

THE
PHRENOLOGICAL JOURNAL
AND
LIFE ILLUSTRATED.

A REPOSITORY OF

Science, Literature, and General Intelligence,

DEVOTED TO

ETIMOLOGY, PHYSIOLOGY, PHRENOLOGY, PHYSIOGNOMY, SOCIOLOGY, PSYCHOLOGY, EDUCATION
MECHANISM, AGRICULTURE, NATURAL HISTORY, AND TO ALL THOSE PROGRESSIVE
MEASURES WHICH ARE CALCULATED TO REFORM, ELEVATE, AND IMPROVE
MANKIND, SPIRITUALLY, INTELLECTUALLY, AND SOCIALLY.

Embellished with Numerous Portraits from Life, and other Engravings.

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“Quiconque a une trop haute idée de la force et de la justesse de ses raisonnemens pour se croire obligé de les soumettre a une expérience mille et mille fois répétée, ne perfectionnera jamais la physiologie du cerveau.”—GALL.

“I regard Phrenology as the only system of mental philosophy which can be said to indicate, with anything like clearness and precision, man's mixed moral and intellectual nature, and as the only guide short of revelation for educating him in harmony with his faculties, as a being of power; with his wants, as a creature of necessity; and with his duties, as an agent responsible to his Maker and amenable to the laws declared by the all-wise Providence.”—

JOHN BELL, M.D.

“To Phrenology may be justly conceded the grand merit of having forced the inductive method of inquiry into mental philosophy, and thus laid the permanent foundations of a true mental science.”—*Encyclopedia Britannica*, 8th Edition.



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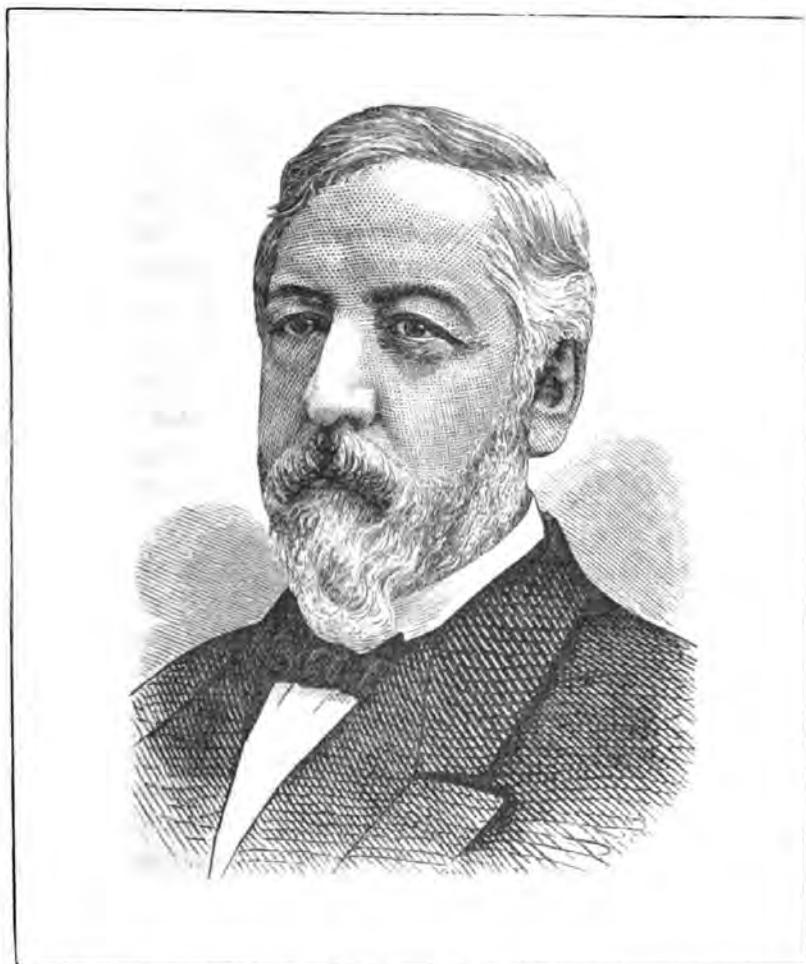
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[WHOLE No. 494.



JAMES G. BLAINE,

UNITED STATES SENATOR FROM MAINE.

THE portrait before us—the original we have never seen—gives us the impression of fineness of constitutional quality, from which we infer intensity, clearness, and power.

Force seems to be written all over the head and face. He has Courage amounting to audacity; the real pluck that does not stop to reason, to calculate safety, or the risk involved; and there is observ-

able the most remarkable singleness of purpose, as if his whole mental life were riveted on a particular object, just as the rifle in the hands of an expert marksman may be said to look at the bull's-eye and yearn to hit it. We can imagine him a boy at marbles, or at some more manly game, leading the crowd, insisting on his rights, and rectifying errors with a ringing, dominant voice that would be heard above all. In connection with these marks we see generosity, hearty liberality, and especially the disposition to take the part of the weak against the strong. As a boy, he never stopped to measure antagonists, and his battles were usually fought with those older and larger than himself. Those of his own age soon learned not to venture an assault upon him, and among his equals in strength he did not pick quarrels. He simply repelled aggression, and helped to settle the quarrels of others. Those who were older, larger, and stronger, who dared to attack him, usually found him ready to fight, if assailed or insulted, at a moment's notice.

That face indicates remarkable health and vigor of lungs; good digestion, with something of unsteadiness in the circulation; hence, as he advances in years, it would be safe for him to avoid unusual exertion, especially becoming unduly excited.

The face indicates strength, courage, fortitude, force, and ardor. The forehead and eyes show practical talent, ability to gather and remember knowledge, holding it in solution ready for utterance; and that fullness of the eye, and the swollen appearance below it, show remarkable ability to express thoughts, feelings and opinions. He is one of the most ready of off-hand debaters.

He has large Comparison, which gives

him keenness of criticism, and his Combativeness and Destructiveness give vim and vigor to his reproofs. He never feels better than when he is the champion of a person or cause worthy of his effort.

He reads character remarkably well, which aids him in exerting influence with different classes of men, and qualifies him for a leader. He is more ardent, enthusiastic, and zealous than he is mellow, bland, and smooth. He has a good degree of Self-esteem; he believes in his own power, his own cause, and in his ability to vindicate himself in what he believes. He is as strong in his friendships as he is in his antipathies; will go any length to back up his friends and his ideas: and his enemies find out that he is a brave, open, and fierce opponent. He looks on the sunny side, expects favorable results, and is well qualified to breathe the breath of life into any cause or subject which needs strength, a clear intellect, and vigor and bravery of spirit.

He has respect, and is polite or dignified toward those who deserve respect. He has good financial talent; would do well in any department where economy and judicious management are required. He has scholarly talent, in the direction of literature and practical science. And if he had devoted himself to medicine and surgery, he would have made an eminent teacher in that field of inquiry. As a lawyer or legislator, and as a business man, he would see quickly and clearly, and go straight on to the accomplishment of his purposes with force and vigor, with tact, ready sagacity, and uncommon self-reliance.

THE man who has contested with all others since the death of Thaddeus Stevens for supremacy in leadership among the

Republican members of Congress is very reasonably suggested as a proper candidate for illustration on our pages. From 1862 Mr. Blaine has been a representative of his State at Washington, and almost from the first conspicuous as a man of positive opinions, and bold and aggressive in their assertion.

He was born in Washington County, Pennsylvania, January 31, 1830, his ancestors being among the early settlers of that State, from the North of Ireland, but having a large infusion of Scottish blood in their veins. Ephraim Blaine, his great-grandfather, was honorably distinguished as an officer during the Revolutionary war, and it is said that the preservation of the Federal army while stationed at Valley Forge, from the horrors of starvation, was in a great degree owing to his exertions.

Mr. Blaine completed his youthful education at Washington College, and immediately after his graduation removed to Maine, where he commenced a literary career, finding employment as editor on the *Portland Advertiser*, and subsequently on the *Kennebec Journal*. In these connections he pursued no negative course in matters of a political nature, and was soon regarded a rising exponent of Republican principles.

In 1858 he was nominated and elected for membership in the State Legislature from the city of Augusta, and served two years. Then he was chosen Speaker of the House, and filled that position with ability and credit until 1862, when he was elected by a good majority to Congress, and took his seat at its thirty-eighth session. In this new legislative field he found ample range for his vigorous intellect, and taking an advanced stand among the promoters of the war for the Union, he soon began to be regarded as a champion on the Republican side. His course proving very acceptable to his Maine constituency, he has been re-elected repeatedly, and still serves as its representative at the council of the nation. On his election to the Fortieth Congress he received as the candidate of

the Union Republicans 14,900 votes, against his opponent's 8,300.

Mr. Blaine is far from commonplace in appearance and bearing. He is above the medium height, yet his frame is so strongly and compactly built that he does not seem tall. Upon a well-rounded and powerful trunk is set his large and well-developed head, with its strong, expressive, and really handsome features. His eyes are brilliant and keen, their expression of vigilance being increased by the deep, overhanging brows. A writer whose political leaning is rather toward the side which is in opposition to the motives and measures of the Maine statesman, thus describes him when engaged in debate: "When he rises to speak you are at once impressed with his wonderful vigor, vitality, nerve power. He is quick, agile, and strong in his movements, stepping backward and forward in the aisle as argument leads him in aggressive movements toward his opponents or persuasive efforts with his friends. He treads lightly, but firmly; his gestures, if studied, became second nature to him long ago, and are now made with unconscious grace and strength, and he emphasizes a point with either hand in a masterly way that would indicate some practice with the boxing-gloves. His style of speaking is clear, rapid, vigorous. The magnetism of his audience and the spirit of the occasion thrill and enkindle him, and he dashes impetuously on in his argument. Not a little of his influence is due to his rich, manly voice, which he pours out until it fills the hall of Representatives without uttering a false tone or giving an inflection that would be out of place in a conversation with a friend. He can, in one word, make a speech without overstraining himself or falling into mannerisms."

He is a great favorite in Washington, the galleries being usually filled with richly-dressed ladies if he is expected to take the floor on some important question. As an orator he is skillful in the use of invective and sarcasm, and often appears to overmaster opposition by reason of the physical superiority evidenced through his oratory, his self-possession never deserting him in the most trying crises of controversy.

ACCURACY OF OBSERVATION.

TO "have eyes and yet see not, and to have ears and hear not," is one of the great errors common to us all. We may pass up and down through a certain street, day after day, absorbed in our own thoughts, or careless of any thought, and be unable to say what are the buildings, or for what they are used, which we have passed and repassed; what the numbers on the doors, or the fashion of the houses, etc., etc., or we may spend our summer vacation amid the green fields and beautiful woodlands, and yet be unable to distinguish grass from grain, or one kind of tree or shrub from another. We are constantly "seeing, and yet see not" the beautiful world by which we are surrounded.

The lesson of accurate observation should be learned in childhood. The great improvements in our present methods of teaching over those of the olden time have, in a degree, helped to remedy the evil so common in the past, of going through the world without knowing what it contains; but even now we are virtually blind, though we have good eyes and the brightest sunshine.

Far greater importance should be attached to this idea of accuracy than it has ever received.

Suppose a boy is taught to observe everything he sees on his way to school, passing down on one side of the street, noting the form, size, and number of buildings, their general appearance and the material of which they are composed, going home upon the other side and carefully observing in the same way. If he notices but one block each day, he soon becomes perfectly familiar with the whole route, and has, also, acquired a *habit* of *seeing* that which comes within his vision. Suppose, next, that the teacher calls upon him to tell what he has seen; to give in detail an account of his observations, what is the life-lesson which that boy has acquired?

In the first place, as an employé, he could be trusted to do errands in any part

of the city, for where he has once been, he can go again; and not only that, he will know, also, precisely what he is to find when he gets there; and when questioned by his employer, he can give such straightforward and correct answers that he inspires confidence at once, and soon becomes indispensable to his employer.

But this is not all. That person who has acquired the habit of accurate observation, not only gives accurate descriptions of what he has seen, thence naturally falling into a habit of perfect truthfulness in his narrations; but the whole action of the mind becomes imbued with this spirit of correctness, and the tendency of words, thoughts, and actions, all easily drift into the channel of truthfulness.

Hence, when a child is taught to observe details, to see and describe carefully whatever comes within the range of his vision, he is having a foundation laid for great wealth of information, great reliability of expression, and honesty of thought and purpose. It is far more important than the multiplicity of text-books, or the long and tedious lessons which must be memorized to answer the requirements of many teachers.

In fact, all knowledge gained from books becomes a hundred, yea, a thousand fold more significant and useful, when preceded by this one carefully-trained habit; for by this, other knowledge is rendered practical. A thing once seen is retained. A habit of associating and classifying facts follows as a natural sequence, and the mind becomes like a house in order, everything in its place, and always available.

If young girls were taught this lesson in reference to all the details of every-day life, many a sad experience of after-years might be saved. To acquire a habit of remembering that which is seen but once is not difficult if commenced in the way described above. The poor girl compelled to make her own clothing, if trained in the first place to accuracy of observation, would have little difficulty in accomplish-

ing the task satisfactorily; for a picture of garments she had seen which pleased her, would be imprinted in detail upon the tablet of memory, and it is the details of life that are neglected, to the great discomfiture and confusion of us all.

Everywhere the girls or the boys who had been thus trained would be the ones to gain and retain the confidence of employers. Honesty and orderly habits would be the outgrowth; and industry, intelligence, and competence would surely follow. Thus poverty, dishonesty, and crime would fade away, and peace, happiness, and prosperity would be the common lot of mankind.

Parents and teachers can not overestimate the importance of this one word, accuracy. It means far more than truthfulness, while out of it truthfulness is sure to grow.

It is like leading the wanderers in a wilderness on to clear, firm, straight paths, which lead to the haven of peace and comfort.

How many of us have ever seen one-hundredth part of that upon which our eyes have rested? How many of us have ever been able to give faithful statements of what we have seen in this journey of life? Very few, I fear.

Of all the mighty multitude who went to Philadelphia to see the great Centennial Exposition, how many saw a tithe of what their eyes rested upon? I listened to the account of the marvels there beheld from scores of persons, and from one only, and she a young girl, could I gather a clear and intelligent understanding of its magnitude or its details. She had been trained to observe details, and described them to her mother.

MRS. HELEN M. SLOCUM.

A KING'S TEST OF THE SCIENCE OF PHRENOLOGY.

THE following story had a wide circulation sixty or more years ago:

"Who," said King Frederick of Prussia at a fête at Potsdam which had attracted an unusually brilliant assemblage, "who is that tall, bony, old man with a head so full of character?"

"Sire, it is Dr. Gall, the famous phrenologist."

"Ah, the phrenologist, eh? Command him to dine with us to-morrow evening."

Next evening the King received the doctor affably, and they sat down to dinner with a dozen other convives, all blazing with decorations and uniforms, but awkward and constrained in manner and conversation.

"Doctor," said the King, at the conclusion of the repast, "pray let us see something of your wonderful skill. Examine these gentlemen's heads and tell me frankly what you think of their characters and dispositions from the indications afforded by their cranial developments."

Gall rose and felt the head of his neighbor on the right, a stout, powerful man in a resplendent uniform, who had been addressed as "general."

"Speak frankly," said the King, seeing that the phrenologist seemed embarrassed.

"His excellency," said Gall, "must be passionately addicted to—to field sports and exciting pleasures; he has a decided fancy for—for the battle-field and"—

The King smiled and pointed the phrenologist to his other neighbor, a small, alert, keen-eyed man in the diplomatic costume.

"This gentleman," said the doctor, "is—hum—is an expert in gymnastic exercises, an accomplished pedestrian; very neat and graceful in all operations requiring manual dexterity"—

"Enough," said the King, rapping on the table, and, as a score of soldiers entered, he continued to the stupefaction of Dr. Gall, "remove these gentlemen to their cells. Allow me to put in plain language what you were reluctant to say: The general is a murderer under sentence, and your other neighbor is the most expert pickpocket and cut-purse in all Prussia, who has eluded capture on innumerable occasions. Examine your pockets."

The doctor did so, and found that his handkerchief, purse, watch, and snuff-box had disappeared. They were all returned to him next day, with a complimentary letter from the King and a costly snuff-box bearing Frederick's portrait set in brilliants.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER I.

THE SKULL OF MAN AND THE VERTEBRATE ANIMALS.

THE name skull is given to that part of the human and brute skeleton which contains the encephalon; that is, the cerebrum and cerebellum, and the beginning of the spinal marrow.

The Greeks designated it by the term *kranion*; the Latins by that of *cranium*. The structure of this bony case offers some remarkable differences in form, composition, thickness, etc., according to the different classes of animals to

1). There are very numerous modifications, however, of this form, and, as we shall show later, it is more pronounced among the lower animals.

Of all the vertebrate animals, man is that one which presents the greatest development of the anterior region. The principal divisions of the skull are: First, the anterior, or frontal bone (See Fig. 1, F); second, the two upper lateral or parietal (P); third, the temporals (T S);

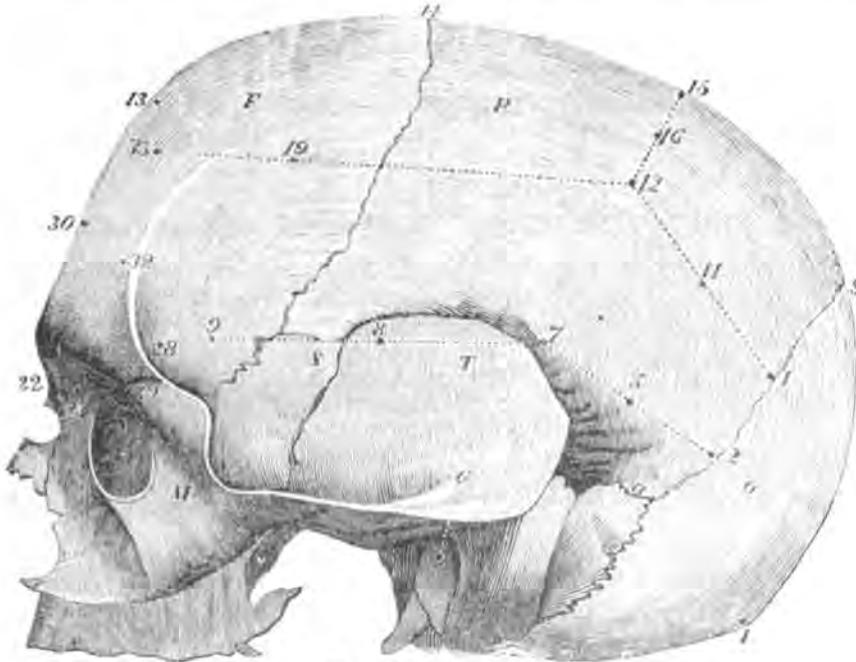


Fig. 1.—SKULL OF MAN.

which it belongs. It is always formed of several pieces, all of which are united by notches, or teeth, whose union constitutes the *sutures*. Some of these bones contribute at the same time to the contour of the skull and of the face; that is why some anatomists in their works have divided them into bones of the skull and bones of the face.

Considered generally, the skull in man presents an ovoid form, of which the larger part lies usually behind. (See Fig.

fourth, that situated inferiorly, called the occipital, at the base of the cranium, O.

These divisions or regions present remarkable differences, which are of the greatest importance when they are studied in man and in the different classes, orders, kinds, and species of animals. It is contemplated, in the course of these articles, to examine mainly the crania of men, quadrupeds, and birds. It is scarcely practicable to include those of fishes, because the differences which they pre-

sent are so variable that it is next to impossible to apprehend with exactness the relations between the bony envelope and the encephalic masses.

While it may be impossible to assign a

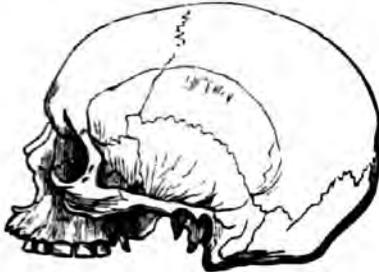


Fig. 2.

constant form to the skull of animals belonging to the great chain of the vertebrates, each class, nevertheless, offers a general character, which may serve for the purpose of comparison and anatomical study. The history of the differences which the heads of individuals of the same class present us, of the same species, sometimes even the issue of the same parents, will have the most interest.

Let one bestow a glance, for example, on Figs. 2 and 3, representing two individuals belonging to the same genus, and it will be seen at once that between their intellectual capacities there are astonishing differences. One is that of an adult man, and, although it does



Fig. 3.

not present an extraordinary development of the frontal region, has, nevertheless, that part of the cranium so pronounced, that it may not be confounded with the same region in the head below.

To render our meaning clear to the reader, and without going into the particular description of the bones which enter into the composition of the skull, we shall use the divisions most generally employed, and designate the important parts by the terms arch, base, vertical section, etc. We shall examine in sections the different parts in man, and in the classes and species which are more prominent among the vertebrate animals.

ARCH OF THE SKULL.

The *arch* of the skull results from a horizontal section of the bone, beginning



Fig. 4.—ARCH OF HUMAN CRANIUM.

at a point half an inch above the occipital process, and extending around the cranium to a point about half an inch above the nasal bones. By this section the cranium is divided into two parts—the *arch* (see Fig. 4), and the *base* (Fig. 5).

To examine the first, we notice that the cranial arch presents two surfaces; one exterior, in contact with the soft parts which envelope the cranium; the other interior and lined with a membrane of a fibrous nature. The arch presents

interiorly five principal regions, one anterior, Fig. 6, A A A A, a superior, B B B B, a posterior, C C, and two laterals, D D. All these regions present notched divisions in the bones M P Z, which are

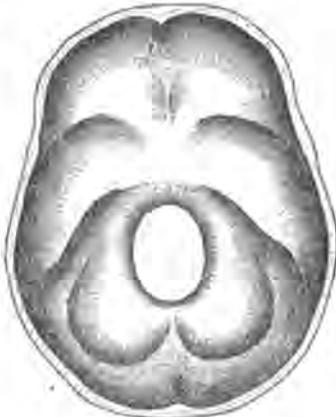


Fig. 5.—BASE.

designated by the name of sutures. The letter N indicates the middle part of the anterior or frontal bone through which runs the suture called the coronal. This does not exist constantly. That indicated by O is called the coronoparietal. M indicates the sagittal suture; and P the occipital. These sutures exist only when the cranium has reached a certain stage of development; they begin to form in man toward the age of eleven or twelve months. It is ordinarily the occipital suture which is formed first. In advanced age they may all disappear, and the arch appear at least on the exterior to be formed of a single osseous piece. One would be wrong, however, in considering this condition to exist generally, and it alone is far from being a certain sign for determining the age of a person whose body had become the subject of legal inquiry. Here allusion may be made to three heads of persons advanced in life, in which the sutures were found to be extremely pronounced, and which probably, however, could not be disarticulated. One was that of a woman seventy-eight years old; the second, that

of a man eighty-three, and the third, a woman ninety-four years old.

The internal surface of the arch, in man, Fig. 4, is smooth, and presents depressions and elevations in correspondence with the convolutions of the brain. One notices in it also channels designed to accommodate the arteries and veins. One of these is more remarkable than all the others, and extends from Z to Y (Fig. 6). It serves for one of the principal veins, which conduct all the blood designed for the nutrition of the brain. The *dura mater*, or fibrous membrane, which envelops the brain, lines the whole surface of the arch. Some of the depressions in this osseous envelope are more pronounced than others, and correspond in the most striking manner to the convoluted mass of the encephalon. These are six: two corresponding to the mid-lateral parts of the frontal lobe, L L (Fig. 6); two in the mid-parietal region, F F; two in the super-occipital region, Q Q.

On examining with care the texture of

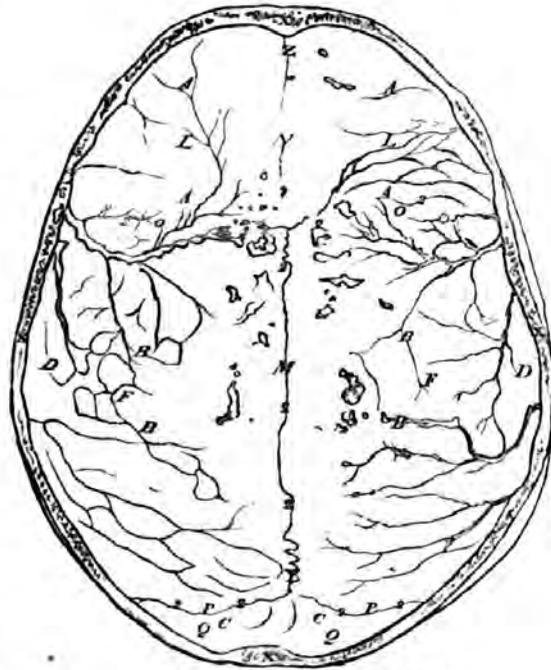


Fig. 6.—SKETCH OF THE ARCH.

the coronal arch, one sees that it is composed of two bony layers; an external and an internal one, which inclose a spongy substance, X X X, which is

known in anatomy as *diploe*. This substance presents variations of density and thickness. Thus it is thicker in the occipital region, and gradually diminishes toward the frontal region (same Fig). The

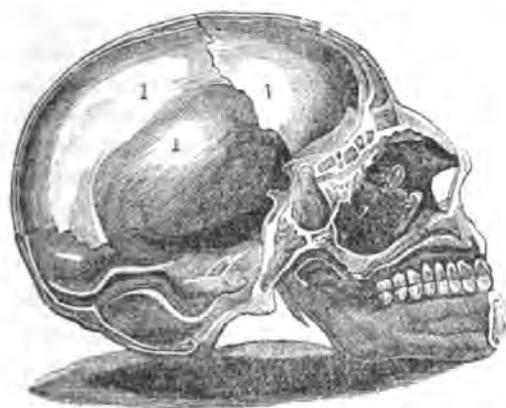


Fig. 7.—SHOWING FRONTAL SINUS.

two plates or layers present sometimes in the anterior region a separation of several lines,* and, in extraordinary cases, of even an inch. The cavity resulting from this separation bears the name of *frontal sinus* (Fig. 7, 2). One may think that when this cavity is very wide, it is absolutely impossible to appreciate, by the exterior of the cranium, the development of the cerebral parts situated in this region; but this



Fig. 8.—ARCH OF CAT'S SKULL.

difficulty is more apparent than real. There are no other parts of this envelope where such a separation is found, except in cases of disease, which are very rare,

* The twelfth of an inch, French measurement.

and which we shall explain in the proper place; so that one is not prevented from obtaining a just idea of the volume of the different parts of the brain by the simple inspection of the exterior table of the skull, the internal table corresponding so closely to it.

ARCH OF THE SKULL IN QUADRUPEDS.

The arch of the skull of animals is found to correspond with the greater part of the cerebral organs. In Fig. 8 (interior view of a cat's skull) the principal fossæ are seen which we have pointed out in the human cranium; but with very marked differences of proportion.

It is noticeable that there is a special receptacle for the cerebellum. This fossa makes part of the base of the cranium in man, and presents certain depressions which correspond to the prin-



Fig. 9.—BASE OF CAT'S SKULL.

cipal divisions of the cerebellum. This is also the case with animals (see same Fig.) But the receptacle of the cerebellum is separated in certain classes of animals from other parts of the arch by a bony plate (see Fig. 8), which is adapted to separate the cerebrum from

the cerebellum, and takes the place of the membrane which separates them in man. This plate presents considerable differences in thickness and extent. It would be difficult to indicate what is its true use. The examinations which have been made do not lead us to any settled results. Richeraud believes that it is designed to prevent the effects of shock to the cerebrum and the cerebellum in animals which, by habit, make great leaps. This is what that learned professor writes on the subject: "The cerebellar process which divides the interior of the cavity of the cranium into two parts of unequal capacity is osseous in certain animals, whose method of progression is by leaps, and

animals of slow and heavy movements, such as the raccoon, badger, etc. Very small partitions are found in skulls of dogs, remarkable for their agility, and, notwithstanding that the process did not separate completely the cerebrum and cerebellum, these animals had never given any sign of cerebral disturbance.

Fig. 10 represents the vertical section of the skull of a young dog, an excellent leaper, in which it will be seen that the osseous veil was but little developed.

Taken altogether, the arch of quadrupeds presents an oval form, of which the greater extremity is behind. The external surface is covered by a *pericranium*, a kind of tissue, very dense, and

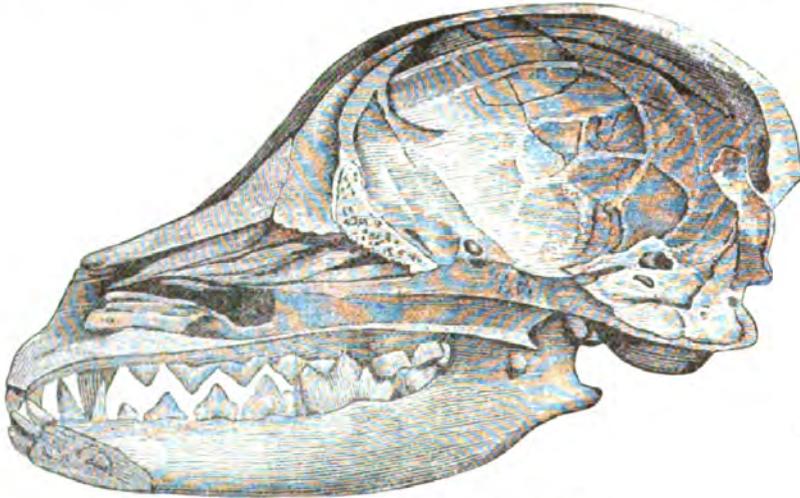


Fig. 10.—SKULL OF A DOG, SHOWING INTERIOR.

precipitate movements. In the cat, for example, which can, without being stunned, make astonishing high leaps." In Fig. 8, we have a representation of the arch of the skull of this animal, and the bony plate is clearly distinguished. This assertion of Prof. Richeraud appears altogether gratuitous; several animals accustomed to make great leaps—and we may cite, for example, the squirrel—have no such osseous partition. The hare and the warren rabbit are also similarly organized. The same organization is found also among apes, who are given to leaping and extraordinary gambols. But this osseous plate is met with in

covering the bones. Next comes the skin which is united to the last by cellular tissue more or less dense, according to the class. In many animals numerous muscles cover almost the whole external surface of the coronal arch. For example, the whole of the family of the carnivora, in whom some very strong temporal muscles are inserted in the crest, which extends the whole length of the arch (see Figs. 11 and 12). In animals whose exterior cranial surface is thus quilted with muscles, one can not fairly distinguish, even when a section of the cranium is taken off, the parts of that envelope which are the most promi-

ment. Certain quadrupeds present upon one half of the arch some attachments designated under the name of horns, or osseous portions adapted for receiving a horny case. One notices in the arch of

Let one place, for example, the arch of the cranium of a young cat between the eye and a lighted candle, in such a way that the internal surface of the cranium may be toward him, the impressions made

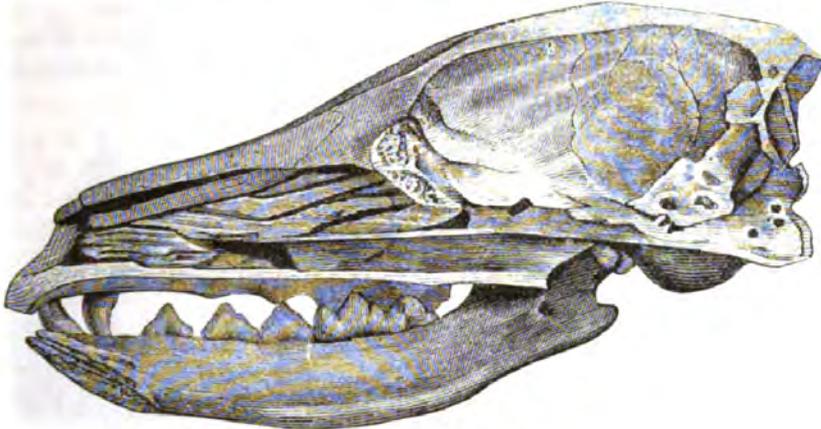


Fig. 11.—SKULL OF THE FOX, OPEN.

the skull of quadrupeds, as in man, an assemblage of notches forming sutures, and indicating that in them, also, the cranium is composed of several pieces (Figs. 8 and 10). The internal surface of the arch presents either sinuous depressions or merely openings. The first are met with among all animals whose brain is provided with convolutions. The ape, Fig. 13, the cow, the sheep, the deer, the pig, etc., have such a conformation, but it is nowhere better expressed than in the family of the carnivora; the

by the cerebral convolutions will be so sharp that one will think that he has before his eyes the external surface of the brain of that animal. This marking, so distinct in old carnivora, is, however, much less apparent in young animals of the same species—a result due to the



Fig. 12.—SKULL OF A TIGER.

mole, and the bat of Europe, forming an exception. In the marten (Fig. 14), the weasel, the cat (Fig. 8), the impressions of the convolutions are very marked.

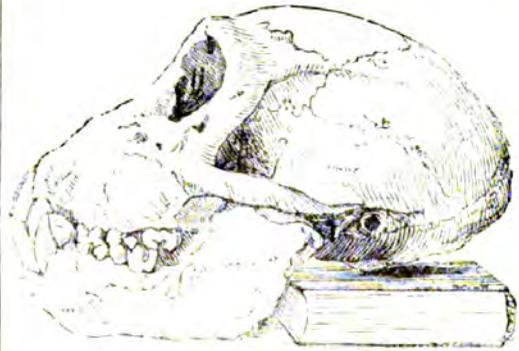


Fig. 13.—SKULL OF AN APE.

more considerable development of the diploe.

In the whole family of rodents, without exception, the internal surface of the arch is smooth, presenting depressions corresponding to the most developed parts of their brains (see fig. 15, arch of the cranium of the hare). We have seen that

the arch of the human brain is composed of two horny plates separated by tissue called diploe, and that this presents variations of thickness in different parts. A similar arrangement is found in animals. We shall not indicate here all the changes of thickness existing between the two cranial plates in the different classes, orders, kinds, and species, for it would require very minute treatment. There



Fig. 14.—ARCH OF THE MARTEN'S SKULL.

exists, however, a special arrangement of the anterior part of the arch in animals which can not be passed over without notice; that is, the region where is found separation of the two tables corresponding to the same part of the cranium in man, and forming what is called the frontal sinus.

This expansion being immediately between the olfactory cavities, is often much developed in certain species, and

does not exist at all in others. The elephant, the ox, the cow, the sheep, have an arch possessing enormous frontal cavities. Several species of dogs, notably the larger, show also very extended sinuses, while the smaller species are pretty generally without them. The fox does not show the frontal sinus (Fig. 11), but in the wolf they are enormously developed,



Fig. 15.—ARCH OF THE HARE'S SKULL.

and form bony projections behind the bones of the nose. In cats they are well pronounced in proportion to the volume of their skull. They are, however, almost wanting in the marten. In the lion and tiger the sinuses are enormous, and contribute to form that arch which is conspicuous in the anterior part of their skulls (Fig. 14). We shall return to this subject when we come to examine the frontal region of the cranium.

INTEMPERANCE IN HISTORY.

THE question has been very appropriately asked: "What place does temperance occupy in history?" History is, or should be, the mirror of the human race. If we can not find from it that intemperance has been a bane and a curse, are not the many who consider it a transient evil justified in looking upon it lightly, and in believing that it will pass away with the transitory conditions which seem to have given it development?

We can easily see that the student in history, who has not made temperance studies a specialty, may fail to find anything there to convince him of the great importance and need of temperance work. He finds, indeed, that intoxicating drinks have been in existence for ages, so that the memory of man runneth not back to their origin. But they have been looked upon, generally, as a blessing, and not as a curse. Endless device and toil and ex-

pense have been spent in their production, and they have been considered among the choice things of earth. They have long formed a part of the treasures of the wealthy; they have been considered worthy a place among the presents that are made to princes. They were anciently indispensable to the sacrificial worship of the deities; while they have been the very crown and grace of all feasting and mirthfulness from the earliest ages. It is acknowledged that evil effects have sometimes followed their use, but these are attributed to excess only, while they appear to have excited very little comment from the sages and philosophers of the race.

On the other hand, the poets have sung their praises unceasingly, from Homer and Horace down to Byron and Burns and Longfellow. What should we expect students and *litteraires* to infer but that wine is one of the blessings and graces of life, and that the temperance *furor* which would banish it is the work of zealots and fanatics? Even those who would not pronounce so strongly have a right to inquire how it happens that we have all at once (as it seems to them) discovered that the use of intoxicating drinks is such a bane and a curse as to demand the most absorbing and unceasing efforts to subdue it; and what reason we have to suppose that we can, as a race, advantageously dispense with a substance which has been so long in use in the human family? We are glad these questions have been asked, and we shall try to answer them satisfactorily.

We wish to premise, however, that we shall permit no stock to be taken in the plea that our long use of alcoholic liquors is any proof whatever of their value, or any indication that we can not prosper without them. There is many a sin that has been practiced since time immemorial which we could very well dispense with to-day, if men would only consent to forego the pleasure. Many a man has foregone the pleasure of using alcoholic drinks when convinced that it would be better for him to do so, and we have

reason to believe that many more will yet yield to that conviction with equal benefit.

We shall revert to that again. At present we shall undertake to give some glimpses at what history has to say about intemperance—proofs enough, we think, of the mischiefs it has wrought to warrant the interest we take in the subject. At the same time, we would call attention to the difference between the subjects of temperance and intemperance. History may be crowded full of cases of drinking and drunkenness and their sad effects, without any intention on the part of the historian of drawing any salutary lessons therefrom, and possibly with no warrant for saying that any of the actors in the terrible dramas drew any such lessons, or that there was any reaction or agitation on the subject. Where this is the case, we do not see how it can in any sense be called "intemperance in history." It is properly "intemperance in history." Exactly which our questioners mean we may not know, but we do think it important to make this distinction, which is far too often overlooked. If it should be carried all through our thoughts, our talks, and our work, our ideas would often be clearer and our work more effective. We shall show the historic proofs of a vast amount of intemperance, and then show why there is very little about temperance action in history.

We do not know when men commenced poisoning themselves with alcoholic drinks. The first reference to wine in that oldest of histories, the Bible, is so very brief as to show that the nature and effects of alcoholic drinks needed no elaborate explanation to the people for whom it was written. To our minds this narrative gives no indication of an account of the first wine made. No doubt wine played its part in the "eating and drinking" in which the Antediluvians were indulging when the flood broke in upon them. Subsequently, the references to it are not infrequent, though not always of such a character as we would like to repeat here, giving abundant proof

that the stuff has changed neither its character nor its effects. We find the foolish Nabal dying a drunkard's death in his own house, the Amalekites, after a successful raid against Ziklag, enjoying their spoil, and so drinking and carousing as to neglect the most ordinary precautions to prevent surprise, and falling an easy prey to David's pursuing band (1 Sam. xxx. 16). The death of Amnon was accomplished when he was "merry with wine" (2 Sam. xiii. 28). The Philistines were overthrown by Samson "when their hearts were merry" (Jud. xxv. 16, 25). Thirty-and-two kings were overthrown in battle who had been "drinking themselves drunk in the pavilions." Nebuchadnezzar was surprised and conquered in the midst of a drunken carousal in his own palace (Dan. v. 4, 30). Besides these, there are innumerable allusions to the subject, with threats and commands, that show the commonness of the vice. We do not consider it necessary to give full details, because the book is at hand to which all can turn and read for themselves. We have no reason to suppose that the Jews were more intemperate than other nations, rather the contrary; for we find an abundance of facts in profane history to show that the vice was rampant, wide-spread, and intense. We will enumerate a few examples.

The famous Alexander the Great in the early part of his career was a very temperate prince. When a variety of choice dishes and some excellent cooks were sent him by the Queen of Caria, he remarked that he had no need of them, for he had been taught that the best cook was a day's march to dress his dinner, and a light dinner to prepare his supper. He sat long at table, but it was for talking rather than drinking, as every cup introduced some long discourse. But it seems that the cups were as unsafe then as now, for he eventually became an immense drinker, and an inebriate as well, incapable of controlling his actions. In one of his drunken fits he killed his bosom friend, Clitus, which caused him the deepest sorrow. On another occa-

sion he undertook to burn the ancient palace of Xerxes. His triumphant career in India was marked by the grossest dissipation. The entire march was a scene of drinking and carousing by the whole army. Upon arriving at the capital of that country, Alexander prolonged the dissipation by making feasts and public entertainments. Shortly afterward, in Persia, the conqueror renewed these excesses and increased them. He offered prizes to those who would drink the most wine. One Promachus drank four congii of pure wine, equal to fourteen British quarts. He died in three days. Thirty-six other contestants for the prize expired soon after, a large number of them dying upon the spot. Not being warned by all this, Alexander continued drinking, and soon engaged in a carousal where, in drinking healths in the cup of Hercules (containing seven quarts), he equaled Promachus himself, let the cup drop from his hand, fell back upon his couch, and died of a fever which ensued.

One might suppose that such a notable instance as this would convert an entire generation into total abstainers, but this was a case of intemperance, not of temperance. They gloried in such excesses. Besides this, the majority of the people had not the opportunity for excessive drinking. Supplies of drink were variable. When they could get it they had a feast or a banquet, and then they went without for weeks, perhaps for months. It is largely so with all barbarous nations. When wealth increases, luxury of all kinds is more largely indulged. So we find kingdom after kingdom rising by self-denial and simplicity of living, and when an increase of means permitted, they ruined themselves by self-indulgence, in which alcoholic drinks played a large part.

The Scythians were a nation who at one time were noted for their self-denial and simplicity of living; but as time went on they, too, learned to drink, and at last became notorious drunkards, so that, not content with what they could drink, they saturated their clothes with it.

The Thracians, who were neighbors to the Scythians, were noted also for their drinking propensities, and "to drink like a Thracian" was to take wine at its strongest, unmixed.

The simplicity and temperance of the Greeks and Romans in the early part of their career are well known to students of history, as are, also, their subsequent excesses, their luxury, licentiousness, and their downfall. Their simple living gradually gave way to an increasing taste for animal gratification and luxury. To attain these objects, no expense was spared. Pliny remarks that the cost of a cook was equal to that of a triumph. What shall we think of men who had entire dishes of the brains of peacocks, or of the tongues of singing birds, whose practice it was to serve to each guest an entire pheasant; who could pay three hundred dollars for a fish weighing four or five pounds, and call it cheap at that? The Emperor Vitellius spent twenty-five millions of dollars for his table in four months. The Roman General, Lucullus, spent five thousand dollars on a collation for two of his friends who refused him the time to get up a dinner.

A large item of these extravagant meals was the wine, of which the Romans had no less than two hundred kinds. Some of these were quite intoxicating. Wine was used instead of water for cooking purposes. Wine fifty, sixty, or one hundred years old came to swell the bills. They had spiced wines, wine sweetened with honey, perfumed with rose leaves or violets, mingled with sea water, or myrrh, or hyssop, or wormwood, or turpentine; and the quantities drunk were simply illimitable, except by the actual holding capacities of the Bacchanals. And who shall measure those when a feather and a little warm water brought up what they had swallowed, only to make room for more! These were ordinary social feasts. Of the triumphal dinners, and of the orgies of Bacchus we will not attempt to speak, nor of the wine given to horses and other extraordinary pranks.

If men did not know how to draw temperance lessons from these excesses, God did, and it is among the most impressive punishments in history, that the careers of these besotted nations were cut short. Their overthrow was directly due to their intemperance, for it made possible the success of the Northern nations that came down upon them. And as if to emphasize the cause, the conquerors became "weak as other men," when they shortly afterward indulged in the flowing bowl.

It is no wonder that the dark ages set in after the highest civilization of the times had gone out in such drunken debaucheries.

During this long, dark night, when the alchemists were busy trying to find gold without working for it, and health without observing the laws of temperance, the evil spirit of wine was unmasked and brought out to play its part in the world's drama; alcohol was separated by distillation. So fierce its mien at first, that the people feared and shunned it, but it gained an introduction through the physicians, and by the seventeenth century became familiar to the people. By this time, in the advance of civilization, the common people had gained the means to gratify their appetites, and to take a share in scenes of debauchery. At a wedding in Switzerland, in 1630, three hundred people lost their lives through drunken excesses. At a public feast in St. Petersburg, five hundred people died through drink or killed each other in their drunken frenzy. In England, Scotland, and Ireland, fatal results of drinking were common at wakes, funerals, weddings, christenings, and other festive occasions. At a "coming of age" of the son of a Scotch squire during the present century, a hogshead of ale and sixty gallons of whisky were among the provisions; hundreds of people lay out drunk all night, and three young men died from the debauch. This made much talk at the time, but it was a small affair compared with some of the feasts of previous centuries. At the funeral repast of a London Mayor, in 1531, there

were "three barrells of ale, a kylderkin of bere, thirty-two gallons of redde and clarett wyne, three gallons of mackeray and a rundlett of muskadine." At a dinner given by the Earl of Warwick, in 1470, at the installation of an Archbishop of York, there were three hundred tuns of ale, one hundred and four tuns of wine, and one pipe of spiced wine.

What these, our forefathers, consumed at feasts, their descendants have gradually come to consume and much more, in every-day life. Numerous historical notices are recorded of the intemperate habits of the people in the seventeenth century, and England was known abroad as "the land of drunkards." In the sixteenth century the Scots indulged in excessive drinking. A writer of that period speaks of the courtiers, merchants, and country gentlemen as much given to intemperance. Ireland has been terribly cursed by the effects of drink.

Many of the drinking customs came with the colonists to America, and prevailed here to a great extent. Feasting and carousing were not much indulged in, but liquor came into every-day use throughout the country. French and Spanish brandy were taken by the wealthier classes, and New England or West India rum by the poorer, and these were varied by whisky, gin, apple and peach brandy, and a variety of fancy liquors. A minister, not yet an old man, tells me that when he was a lad and was taken by his mother to make calls in the staid city of Philadelphia, cherry brandy was the drink commonly offered. Whisky was the common drink at dinner; medicated rum for a cold; rum and milk was given to nursing mothers, and rum and opium to little children, under the Greek name of *paregoric*. In some shape alcoholic liquors were an established article of diet, almost as much as bread. The friend who did not testify his welcome with them, and the master who did not provide his servants with them bountifully, were considered niggardly. The consequence was that sots were common of both sexes, various ages, and all conditions, and the

drink was constantly making large numbers bankrupt in property and prospects, and inflicting upon the community a vast amount of physical and mental ills in their worst forms.

Such consequences as these have followed the free use of alcoholic liquors times innumerable in the history of the human race; nay, more, they have destroyed families and tribes and nations. Not only did the Greek and Roman nations go down under the influence of their use, but of late it has been the real bane of the American Indian. It has reduced the population of the Sandwich Islands by more than one-half; it is now depopulating New Zealand, and sweeping away whole tribes of native Africans.

The extent to which the evils of drink have attracted the attention of philosophers and thinking men, and the efforts which have been made to lift the curse, are precisely the things that have escaped the attention of the ordinary reader of history, and these we will consider in another article.

JULIA COLMAN.

LIFE PICTURES.

"DISMAL pictures" are they, say you?

"With the shadows dark between?"

Yet among so many pictures

Are some pleasing ones, I ween.

For I'm sure that nature ruling,

Light and shade will always see,

And without the shade a picture

Would no longer picture be:

For as light before the shadow

Makes the shadow deeper seem—

So the light is also brighter

Where the *shadows* intervene;

And as night without a morning

Would a dismal night appear,

So would morn without an evening

Prove monotonous, I fear.

Thus we see that nature ruling—

And through nature, Nature's God,

That 'twere better uncomplaining—

To accept and kiss the rod;

Nor repine that intermingled,

Both our joys and sorrows flow,

For I doubt would there be *heaven*

Were there naught of *pain below!*

MRS. WILKINSON.

MY WICKED FRIEND.

REGARDING myself as the average child, I speak, as Montaigne would say, "soundly of myself," as illustrating points in the experience of childhood from whence, perhaps, a lesson may be derived, which will help us better to understand this period of life. Be it remembered that in my infancy children were not unduly petted, indulged, or lionized. We had no pernicious child literature to foster imbecility or stimulate vanity. We were expected to be heroic to a certain degree—truth, absolute, unadulterated truth, was to be the law of our being. Perhaps the child of my day was not particularly bright—seeing how much was to be learned, and how little I knew, I had strong suspicions, when a child of five or six, that I *might be idiotic*, still I none the less sought improvement. I was savagely conscientious, as I believe children would generally be if not corrupted by the example of their guardians. I committed many faults, but owned up to them religiously, and found a comfort in confession, which most likely is the element that binds the masses to the Roman Catholic Church. Being vivacious and impulsive, I offended constantly my own taste as well as that of my mother, who believed in training little girls into ladydom.

In our day the people are demoralized by the universal tendency to wit and humor, by which an irreverence and levity are engendered, rapidly undermining wholesome morals. I don't think Pilgrim children understood readily turns of wit—facetiousness they did—irony, and the genialities of humor, but generally we were inclined to gravity, and a habit of thoughtfulness, not, perhaps, engaging, but very safe. I always grew funny with grave people, while funny people were apt to make me grave. I was not afraid of bad people; indeed, perhaps, was a little drawn to them—good people were all right, had a multitude of friends; but bad people, somehow, looked forlorn and deserted, which went right to

my poor little heart. I believe children often feel in this way, and good, pious souls look upon it as the sympathy of depravity, when it is only a sweet pity. Poor little owls were we children, staring out with great, round, half-blind eyes upon the outside world, which we took in most solemn wise!

On my way to school, when between five and six years old, I used to pass "Old Zeke" where he sat smoking a little stump of a pipe on a bench in front of a place where "tobacco, gin, rum, etc.," were to be had. He wore a red "bandanna" tied over his head, and was otherwise dressed in sailor style. My mother had told me that my dead father was commandant of a large vessel when but little over twenty, and hence my heart warmed to the sailor; but "Uncle Zeke" was a miserable reprobate, a drinking, red-eyed man, whom nobody much regarded. To me, a wicked sailor was a creature to be pitied, and prayed for, and helped to a better life. Had not my religious, gentle father been once a sailor, and how could anybody see one miserable and drunken and not take it to heart? I was naturally reticent upon my religious feelings, and seeing poor Zeke in this pitiable condition, I took him into my daily prayers, firmly believing that God would interfere and reclaim him.

One morning, as I passed by to school, Uncle Zeke was whistling a light, airy tune, to which my nimble feet at once responded. I paused, kept time to the music awhile, to the great delight of Uncle Zeke, and then passed on with a suddenly awakened sense of outraged decorum. All the way I blushed with shame at dancing in the street to the whistling of a "sot," as everybody called him. Often and often he tried to beguile me into a repetition of the dance, but I did not yield; I had felt too much shame.

At the turn of the road to the school-house was a large pea-green painted house with a whole colonnade of poplars.

In front of this was a spit of land extending into the bay (Coreo), which was appropriated to a ship-yard. The green, inland view; the glittering waters of the bay; the granite rocks bulging from the soil gleaming with isinglass, and bright with the red cups of the moss; the broad leaves of the plantain and burdock harboring myriads of cheerful grasshoppers and crickets; the skeleton ship on the supporting timbers, with the busy click of chisel and hammer, created a scene perfectly fascinating to my young, buoyant nature, and I often stood gazing wistfully at the sea, lost in sweet, childish reverie; happy with a child's happiness, always dashed with the sadness of premature thought.

Old Zeke might here be seen hour after hour rolling his "quid of tobacco," and listlessly enjoying the sunshine and air. It was natural that a sailor should enjoy the building of a ship, I thought, as I paused on my way to school. Now, Old Zeke, though he sometimes called me "Golden-head," never touched my hand or attempted any liberty whatever. I knew he put himself in my way to greet me as I passed, and that the wicked old fellow was always whistling upon my approach, although a moment before his laugh and voice were loud and boisterous. One morning he said to me:

"Yesterday you ran over the timbers of the ship—I s'pose you don't want to do it again?"

"Oh! yes. I do it 'most every morning," I replied, jumping up the ladder and leaping from beam to beam, and then down and off to school. I noticed Uncle Zeke was very sober when I came down, and, indeed, it was a hazardous feat for any child of half a dozen years, however sure-footed. Word must have been carried to my mother anent these exploits, for I was summoned to her presence, where she seemed to have collected a whole catalogue of my misdemeanors.

"So you are quite intimate with Old Zeke, as I understand?" she began.

"Oh! ma, it isn't quite that."

"You run across the timbers of the

new ship at the ship-yard to please him, and have the workmen shout after you."

This was a version I had not thought of, and I colored, partly with shame and partly with indignation, but I replied, sturdily:

"I think, ma, I did it more to please myself—I like it."

"You do, eh? Well, don't let me ever know of your doing it again. Another thing, you dance for Old Zeke!"

Oh! how my sin had found me out! The whole placed me in such a low position, and, though true, made me appear to myself so outside of my caste, and so given over to something unlike those about me, that I burst into tears.

"Yes, ma. I did dance when Old Zeke whistled."

"A pretty sight! my daughter dancing in the street, while an old drunken man whistled the tune for her!"

"But he is a poor sailor, ma, and I pity him; pa was a sailor."

My mother never used unnecessary words; she saw the rebuke was sufficient and said no more. I obeyed to the letter, for in my day disobedience was unknown in any Pilgrim family; but somehow, in my heart I could not give up Old Zeke, and he a sailor, and a something so kind and worshipful about him. I had one more interview wrung out of my poor little prayerful heart, and then I was sent into the country to my grandma's, and never saw my wicked friend again. I only distinctly remember the perturbation and distress of mind he caused me. The kindly respect with which he treated me, and that he gave me a new word, the meaning of which I had to search out in the dictionary, and which I never hear in all these long years without its bringing up the last words and the tears of poor Old Zeke. The word was *convoyed*, and occurred in this way:

I was on my way to school again when I heard my wicked friend's voice, loud and profane, and at a glance I saw he was even more than his wont in a state of intoxication. Forgetful of all interdicts and of all the proprieties, I rushed up to

where he sat, in the midst of a group, each with pipe in mouth, and enjoying the unseemly language of Old Zeke, and I exclaimed, with trembling voice :

“Oh! Uncle Zeke, how can you drink rum and talk so wicked? I pray to God every day to make you good, and you only grow more wicked.”

A dead silence followed my words, and then the poor old reprobate burst into tears; he was sobered at once, and turning to his companions, he cried out :

“Look a here, messmates. There isn't one of you cares what becomes of poor Ole Zeke — but I tell you he'll go straight into Heaven, *convoyed* by this *here* angel.”

This was my first temperance lecture, and, as I have been told, Old Zeke grew a sober man, and died a good Christian; my child-heart was comforted with the hope that my earnest, little prayers were not uttered in vain.

ELIZABETH OAKES SMITH.

FITZ-GREENE HALLECK.

THE MAN AND THE POET.

FROM the year 1833 until 1835, when a mere stripling, it was our privilege often to meet with Mr. Halleck. We recall him as a handsome man, with benign features, illumined by a pair of sparkling eyes, and with the beauty of intelligence stamped on his countenance; courtly manners, quiet observation, and habitual reticence were his outward characteristics.

The best likeness of our poet, at this time of life, is an engraving copied from a painting by Inman, and published in the *New York Mirror* of 1836. This portrait reflects, admirably, the individual expression of his features. That he was modest of his abilities is well authenticated; and we may be certain he wrote with little regard for fame or profit. His purposes were swayed by high and noble aspiration.

Honors, such as fell to his share, he never sought; they came to him. One of the few modern paragons was he, who remained humble with dignity—a red-blooded philosopher, who relished the amenities of social existence—nor grubbed and plodded for material profit.

In the winter of his days Mr. Halleck, by outward attire, affected neither look of seer nor prophet; nor had he the preposterous vanity to exhibit himself, photographically, with hollow cheeks and shrunken limbs, among the pictured ballet-girls and prize-fighters that stare at us from shop-windows. Nor was our

author a trading *litterateur*, who, on the strength of his name, drives a “sharp” money-bargain with juvenile journals and milliners' magazines for the sale of scraps, lop-sided sonnets, and feeble translations.

From the first, Campbell's muse had for him an especial charm, and her influence endured to the end. Had there been more of Campbell, we would probably have had none of Halleck. Such poems as he admired he habitually copied, and committed to memory. Indeed, easy memorization of poetry was to him a test of merit.

More cosmopolitan than local, he believed not in the distinctiveness of “American” or “Australian” literature—little as he did in the future of Choctaw or Cherokee *belles-lettres* achievements—but wisely maintained that Anglo-Saxon writers, on both sides of the ocean, are equally English. To him both Shakespeare and Milton were literary countrymen.

And what is poets' fame? Illustrative of the mutability of reputations, when we look backward, dividing by-gone years into decimal periods, we discover a shifting record of the comparative rating of American minstrels. In the year

1825, stood first Bryant, followed by Dana, Halleck, and Percival.

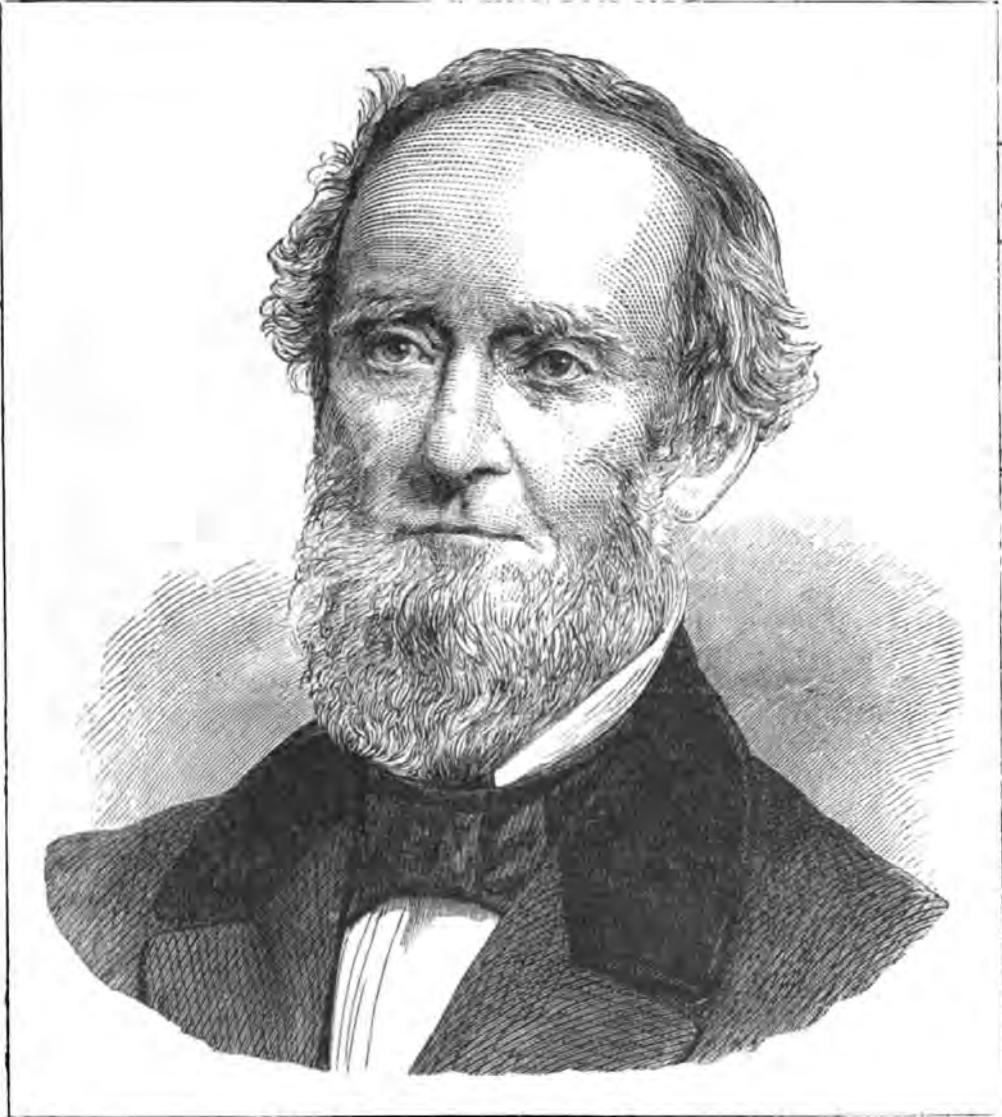
1835, stood first Dana, followed by Bryant, Halleck, and Percival.

1845, stood first Bryant, followed by Halleck, Willis, and Longfellow.

1855, stood first Bryant, followed by Longfellow, Poe, and Emerson.

1865, stood first Longfellow, followed by Bryant, Whittier, and Poe.

Mr. Halleck's best work was accomplished in his early days, and within the years 1820-1823. He ceased to write when in the prime of life, and at the height of his reputation. From 1829 to 1863, an interval of thirty-four years, no



1875, stood first Longfellow, followed by Whittier, Bryant, and Poe.

It is fair to say, however, that literary students would have qualified these ratings. Looking forward, we are confident that "the whirligig of time" will once again disturb these popular estimates.

poem of importance was added to his collection. It is marvelous that so well-accepted an author should persistently have remained silent.

The alternate of "occasional" verses, derived from his scattered correspondence, and printed in General Wilson's

volume of autobiography, swells the poet's productions, but adds nothing to their value. In the authorized collection, issued during his lifetime, there are, in all, only thirty-three poems, inclusive of two translations.

None of Halleck's contributions to newspapers and magazines brought him any pecuniary returns. General Wilson states that the total income from all his writings amounted to \$17,500. Considering how little he has written, this would seem to have been ample remuneration. Of this amount he received for editing an edition of Lord Byron's Works \$1,000; for editing a meritorious "Selection from the British Poets," \$500; for the second part of "Fanny," \$500; and for "Young America," \$500.

In 1843 the editor of *Graham's Magazine*—at that time the leading literary monthly of our country—wrote to Mr. Halleck for contributions, and offered \$50 as an *honorarium* for each composition. But the poet did not respond to the invitation.

Treating our author's poems collectively, we find their *wording* natural, precise, and copious; the *phraseology* exact, clear, and compact—smooth or forcible as the subject may require; the *sentiment* noble and aspiring, never misanthropic, mawkish, didactic, or metaphysical; the *witticism*, oftenest in bad taste, but never rude or malicious; the *rhythm* melodious, with a clear and manly ring to it. Seldom do we encounter expletives, stilted expression, or bad metaphor. Similes he uses sparingly; nor does he ever hide his poverty of invention among the bulrushes of Biblical platitudes.

Of *mannerisms* there are none worth mentioning. We only find an over-fondness for employing the adjectives "warm" and "pure," and a disposition to give his witticism point and purpose by unexpected allusions to pounds, shillings, and pence.

The themes presented are usually engaging. The author always has something to say. Hindrances to his more permanent success have been an all too

frequent choice of local subjects and temporary topics, coupled with an inexplicable fondness for untimely jokes and farcical allusions.

A writer's lack of sincerity inevitably provokes distrust in the reader; it is detrimental to the success of a poet. Our facetious friend oftenest leads us to delightful scenes and lovable adventures, and after, with a sudden outburst of impishness, trips us over into a frog-pond. In these stirring, sensational days critical readers seek for newer poetic idols. Shakespeare still reigns on Mount Olympus; but already Milton's throne is shaken. The transparent, nervous style of a Campbell has yielded to the obscurity of a Browning and the word-embroidery of a Tennyson. But we are not certain that they who thirst for life-giving waters shall not anew return to the original fountains.

The simultaneous views of Poe and Lowell, permanently embodied in their volumes, severe and ungenerous as they were, did much to unsettle Halleck's literary standing. Our modest poet showed no resentment; many of his old admirers had passed away; and others, who once loudly did him reverence—the Cheevers, Griswolds, Hillards, and Tuckermans—were world-wisely silent. Poe thus remarks concerning "Marco Bozzaris": "Force is its prevailing feature—force resulting rather from well-ordered metre, vigorous rhythm, and a judicious disposal of the circumstances of the poem, than from any of the true lyric material. Even as a lyric, or ode, it has been surpassed by many American and a multitude of foreign compositions of a similar character." We should be overjoyed to be put in possession of those *many better American compositions*. Would that the reviewer had specified some of them.

Further on Poe says: "The author writes carelessly and loosely, and, as a matter of course, seldom effectively, so far as the outworks of literature are concerned." "Outworks of literature." Bomb-shells and grape-shot! When the

science of artillery is made to do service in the province of poesy, the poet may as well surrender.

Mr. Lowell, in his "Fable for Critics," less cavalierly dispatches our poet. Hear him: "No doubt, Halleck is better than all he has written," etc.

"And we can't but regret (seek excuse where we may)
That so much of a man has been peddled away."

This rhymes, but it is less witty than personal; the manner of the reviewer suffers by contrast with the dignity of his subject. Certain it is that flippant criticism, rendered in such inharmonious language, is not sufficient to consign a poet to obscurity.

In 1836 Mr. Bryant thus reviewed the author of "Marco Bozzaris": "His humorous poems are marked with an uncommon ease of versification, a natural, unstudied flow and sweetness of language," etc. "Aerial facility is his peculiar endowment," etc. "His poetry is remarkable for the melody of the numbers," etc. "You find in no poet passages which flow with a more sweet and liquid smoothness," etc. "Why does he not more frequently employ the powers with which he is so eminently gifted? He should know that such faculties are invigorated and enlarged, and rendered obedient to the will by exercise." Mr. Halleck, however, knew that a poet has "a hard time of it" when he attempts to render his muse obedient to his will.

Let us now proceed to examine some of his poems in the order of time in which they were written. It would be futile, at this late day, to enter into any microscopic analysis. Nor would we venture, for its hip, to anatomize the rose; or for its bones, uncrest and tear the glittering humming-bird.

To (Dedicated to Miss McCall). Dated 1818. One of the poet's earliest versions. Poetic and melodious; in merit, equal to some of Moore's melodies. The last lines, that read

"The wild-flower wreath of feeling,
The sun-beam of the heart,"

are slightly extravagant.

Fanny. The first portion was published

in the year 1819; the second part in 1821. The entire poem was reprinted in London in the year 1837. This long *jeu d'esprit* became popular in society and among local politicians, and was widely quoted. Its wording is melodious, clear, and fluent; but the stanzas are loosely strung together, and none of them have especial merit. In subject the poem is too local; the men and things spoken of are temporary, and have no interest for modern readers. What there is of fun is largely personal, and has lost its object by change of circumstances.

On the Death of J. R. Drake. First published in the year 1820, in the *Quarterly Repository*, and soon after copied into the *New York Evening Post*. Simple, natural, and elegant; tender, pathetic, and genuine. Collections of good English poetry can never spare these verses. There is no better elegy in our language.

Psalm 132. Dated 1821. It deserves to be well-remembered.

Wyoming. Dated 1821. Lacks interest and individuality. With the fifth stanza our sympathy is rudely undone, and we are warned against a succession of poetic pitfalls.

Burns. Dated 1822. Has had many admirers. This composition is too diffuse; one-half might have been expunged with advantage. As a matter of course, the thirty-eight stanzas are of unequal merit. The six opening ones, together with the twelfth, thirteenth, twenty-eighth, and thirty-second, indicate the best parts of the poem. Readers should not place much faith in "specimen bricks" taken from literary structures. Felicitous passages, chosen from the many, by no means indicate a successful composition; a good poem is only such in its oneness.

Mr. Whittier has composed similar verses on the same subject. The elder poet addresses the "Wild Rose of Alloway," whilst the modern writer apostrophizes "A Sprig of Heather." Altogether Mr. Halleck's original version is the more poetic, but less compact, of the two, and contains nobler passages. We hold to

the axiom that, unless imitation be an improvement, or supplementary, there is no good reason for its existence.

Alwick Castle. Dated 1822. The first half is happily worded and euphonious; the lines are musical and flowing; the description is picturesque; the sentiment noble. But, alas! the second half, in which, among other commonplaces, our author tells us that modern Highlanders

" — Put on pantaloons and coat,
And leave off cattle-stealing."

And that

" The Duke of Norfolk deals in malt,
And Douglas in red-herrings," etc.,

is incongruous and farcical. We are none the happier or wiser for such information.

Woman. Dated 1823. Gallant and meritorious verses.

Marco Bozzaris was first published in 1823 in Mr. Bryant's *New York Review*. It has been translated into French and modern Greek. An inspired and thoroughly well-sustained lyric, containing eloquent passages in variety. It would be superfluous to enter into any analysis of its merits.

Connecticut. The first portion was published in 1823 in Mr. Bryant's *New York Review*. The second part of twenty-five stanzas appeared in 1852 in the *New York Knickerbocker Magazine*, under the title of "Extract from an Unpublished Poem." This entire composition may safely be consigned to the regions of commonplace.

Red Jacket. First published in 1828 in a *New York annual*, called *The Talisman*. It reads like an impromptu effusion—such as it really was—having been written within two days, to match an Indian portrait. This is a peculiar composition, being, by turns, poetic, sarcastic, descriptive. The introductory verses are cursory. *Red Jacket*, the Mohawk chieftain, is well drawn. But the author nowhere in the many stanzas rises to his highest ability.

Love. Dated 1830. The rhythm is melodious, and some of the passages are elegantly worded. But all five stanzas are, more or less, disfigured by confused and extravagant metaphor.

The Field of the Grounded Arms. Dated 1831. Mr. Bryant, as a critic, has been among its numerous admirers. The lines are unrhymed, and Horatian in structure; the wording is precise and melodious. We discover in this version more of patriotism than poetry.

Translation from the German of Goethe. Dated 1838. Introductory to a part of *Faust*. An elegant version, wherein the sense of the original is rendered in a masterly manner.

Young America. First published in the *New York Ledger* in the year 1864. On the appearance of these verses much disappointment was manifested among Mr. Halleck's admirers. What incentive the veteran had, after so prolonged an interval of silence, to make public so lame a strain of commonplaces, it is difficult to determine. This poem betokens neither wit, elegance, or invention. As it is, however, it closed Mr. Halleck's literary career. In conclusion, let us express our high regard for this cherished American man and poet.

WILLIAM WEIDEMEYER.

D U T Y.

I KNOW Love's fruit is good and fair to see
And taste, if any gain it; and I know
How brief Life's passion-tide, which, when it
ends,
May change to thirst for knowledge; and I know
How fair the realm of mind, wherein the soul,
Thirsty to know, wings its impetuous way
Beyond the bounds of Thought; and yet I hold
There is a higher bliss than those, which fits
A mortal life-compact of body and of soul,
And therefore double-natured—a calm path
Which lies before the feet, thro' common ways
And undistinguished crowds of travelling men,
And yet is hard to tread, tho' seeming smooth;
And yet tho' level, earns a worthier crown.

EPIC OF HADES.

THE OLD AND THE NEW EDUCATION.

AS a man of threescore might smile at a youth's prattle about progress and culture, so, perchance, may the man of the twentieth century smile at the discussions of to-day concerning these themes. From things to thoughts is the natural order of study. We have reversed this, and by thought and investigation of thought, are attempting to identify things. One hour's handling of gold, and seeing it wrought into forms of beauty, will teach more about the metal than would a year's study from a book, and that, too, with a thoroughness that gives permanent knowledge. The same remark will apply to paper-making, printing, making of cloth, cutlery, or machinery.

Nature environs the human infant with objects whose qualities and uses he should learn—grass, trees, birds, earth, fire, water. Whilst the body is growing the mind should be learning its surroundings. But the first move of the "educator" is to harness up the free, questioning mind of childhood which has hitherto been learning nature's lessons from parents and companions, and proceed to bit, bridle, and rein it in the methods of the schools. Instead of the fresh herbage the child has been accustomed to nibble as he listed, he is crammed, against his will, with the dry fodder of a-b—ab's, the one-two-three of numbers, and all the endless nomenclature that reading, spelling, and arithmetic include. The little sufferers die by the scores and hundreds, and other learned prattlers call their diseases diphtheria, scarlet fever, etc., while in truth their disease is one—exhausted vitality induced by the struggle with "thoughts beyond the reaches of their souls."

Modern scientists may call this the "survival of the fittest," but what poor blasted wrecks the survivors are. Where do we see among our students the splendid athletic manhood of the ancients, whose "academies" were "God's first temples"? Violently torn from nature's

free halls, and shut within the school-prison, the child's natural curiosity is crushed out by forcing his attention upon subjects he cares nothing about, and his memory is exercised at the expense of other faculties. The object of almost every teacher seems to be to convert his pupils, in the shortest possible time, into mere mnemonic machines. It is appalling to think what an immense load the memory of every educated person carries. Were the perceptive and reflective powers properly educated, they would materially aid the memory in bearing its burdens. Moreover, the mind of every student is oppressed by vast numbers of precedents, and authorities, opinions upon opinions that lead back to the earliest records. What a blessing, what an unappreciated blessing to scholars, the burning of the Alexandrian library! What wisdom in the Providence that has permitted so many books and manuscripts to go back to dust!

We fancy the past wiser than we! Not so. The mind of man in every age, judging from the Bible and ancient histories, has developed to about the same degree. It is well that a few books, a few records, a few monuments have come down to us from early ages, but it is not to be deplored that many have perished. The mind is limited in its powers of acquiring and apprehending ideas; when we strive to learn everything, to compass all knowledge, to read all books, understand all tongues, we must necessarily fail. The mind, like the body, can not be forced without injury to its subsequent strength and efficiency. This is especially true during the early years. The mind works through the brain, the most delicate of bodily organs; any overwork tells upon it with fatal effect; and what renders the matter more intricate, is the fact that the injury may not be apparent when first inflicted. Years after it may crop out in some peculiar phase of mental or moral insanity. Men and women totally ignorant of mental philosophy and physiology

are employed to teach the youth. It would be less important that these persons should be ignorant of arithmetic and grammar and be licensed teachers, than that they should be ignorant of the laws of mental growth and health, and yet be placed in these responsible positions.

The educational problem has been much studied; we will question it farther. Is it better to con over another's thoughts than to acquire the power of thinking and deciding for one's self? Is memory, or the recording power of the mind, higher than the inquiring or perceptive power, or than the reflective, inventing power? Is knowledge of dead languages better than knowledge of living languages? Most advocates of the memory-worshipping system of education answer these questions practically in the affirmative, and their pupils acquire the dry bones of science, language, and art. There is no life in their learning; it is the "thus saith" of some hoary ancient, not the "I know" of the practical, fountain-head student. There is no magnetism, no vitality in their knowledge. Neither eye, hand, or brain has acquired true understanding. Fortunately this old book-worship, this word-for-word tramping in the track of other minds, is passing away, and object-study is taking its place.

The "new education" is doing wonderful things in the scientific fields of thought; is it doing as much in art, music, literature, and language? Are students in these departments working out new knowledge, or are they copying copies of works and writings of the long ago? Are our sculptors carving out new, nineteenth century conceptions, or are they making Dianas, Venuses, and Psyches still? Are our artists painting new visions of beauty, filling glowing canvas with new thoughts, or are they, too, copying the "old masters"? Can our authors utter new truths in more striking and significant phrases than did the old authors, or are they piling tome on tome of commentary upon Milton,

Homer, Shakespeare, Plato, the "literary Titans" of the past? Is thought and life but a tread-mill, or is it possible to strike out new paths, create new conceptions? When we have gone the round of knowledge of the schools, is there no beyond? Have we reached the "be-all and end-all" of thought? Poor creatures of earth's short day of life, how paltry is our knowledge if on some other planet there be not better opportunity to expand, grow, develop! What we call our civilization cramps and narrows us; our little homes, our fenced fields, our petty measures of value—pints, inches, and pennies, all this dwarfs us. We can not justly conceive great distances, heights, extents, nor great motives, pure and lofty ambitions, exalted patriotism. We are pigmies, mental and moral pigmies; we have never been educated out of the little, the gross, the selfish. In the sight of Infinite Intelligence we are *so small*.

Is life becoming something more or less worth living? Would we willingly go back to implicit faith in priests, bishop, pope? Are we willing to acknowledge the divine right of kings? Can we believe the scholarship of the translators of the Bible was so perfect that no translation more exact can be made? Would we give our scientific knowledge for the scientific knowledge of even fifty years ago? Would the women of to-day go back to the position women held at the beginning of the century? Would they yield up the chances they have for education, for labor in congenial fields, for equality before the law, and return to the old state of semi-slavery? Is not our Christian faith a better, broader faith than that of the Middle Ages?

Can we grow? Will the new education enlarge our capacities? The future must answer these two questions. We are certain the answer will be affirmative. In time fences will be removed, the domain of nature will be free for eye and thought to range; all study will commence with the outward, material side of the sciences, and without strain of the youthful mind will pass to the difficult, the abstract

every person will choose the line of thought and study to which his preferences and capacities call him; the cultivation of the social, æsthetic, moral, and mental natures will go hand in hand; men and women will learn how constant devotion to petty, selfish interests dwarfs them, and they will emancipate themselves from the bondage of dress, of show, of sham; all will learn that exclusive attention to self belittles the intellect as well as the moral nature, for no selfish or bad person can rise to his greatest intellectual possibility; the masses will learn that whatever harms one member of the community, or one portion of the body politic, harms all; for the interests of the lowest, most insignificant seeming member of society are so entwined and woven in with the interests of each and all members of his community, and hence of the world, that to disregard one is to injure all. "No man liveth to himself." It is for the good of every man, though living apparently apart from them, that every child, man, or woman should be instructed, that every criminal should be, not simply punished, but reformed. The servant of the king's son may poison his master morally, thus vitally injuring the State. The young everywhere are constantly exposed to evil from ignorant, evil people surrounding them in humble

capacities. Hence the new education to do its utmost of good must be universal, especially in social and moral phases. Man everywhere must learn to feel brotherhood with man; the narrow distinctions of family, race, and nationality must be broadened. The new education must take as its teachers all the "graces of the Spirit," especially employing charity or love, to convey its precepts and teach its rules to every heart of man throughout the broad universe.

When this is done, crime will cease, prisons will be empty, no man will contrive ill against his fellow. The liquor traffic will die. That demon in the heart of man that leads to murder and to kill in war will be cast out. The gentle angel of peace will wave her sceptre over the world, and blossoms of good-will and good deeds toward men will spring up on every hill-side and in every valley. Christ the great Teacher will reign everywhere in the hearts of men, and the new education which presents all knowledge in a spirit of gentleness, conciliation, and love will be seen to have had its greatest exemplar in Him who gathered His disciples together upon the hills and in the groves, and drew His lessons from the grain, the grass, the sparrows, and the lilies of Judea.

A. VERONICA PETIT.

THE ROBIN.

THE American robin belongs to the family of thrushes. The scientific name for him is *Gurdida migratorius*, meaning migratory thrush. It has been stated by at least one writer, that the robin is gregarious in winter, thousands of them having roosted every night during winter, in a willow marsh about four miles from his residence. I can not speak from personal observation on this matter, but this I do know: that his cheerful note is among the first to greet me in the early spring, and it is always hailed with a thrill of delight. We all know nearly everything about the robin, and he is nearly everybody's particular friend.

What would you or I do, dear reader, if we saw one in the claws of a cat? Why, rescue robin, if possible, and annihilate the cat, of course!

We like him for his friendliness, his sociability, and good-nature; but we *don't* like him for stealing our berries and cherries and such. Verily, he is an adept at that business! "Stealing," did you say? He spurns the vile aspersion! Just look at the honest countenance he wears, and observe the boldness with which he looks you in the eye when you know his crop is full of them, and then accuse him of *stealing*, if you can. He flies directly from your cherry tree, and

alighting on the pickets in front of your house, salutes you with his quip, quip-a-quip, as innocently as any honest bird might do; but oftener, he leaves the tree or berry patch with his mouth full to carry home to the children. But how he does "gobble" them. The tree hangs full of luscious fruit, but they will strip it naked in half an hour, if you let them alone. It is astonishing that so small a body possesses such capacity! But when you remember that his *capacity* for worms and other vermin that destroy your fruit is just as great, you can for-

of dignity becoming an emperor. But somehow, it doesn't become robin; it makes him seem awkward, and you laugh in spite of yourself. He is too full of business (that means grubs!) to notice you; but if there is a cat around, he takes notice instantly. The way in which he catches them (I mean the grubs and bugs, and things), shows plainly that he understands his business, and knows how to attend to it properly. He is not very artistic in his nature, as his nest will testify. It is large, coarse, and clumsy, but it serves just as well, perhaps, as a



THE ROBIN.

give his little weakness in this particular; for robin only eats your fruit, while the worms eat fruit, foliage, and all, and kill the tree into the bargain. An observer says that the bird appropriates mainly those cherries and small fruits which are worm-eaten, as he has found upon examining the stomach of a robin which he had shot while helping itself to his fruit.

I think myself justified in dubbing robin a wag. Did you ever watch him searching for grubs? What a comical appearance he makes of it! He walks with slow, deliberate step around the hills of corn and potatoes with an air

shelter for the four or five little ones which come to life within it, as if it were as skillfully and laboriously constructed as that of the orchard oriole.

A tiny brook runs through a meadow, and along its bank is a path which I have often trod. There it is quiet and secluded, and therefore a great resort for robins. It is just deep enough for them to stand in, with the water reaching up to their red waistcoats. You will see them in pairs all along the banks, and what splendid baths they do have here! How I have envied them as they fluttered their wings in the cool, clear water, and

dashed it in a spray about them. I might pass within two feet of them, but they would not mind me, for they knew I was their friend. I would commence talking to them as soon as I got within hearing distance, and they only raised their heads and turned one eye upon me, just to see who it was, and then went on with their bathing.

Well, they are useful to us, after all, and we can afford to let them take their tithe of berries and cherries for the good they do as insect and worm destroyers. They are dear, comical fellows, and so intensely natural! "With all their faults we love them still," and would not do without them if we *could*.

OLIVE A. DAVISON.

TRUST THE CHILDREN.

Trust the children! never doubt them!
Build a wall of love about them.
After sowing seeds of duty,
Trust them for the flowers of beauty.

Trust the children. Don't suspect them.
Let your confidence direct them
At the hearth, or in the wildwood,
Meet them on the plain of childhood.

Trust the little ones! Remember
May is not like chill December;
Let not words of rage or madness
Check their happy notes of gladness.

Trust the little ones; yet guide them,
And above all, ne'er deride them;
Should they trip or should they blunder,
Lest you snap love's cord asunder.

Trust the children! Let them treasure
Mother's faith in boundless measure;
Father's love in them confiding,
Then no secrets they'll be hiding.

Trust the children! just as He did,
Who for "such" once sweetly pleaded,
Trust and guide, but never doubt them,
Build a wall of love about them.

THE YOUNG FOLKS OF CHERRY AVENUE.

CHAPTER I.

THE GAME OF CROQUET WHICH WAS NOT FINISHED AFTER ALL.

"NOW, Edith, that is not fair to push your ball into position."

"I didn't do anything of the kind."

"Why, how can you say so? I saw you do it."

"I just don't care. You are a mean, cross thing, Lizzie Payton, and I'll never speak to you again."

Saying this, Edith Manley threw down her mallet, and ran down the lawn toward the gate.

"What's the matter, Edith?" screamed the other two girls, who were at the lower end of the croquet field. But the angry girl continued her flight without making any answer.

"She said I had cheated, because I got through both these wickets with one stroke," said Lizzie, "and then said *she* never did, when, only a minute before, I saw her push her ball with her foot right into position, where it is now."

"Why, I croqueted on it, and sent it over there," said Sophie Deane.

"Yes, I told her that I'd seen her move it," went on Lizzie, "and she got very angry, and called me a mean thing, and threw down her mallet, and ran away."

"Oh, she gets mad so easy," said Milly Sommers, "just because she can't have her own way, and it's real trying to play with her."

"I think she don't always mean to be disagreeable, and don't intend what she says," said Lizzie.

"Well, she's disagreeable this time, for she's broke up the game; for we can't play partners any longer, and I don't like to play, every one for herself," said Milly.

"Let's run over to the barn and get Fred," Sophie suggested.

"What! would you play with your hired man?" exclaimed Milly, in a tone of high disdain. "Mamma says it is so

low to make yourself familiar with servants, and they are sure to take advantage of it."

"Fred is a real good fellow," returned Sophie. "He plays croquet nicely, and keeps the grass here close for us; and I'm sure I don't see why he isn't as good as anybody."

"It is so low-bred to make free with servants," repeated Milly, with the air of an elder giving a rebuke. "I should think, Sophie, you would not be seen in his company. Why, you don't eat at the same table with him, do you?"

Sophie's cheek flushed as she answered, "Oh, no; he eats with cook and Betsy, of course."

"Well, then, if he's good enough to play croquet with us, isn't he good enough to sit and eat with us?" asked the young Miss, tossing her head.

"Oh, that's different; indeed, it is; isn't it, Lizzie, very different from playing croquet out here? When papa, mamma, Mary, and I sit down to eat, we want to be by ourselves; and we talk about things which we don't want the servants to know. It's nice, too, to have only the family together at the table. Papa says he likes to have only his own family at the table: it feels then like home—there goes Tal."

"Yes," cried Lizzie, "he'll play with us. Let's ask him. Tal! Tal!" she shouted.

Tal was Edith's brother, a boy about eleven years old. Hearing the call, he jumped over the low fence which surrounded Mr. Deane's residence, and ran across the lawn to the croquet field.

"What's wanted?" he asked, as soon as he had reached the girls.

"We want you to play with us," replied Sophie; "Edith got angry a little while ago with Lizzie, and ran away, home, I suppose."

"Yes, she came home, looking as mad as fury, and I asked her what was the matter, and she told me to mind my business. I was just a going around to the barn to see the new chickens Fred told me you'd got."

"Let's begin all over again, and choose

partners," cried Milly. "I've quite forgot where I was."

"Oh, yes, Milly, you want to get Tal on your side; you always have him," said Sophie.

"Well, Edith was on my side, and it's no more than right that Tal should take her place," responded Milly, stabbing a little clump of plantain with the handle of her mallet.

"I'm sure I don't care," said Lizzie, "only let us go on with the game, or begin over; I can't play much longer anyway."

While this discussion was going on, Tal had picked up the abandoned mallet, and was amusing himself by knocking the balls about promiscuously. As Lizzie finished her little speech, he remarked:

"Well, I guess we'll have to begin again, 'cause nobody knows where anybody is now, and I'd just as lief be first and on Milly's side."

Suiting the action to the word, he placed his ball in front of the first wicket and began the game by knocking it through. Sophie took the second place, and, in a minute or two, the game had been fairly started.

Tal was a bright little fellow, ready for a frolic at all times, and brimming to the eyes with mischief. He was a general favorite, although his pranks often provoked an angry outburst among his playmates. His good-humor, however, usually succeeded in turning their anger into fun. He was a good croquet player, and liked dearly to win; yet, in the midst of a game, his fun-loving nature could not always resist a good chance to play off a trick, especially at the expense of his opponents.

The game went on peacefully enough, and Tal had successfully pushed his ball to within two wickets of the home stake, and then thought he would sport around a little as a "rover," meanwhile helping his partner, and putting as much confusion into the ranks of the enemy as he could. Having made a famous stroke, he threw down his mallet, and went over to an old apple-tree on the margin of the

croquet field, where he tried sundry experiments at standing on his head, with his legs up against the trunk of the tree for balance.

"Tal Manley, you make me laugh so, I can't knock my ball straight," cried Lizzie. "Just look at the silly boy, girls! He'll smash his head in yet."

"Yes, and lose what little sense there is in it," responded Sophie.

"What's that you say?" demanded the boy, jumping upon his feet, and running, with a great show of offense, to Sophie. "Here, let me see what sort of a little cocoa-nut you have." Running his fingers through her flowing tresses, and pretending to feel of her head, he exclaimed, "A banged-up head, a banged-up head; all the sense has been knocked out of it."

As Sophie wore her hair in the fashion called "a bang," Tal's humor had some point, and the girl, feeling quite piqued, said: "I declare, Tal Manley, you are quite insulting; I won't have you talking that way to me."

"Beg pardon, beg pardon, Miss Queen Deane."

"He seems to think that great cabbage-head of his a wonderful one," remarked Lizzie, in a merry tone.

"Yes, and you think yours is a beet head, 'cause you're so sweet."

At this sally the other two girls burst into a loud peal of laughter, and the sensitive Lizzie blushed at first and then joined in the fun. Without waiting for them to stop, Tal picked up his mallet, saying, "I think it's my turn, and I'm just going to sail right into that yellow ball like an old hen into a hunk of boiled cabbage." He then gave his ball a violent blow, which sent it two or three yards beyond the yellow, missing that, and making it the easy prey of Lizzie's blue, close to which it rolled.

"Ha, ha, ha!" rippled Lizzie's musical voice. "Now I've got you, master Tal, and will pay you off for what you've said. It's just what I wanted, to reach my wicket, and then, sir, I shall have but one more to go through to be up to you."

Tal didn't like the situation, and stood

ruefully by his ball, as Lizzie tapped it lightly with the blue, and then, by a sharp stroke, drove her ball toward the wicket, and his off at an angle. In another moment she was through, and one more blow had given her a good position for the next turn.

"Ha, ha! who's ahead now?"

"Sophie, of course," replied the boy, in a tone that indicated a struggle between his desire to be good-natured, and his disappointment at the unexpected set-back he had received. As Sophie was behind them all, Lizzie laughed again.

"Now, Madam Payton, you needn't feel so good because you have got up there," said Milly, and, turning to Tal, she continued, "Tal Manley, you are really foolish to play around, as you most always do, when you think you are so near out. You see now what you get for it."

"Well, don't you let her go out," retorted Tal; "just you send your ball up here by mine, and give me a chance to work up to that wicket, and you'll soon see Miss Blue flying into them strawberries."

"Them strawberries," shouted Sophie, "is that the word Miss Clem teaches you to say?"

"Well, *those*, if that'll suit you any better. Just as if I didn't know what's right."

"Then I'd say it. Milly, it's your turn; are you ever going to play?"

"I was waiting for our new school-marm to finish her lesson to the young man—why, what's the matter with the chickens? How they are screaming. Let's go and see."

Down went the mallets, and all started for the poultry-yard, which was at a distance of fifty or sixty yards, and in which a great fluttering and screeching were heard. Milly's quick feet reached the noisy inclosure first, but Tal was close behind her, and with one swift glance, discovered the cause.

"Oh, Sophie! here's a horrid black dog chasing your chickens!"

Sure enough, a rusty black dog of surly

appearance had somehow gotten into the poultry-yard, and was driving the chickens round and round, in and out of their roosting shed, snapping at them with furious jaws, and, when he could, catching a poor, scared bird which fluttered near him, and tearing and shaking it to death.

"Fred! Fred!" cried Sophie. "Fred! Fred!" repeated the other children in alarm. But no Fred replied.

and he won't be back in an hour!" exclaimed the lady.

"Oh, the murderin' brute," burst out Kate, the cook. "There's Jimmy over at Williams's; he may be after bein' at home."

"Yes, Kate, go right over, and if you can find him, ask him to step over."

"I will, ma'am," and off the girl went on a trot.

"Oh, the poor little things; they'll be



TAL'S FALL INTO THE CHICKEN-YARD.

"I must go and tell mamma," said Sophie, and off she ran to the house. In a few moments Mrs. Deane came down the path from the house with Sophie by her side, and followed by her cook, and Betsy the chambermaid. She was a slight, nervous lady, and shared the excitement of the children as soon as she saw the dog.

"Dear me, I sent Fred to the store,

all killed if we don't stop that dog's work soon," cried Lizzie, her eyes filled with tears of pity.

"Why don't the stupid things run out through the opening there?" asked Milly, adding, to the dog, "Oh, you great ugly brute."

"I suppose that they are too scared to see it."

"That's where the dog must have

squeezed in to get at them, for the gate is latched."

"My papa has a gun, but I don't know how to shoot it," said Tal; "I wish I did, for I'd get it and pepper his eyes out."

"Children, you had better all come into the house," said Mrs. Deane. "That dog might get out and bite some of you. Just think, if he were mad; and he certainly acts so."

"Oh, can't something be done for the poor chickens? I can't bear to see them torn to pieces. See! that ugly thing has caught another," cried Lizzie, in great excitement.

"If you will hold the door open, Lizzie, I'll go in and break the villain's head with this mallet," said Tal.

"No, no, no, Tal, it would never do; I shall not let you do such a thing. You'd better go home, all of you," rejoined Mrs. Deane quickly. "Come, Sophie, into the house; I left baby asleep in her crib; she might awake and find herself alone. Really, children, I'm afraid that dog will get out and bite one of you." Saying this, Mrs. Deane turned toward the house.

"Look here, I think we can fix the old monster," said Tal. "Girls, you all go into the house, and I'll bring the ladder, and Betsy'll get up on it and open the gate, while I'll fire stones at him."

"Sure an' I'll be bit if I do that," said the chambermaid, in alarm.

"No, you won't, a bit; I'll get on the fence with a lot of stones in my pockets," and the little fellow commenced picking up the stones as fast as he could.

"I'll bring the ladder," said Sophie.

"And I'll help," cried Lizzie.

Off they ran to the barn, and soon returned, carrying the ladder between them. Tal took it and planted it against the fence, which was a high one, and then climbed up and perched himself on the roof of the shed.

"Now, Betsy, you unlatch the gate, and get up on the ladder."

Betsy, not to be outdone by a little boy, did as she was ordered; the girls, meanwhile, having run away.

At a signal the gate was swung open, and Ted commenced throwing his stones at the dog. No sooner had the gate been opened, than the chickens that were unhurt, flew pell-mell for it, and flocked noisily into the garden. But the dog didn't follow them at once. A heavy stone had struck him on the back, and drawn his attention to the enemy on the shed; and he glared and growled spitefully at Tal, who kept up his fire until his ammunition was gone. The last shot struck the murderous cur fairly on the mouth, and made him wince at first, and the next moment he sprang furiously toward the shed, and leaped up, in the vain attempt to get at the boy. Tal had taken up his mallet, and now used it with some effect, battering the dog's head whenever it came within reach.

"That's me fine boy," encouraged Betsy; "give the murtherin' brute another poke like that wan, and he'll be sick of the business, I'm thinkin'."

"If I get a good chance I'll give him one that'll make him sing," returned Tal. The dog leaped up as the boy spoke, and he concentrated all his little strength in the blow he gave, but in the effort lost his balance, and fell into the chicken-yard plump upon the enraged dog.

"Musha, he'll be kilt now," screamed Betsy, and Mrs. Deane and the girls, who had been watching the battle from a second-story window, responded by a cry of distress.

But the dog, as if astonished by this unexpected onset, gave one vicious snap at his prostrate enemy, and dashed out of the inclosure, and out of the garden into the street. Tal got up and limped out. He was evidently hurt some, but wouldn't admit it, and kept back the tears which had started in his eyes. Sophie, Milly, and Lizzie all rushed down to him.

"Oh, I hope you aren't hurt," cried they all, helping to brush the dirt from his dress.

"Not much, I guess, only I most broke my right leg."

"He was afther fallin' right on the

dog, and I was lookin' for him to be chawed up just as if he was a chicken," said Betsy.

"See how your coat's torn," said Milly, pointing to a bad slit in the left shoulder. "What'll your mother say?"

Tal looked ruefully at the damage. "That's worse than having a broke leg; mamma just sewed on two buttons this morning that was torn off yesterday while Sam Williams and I were playin' leap-frog." His lip quivered, and a sob followed.

"Never mind, Tal, you made that horrid dog run away, and if Mrs. Deane'll lend me a needle, I'll mend your coat," said Lizzie.

"Oh, mamma 'll do that, I know," cried Sophie. "Here, give me your jacket, Tal, and I'll take it in to mamma."

Thus cheered up, Tal's eye brightened, and he took off the garment, saying:

"I'd be much obliged if she would, Sophie; and while I'm waiting for it I'll go and drive the chickens back. See, they're over in the tomatoes. I guess I aint hurt much, my leg feels most well now."

Sophie ran into the house with Tal's coat, and relieved her mother's anxiety for the brave little fellow. Mrs. Deane took the coat and set about repairing it.

Soon afterward Kate made her appearance with the coachman.

"Seems to me that you've been a long time," said Sophie; "we might have been all killed."

"Shure, Miss, an' didn't I have to wait there till he'd finished harnessin' the hosses for Mrs. Williams to take a ride? and thin we come as quick as iver our fate would bring us."

"Well," said Milly, "you're too late, for the dog's gone."

"Was that him running down the street on three legs," asked the coachman, "two or three minutes ago?"

"Yis, for the b'y give him a good swipe wid wan of the stones right on wan of his fate," replied Betsy.

"I'm thinkin' it's Mr. Beck's dog, who lives 'bout half a mile down. They say

he's great on chickens. I wish you'd just fastened him up."

"Then the chickens would have all got out into the road, and, besides, papa doesn't want them let out into the garden, because they are sure to get at the vegetables," said Sophie; then turning to the cook, "Kate, I think mamma wants you, for baby's awake."

Kate obediently left the group, and went to her mistress.

Meanwhile, Lizzie had gone, and Tal had driven the chickens from the tomato patch, but as they showed no inclination to return to their quarters, and scattered widely over the grounds, he found his task a very difficult one. Finally, he shouted, "Sophie, Milly, I do wish you'd come and help. These old things won't go at all the way I want them."

"It's about feedin' time; give them a little corn, then they'll come," advised Mrs. Williams' man.

"Tal, come here," called Sophie. "Let's give them some feed."

"Do you know what damage the dog's done?" asked Jimmy.

"Oh, let us go into the chicken-yard and see," cried Milly.

Tal came tripping up, and they all went into the inclosure, and found three of Mr. Deane's favorite brown Leghorns dead, and two others with their wings broken, fluttering on the floor of the roosting shed.

"You're pretty lucky," said the coachman. "Mr. Thompson had eighteen killed the other night, and he thinks it was by the same dog. What you goin' to do with them fowl, youngster?"

Tal had picked up the two wounded birds, and was holding them gently in his arms.

"Poor chickies! I wonder if Dr. Lover couldn't mend your wings," he said pityingly.

"I guess Mr. Deane'll have to chop their heads off, and make a pot-pie. That'll be the only way to cure 'em," rejoined the man.

"If I was a doctor I'd cure chickens, I guess, just as much as people that have

broke their arms or legs; and I wouldn't like to kill such nice fellows as these," said Tal.

"Who'd want to eat chickens that have been in a dog's mouth?" asked Milly.

"Well, I'll just take 'em into the barn, and put 'em on some nice, soft hay, and when your papa comes home, Sophie, he can do what he wants with the poor things."

"Get some oats out of the bin there, and bring it along," said Sophie, "and then we will call the others in."

Tal carried off his wounded charges, and soon returned with both hands filled with oats, which he scattered on the ground of the poultry-yard, saying:

"You call 'em, Sophie; they know your voice. I guess they've had enough of me."

"Yes, I feed them nearly every afternoon. They'll come."

"Well, I must go home now," said Milly, "because it's getting rather late, and mamma, you know, is very strict about our all being ready for dinner when papa comes in from the store."

"Well, good - bye, Milly," returned Sophie, going up to her and kissing her; "stop for me in the morning when you go to school."

"I will if I don't forget. Good-bye."

"Good-bye, and last tag," cried Tal, touching Milly's shoulder as she passed him, and then jumping away.

"I won't run after you, Tal Manley, so you needn't be so smart," protested the young Miss pettishly.

"All right! Last tag, just the same," persisted the roguish boy.

Milly gone, Sophie called the chickens, and they obediently came trooping into their inclosure, and commenced devouring the grain in their usual greedy manner.

"Now, Sophie, you'd better push the board over the hole there, or they'll get out again. I think it's a good deal too big for chickens, anyway, and see how loose it is," said Tal, kicking it with his foot. "There, that's just how the feller got in; he must've pushed the board back with his nose."

"I shouldn't wonder if that was the way he got in. I'll tell papa about it, so he can fix it this very night."

"I wonder if your mamma has got done with my jacket; I think I'd ought to go home too."

"Oh, here comes Kate with it in her hands."

"Here, you b'y," exclaimed the cook, "here's your coat."

Tal took the garment, and felt of the mended place, and cried out in a joyous tone:

"Isn't it done good? Oh, Sophie, your mamma'd make a real nice tailor. I'm ever so much 'bliged. Nobody'd think it was ever torn, would they?"

"Is Jimmy afther goin' home?" inquired the servant, looking around.

"Yes, and I s'pose you're sorry that the 'by's' gone," replied Tal, affecting her manner. "And I'm off too. Good-bye, Sophie, and everybody."

"Good-bye, Tal; I think we'll have to call that game of croquet a tie."

"All right, if you say so," rejoined the boy, as he trotted briskly over the lawn, taking a short cut to the fence, where he sprang through the bars, and was soon out of view.

CLARE.

VENICE.

CITY of palaces, Venice, once enthroned
Secure, a queen 'mid fens of flashing waters,
Whom East and West with rival homage owned
A wealthy mother with fair trooping daughters,
What art thou now? Thy walls are gray and old,
In thy lone halls the spider weaves his woof;
A leprous crust creeps o'er thy house of gold,*
And the cold rain drips through thy pictured
roof.

The frequent ringing of thy churchly bells
Proclaims a faith but half-believed by few;
Thy palaces are trimmed into hotels,
And travelling strangers, a vague-wondering
crew,

Noting thy stones, with guide-book in their hand,
Leave half the wealth that lingers in the land.

—Macmillan's.

* The *Casa d'Oro*, a well-known palace on the right side of the Grand Canal, as you sail up.



MAGNETISM AND SOMNAMBULISM IN PARIS.

SOME REMARKABLE EXPERIMENTS.

A CONTRIBUTOR of *L'Illustration* gives an account of some experiments made by the eminent Dr. Charcot in the great hospital of Salpetriere, Paris. It would appear that this savant has for some time been making his observations, with a view to exhibiting, in a clear light, the nature of certain phenomena in nervous maladies.

The writer says: "The studies of the learned professor are connected, intimately, with an order of facts which the wonder-workers of past times and the charlatans of the nineteenth century have often looked into. Animal magnetism and somnambulism have deceived many credulous minds, leading them to accept a supernatural cause. M. Charcot establishes to-day, in a very marked manner, that the phenomena attendant upon them contain nothing supernatural, and that it is easy to repeat in Clinic Hall by mesmerism what the jugglers of the day produce. The subjects are invalids, affected mainly with hysteria.

"I have just pronounced the term hysteria; it will occur at different points in this article, and it is necessary to define its meaning as we go on. The public, little acquainted with technical terms, attribute to it an equivocal significance, which corresponds but rarely with the reality. Some designate under the name of hysterical, persons afflicted with convul-

sive or paralytic nervous troubles, which they attribute often to a perversion of the senses, but which are really connected, like a great number of other nervous diseases—for instance, epilepsy, St. Guy's dance—with convulsions in general, which are owing to some changes of the nervous system yet unknown, and which it is of very great interest to resolve. One will understand, then, that the new researches and experiments of M. Charcot have, from a point of view exclusively scientific, a positive value. One will understand, also, that this word hysteria should not awaken in the mind any disagreeable meaning.

"Let us see, now, how Dr. Charcot has proceeded. In the first of his trials, he had to do with a woman afflicted with a permanent contraction; her left hand was shriveled, the forearm on the same side fell useless by her side; the sensibility even had disappeared. M. Charcot, to move this permanent condition of the disease, had recourse to *magnetism*, and, what is an interesting phase of the experiment, he applied the 'horse-shoe magnet,' not to the diseased arm, but to the right arm, which until that time had remained healthy. At the end of half an hour, a strange phenomenon appeared—the right arm contracts, the shriveling of the left hand decreases. The application of the magnet being continued, little by

little the left hand returns to its normal condition, and it is the right arm which assumes the disease.

"This artificial contraction is so marked, that the invalid refuses to submit to further experiment, fearing mere change of the disease. This is called 'the phenomenon of transfer.'

"But there are other examples more curious still. In grave forms of hysteria or of nervous disease, one can provoke at will lethargic and cataleptic conditions. The sick have what are called *foci*; that is to say, some sensitive or painful points which are easily excited. Thus, in the case of a woman who had every external indication of health, but when subjected to the operator, who exerts pressure upon her back between the shoulders, immediately droops, sinks upon herself, loses consciousness, sensibility, and becomes a prey to the lethargic condition. I can cite an example of a lady who, under the impression of a dash of cold water directed upon the center of the vertebral column, fell immediately. The sensitive point may be compared to the button of an electric clock: you press that button gently, the tick decreases; you press more strongly, the tick is suspended.

"M. Charcot meets one of his *pensionnaires*; he gives her a light stroke with the handle of his cane, and the young girl is taken with lethargy; he touches again, she revives. If the magnetizer be learned in this respect, it will not be difficult for him to operate so as to appear, in the sight of a credulous public, endowed with supernatural powers.

"Troubles of vision are interesting to some of the affected persons; everything appears gray. Some lose at first the idea of violet, then green, then blue, then yellow, then red. Do the colors reappear, the series is reversed; the red is regained first, and then in successive order the others.

"Here, again, comes in the 'phenomenon of transfer.' M. Charcot applies the magnet to the weak eye; straightway it perceives red, and the other eye, until

then healthy, loses the notion of violet; when the one sees the yellow, the other ceases to distinguish green.

"What strange developments! But there is more. A young servant girl is so impressionable, that as soon as Dr. Charcot looks at her in the 'white of the eye,' as they say, she goes into the lethargic state. If the operator then presses one of her muscles it immediately becomes rigid. Does he open her eyes, at once she passes into the cataleptic condition; that is to say, her members keep the position which is given to them—a foot remains raised, an arm extended, the fingers fixed in any position. When the operator wishes to bring her out of the sleep he blows upon her face.

"The electric light performs the same part. A ray which strikes the eye of the subject brings catalepsy; stop the current, the young girl gives a cry, her limbs relax, lethargy retakes possession. There is nothing more remarkable than this sudden change from one state to another, nothing more extraordinary than the awakening brought about by merely blowing upon the face.

"When the experimenter opens both eyes, his subject passes from the lethargic state to the cataleptic state. Dr. Charcot may limit himself to opening one eye, the left for example, then catalepsy appears only on the left side. The converse is also tried. One can then submit the two sides of the body successively to the different conditions, according as one opens or closes one of the eyes. And it is not the light only which acts. At the suggestion of M. Romain Vigouroix, Dr. Charcot has had made a tuning-fork, and fixed it in a box. Two young invalids, whom I shall designate as A. and B., seat themselves upon this box. The tuning-fork is made to vibrate, and they fall into catalepsy. The vibrations are stopped suddenly, and the subjects fall into a state of complete relaxation; to the catalepsy has succeeded lethargy or hypnotism; fresh vibrations renew the catalepsy, and so on.

"This phenomenon is not special to

man; certain animals can experience it. I have made myself the experiment upon a cock. One places the bird upon a black table, presses his bill down upon that table, and traces next with a piece of chalk, in a line directly from the beak, a broad white line, and then leaves him. The cock remains immovable, his feathers raised, his bill set—he is struck with catalepsy.

“Let me describe an experiment in metalloscopy made by Dr. Charcot. The patient had his right side anesthetized; that is to say, deprived of sensibility, and one could prick his right arm with long needles, without producing any painful sensation and without bringing a drop of blood. Around the right arm a bracelet,

composed of pieces of gold, was clasped afterward, and at the end of a quarter of an hour the skin was warm—had assumed a ruddy color; the pricks now became sensitive, and little drops of blood were seen filling them. Other metals could be used in the same way—as iron, zinc, and copper.

“One might ask if any physician well acquainted with the nervous system could be able to reproduce these experiments? The answer is not a matter of doubt. Nevertheless, there is a qualification. Dr. Charcot has the vigorous physique appropriate to the business, a penetrating look, a regular profile, much authority in manner, and a communicative strength of will.”

D.

POISONS AS MEDICINES.

THINGS incidental to the use of drugs may not form a sufficient ground for the use or disuse of them. If a poison-drug can be proved to save life in ten cases and destroy it in the eleventh, or if it aids in the restoration of a hundred and does great injury in a single case, it may be best to use it and let the one be sacrificed for the benefit of the ten or the hundred. But is it true that people recover any more rapidly or certainly by the use of poison-drugs than without their use? Will any candid and intelligent practitioner presume to say that he knows his success in a hundred or a thousand cases might not have been quite as good without drugs as with them? If it is claimed that experience has proved the necessity for drugs, and settled their merits as restoratives on a firm basis, must the claim be admitted without questioning its validity? If drugs have been used and the patient has recovered, must we conclude that the recovery could not have taken place without the drugs? Is it not the tendency to reason thus? “He was sick; he took drugs; he got well. Therefore, the drugs cured him.” Why not reason the same way when the result is different? “He

was sick; he took drugs; he died. Therefore, the drugs killed him.” If all sick persons who take no drugs die, and many who take them get well, such reasoning might prove something. But every candid observer knows this is not true. The question stands thus: Dr. A. has treated a hundred cases in the past few months. Ninety of them recovered perfectly, and four partially, and one died. Good success! The doctor cured ninety-five per cent. and lost but one!! But did he? How would it have been if he had not been called? Would all have died? Would one-half or one-fourth have died? Would the number of deaths have been greater than it has proved under his treatment? Without saying that it would not, we challenge any one to prove the contrary. The fact is, experience is an unreliable teacher here. No two cases are quite the same. No two constitutions are just alike. The vital force in two persons, apparently much alike, may differ greatly. The invasion of disease may be much more powerful in one case than in another and the fact not be apparent at first. Hence, none can safely infer that the result in two similar cases will be the same, with or without treatment. Till

statistics have been carefully kept for a series of years, and covering an extensive field, showing results in an equal number of cases of all kinds of disease, treated with and without drugs, the evidence will not carry with it the weight so generally given it by the advocates of drug medication. Then why not consider this an open question, and apply ourselves to the work of settling it upon an intelligent basis?

Admitting, however, that drugs do more good than harm, and that more cases recover with their use than would recover without them—an admission we make as a hypothesis, and not as an established fact—there are many things incidental to the use of them that may well be taken into the account. One of these is the frequent and fatal mistakes made by physicians in making their prescriptions; of druggists in compounding them, and manufacturing chemists in preparing, labeling, and shipping the various articles used in them.

A few years since, the papers contained a notice of forty mysterious and sudden deaths opposite St. Louis, which were found to result from the administration of corrosive sublimate instead of calomel. In this case the error was traced to the house where the poison was prepared in London, Eng. A quarter of a century since, in one of our large Western cities, a Jewish child was killed by the prescription of a German physician, put up by a young man who had not been informed that his prescriptions were to be put up by the Prussian instead of the American dispensatory. This led to the use of the alcoholic instead of the aqueous extract

of nux vomica. Another such case, in the same city, was the death of the child of an eminent physician, caused by an error in a prescription written by the father, and administered in his absence on his daily round of professional calls. And still another was the administration of sulph. morphia, administered to the estimable wife of a popular city pastor, whose medical adviser intended to write sulph. quiniæ instead. A case, coming home to the writer with still sadder memories, is that of a beloved brother, not very sick, killed by the administration of incompatibles containing prussic acid, which was set free by chemical reaction. If all the known cases of such errors were collected for a single year, it would make a formidable list. And what of the unknown cases? Many occurring in the practice of the most intelligent and careful physicians, no doubt, escape notice. Many more in the hands of ignorant and careless practitioners, not only pass unnoticed, but they in whose hands these cases occur are too often incapable of detecting their cause, should attention be directed to it.

These thoughts are prompted by the death of Mr. George Arthur Gardiner, caused by arsenical poison introduced into a decaying tooth to kill the nerve. His case was an unusually aggravated one. This, and his prominent standing as a citizen of Boston, and a member of a family of high social position, makes it the more noticeable. May it not be well to consider whether all the benefits of arsenic in such cases can compensate for the life of one such man destroyed by it?

J. S. GALLOWAY, M.D.

"WHAT SHALL OUR CHILDREN EAT?"

[WE find in the *Country Gentleman* a criticism of a communication which had been published in that excellent agricultural paper, under the above title. The criticism embodies some suggestions, and is deserving of a much wider dissemination than the *Country Gentleman* or PHRENOLOGICAL JOURNAL can give it. However, with the aim to show at least

our appreciation of such teaching, we give it what publication we can.—ED.]

MESSRS. EDITORS:—Your correspondent S. B. S. makes some remarks that might be supposed to emanate from a kind, though, perhaps, after all mistaken mother. S. B. S. shudders

at the idea of cold water on the stomach of the poor child, but says: "Furnish but little pie and cake, with weak tea and coffee. Do not indulge in the foolish notion that the dear, innocent child must put cold water on the stomach, or nothing. Fix up some warm drink every meal; it will do him good."

If proper food is supplied, little drink is required, especially while eating. But if drink is necessary, why not, instead of warm tea and coffee, give warm milk? Milk is the natural food for a child, and what is not less important, contains all the elements of nutrition for the whole system. As to warm tea or coffee, why not give warm whisky-sling? It would be equally good for the stomach. It might be like tea, given weak to begin with, and practice, with example, would soon teach them to take larger doses. The writer can remember when it was a fashion from high authority to give rum and molasses to children as an antidote for worms, "and it wasn't bad to take, either;" and the idea of tea and coffee, with pie and cake, for health, even in small quantities, for children, is about on a par with rum and molasses, or whisky-punch.

Do we stop to inquire why five of eight children do not live to see twenty years? Why not care for the health as well as appetite of our children? Why not in some measure anticipate the day, as the good Book says, when "there shall be no more thence an infant of days, nor an old man that hath not filled his days, for a child shall die an hundred years old?" Will it require a miracle to bring

the millennium, or shall we live more in accordance with the laws of health? Some do now live to a hundred years. Why may not many, or all? Can any good reason be given why children born this centennial year may not live to see the next?

Our most intelligent physicians admit that most sickness might be avoided; and there is no longer fear of epidemics where sanitary measures are observed. I do not hesitate to predict that before another centennial year sickness will be considered by all "well-regulated families" as decidedly vulgar. But even weak tea and coffee, with pie and cake, for children, will not promote the prediction.

The subject of health was brought to my serious attention some thirty years since, by a sharp call for investigation, by Combe's "Physiology," Graham's "Lectures," Sax on the "Organic Laws," and other progressive works. I was convinced that it was for me to elect how much sickness I might have, and after thirty years' observation, am still more convinced that health is at command. But there are difficulties in the way to this, to me, very acceptable doctrine. One is, we have not time to investigate the subject, unless given up by physicians to die; but the hardest to overcome, is that sickness is beyond our control. The latter seems to be ingrained, and tradition holds us with a firm grasp; but the car of progress is coming, and if there are any who do not wish to be convinced they had better get off the track.

J. W. PRENTISS.

POSITION IN SLEEP.

POSITION affects sleep. A constrained or uncomfortable posture will often prevent repose. Lying flat on the back with limbs relaxed would seem to secure the greatest amount of rest for the muscular system. This is the position assumed in the most exhausting diseases, and it is generally hailed as a token of revival when a patient voluntarily turns

on the side; but there are several disadvantages in the supine posture which impair or embarrass sleep. Thus, weakly states of the heart and blood-vessels, and in certain morbid conditions of the brain, the blood seems to gravitate to the back of the head and to cause troublesome dreams. In persons who habitually, in their work or gait, stoop, there is some

distress consequent on straightening the spine. Those who have contracted chests, especially persons who have had pleurisy and still retain adhesion of the lungs, do not sleep well on the back. Nearly all who are inclined to snore do so when in that position, because the soft palate and uvula hang on the tongue, and that organ falls back so as to partially close the top of the windpipe. It is better, therefore, to lie on the side, and in the absence of special chest disease, rendering it desirable to lie on the weak side so as to leave the healthy lung free to expand, it is well to choose the right side, because when the body is thus placed the food gravitates more easily out of the stomach into the intestines. A glance at any plate of the visceral anatomy will show how this must be. Many persons are deaf in one ear and prefer to lie on a particular side; but, if possible, the right side should be chosen, and the body rolled a little forward, so that any saliva which may be secreted shall run easily out of the mouth, if not unconsciously swallowed. Again, sleeping with the arm

thrown over the head is to be deprecated; but this position is often assumed during sleep, because circulation is then free in the extremities and the head and neck, and the muscles of the chest are drawn up and fixed by the shoulders and thus the expansion of the thorax is easy. The chief objections to this position are that it creates a tendency to cramp and cold in the arms, and sometimes seems to cause headaches during sleep, and dreams. These small matters often make or mar comfort in sleeping.—*Medical Journal.*

[It may be added to the above that the mouth should be kept shut, and the breathing done only through the nose, unless there be some positive physical obstruction which renders it difficult or impossible for one to breathe through the nasal passages, which is the natural way. Persons who snore in sleep generally breathe through the mouth. Animals breathe through the nostrils; and it is observable that cases of pulmonary disease or throat-ail are very uncommon among those who keep the mouth shut waking and sleeping.—ED.]

BEER WILL NOT INTOXICATE.

I HAV finally cum to the conclusion that lager beer as a beverage is not intoxicating.

I have been told by a German who said he had drunk it all nite long, just to try the experiment, and was obliged to go home entirely sober in the morning. I have seen this same man drink eighteen glasses, and if he was drunk it was in German, and nobody could understand it.

It is proper enuff to state that this man kept a lager beer saloon, could have no object in stating what was not strictly thus.

I believe him to the full extent of my ability. I never drank but three glasses of lager in my life, and that made my head ontwist as tho it was hung on the end of a string, but I was told it was owing to my bile being out of place; and I

guess that it was so, for I never biled over wus than I did when I got hom that nite. My wife thot I was goin to die, and I was afraid I shouldn't, for it seemed as tho everything I had ever eaten in my life was coming to the surface; and I believe that if my wife hadn't pulled off my boots just as she did, they would hav cum thundering up too.

O, how sick I wuz! 14 years ago, and I can taste it now.

I never had so much experience in so short a time.

If any man shud tell me that lager beer was not intoxicating, I shud believe him; but if he should tell me that I wasn't drunk that nite but that mystum-mick was out of order, I shud ask him to state over a few words just how a man felt and acted when he was set up.

If I warn't drunk that nite, I had some

or the most natural simtums that a man ever had and kept sober.

In the first place it was about 80 rods from where I drank the lager beer to mi house, and I was jest over two hours on the road, and a hole busted through each one of my pantaloon neez, and didn't hav any hat, and tried to open the door by the bell-pull and hiccuped awfully and saw everythin' in the room trying to get round on the back side of me, and, sitting down on a chair, I did not wait long enough for it to get exactly under me when I wuz going round, and I set down a little too soon and missed the chair about twelve inches, and couldn't get up soon enough to take the next one that come along; and that ain't awl, my wife sed I

wuz as drunk as a beest, and, az I sed before, I began to spin up things freely.

If lager beer is not intoxicating it used me most almighty mean, that I know.

Still I hardly think that lager beer iz intoxicating, for I hav been told so; and I am probably the only man living who ever drunk eny when his liver was not plumb.

I don't want to say anything against a harmless temperance beverage, but if ever I drink eny more, it will be with mi hands tied behind and mi mouth pried open.

I don't think lager beer is intoxicating, but if I remember rite, I think it tasted to me like a glass of soap suds that a pickle had been put tew soak in.

JOSH BILLINGS.

NOTES IN SCIENCE AND AGRICULTURE.

The End of the World.—A lecture was lately delivered at the Berlin University, bearing the above ominous title. The learned professor argued that every movement upon our planet, with the exception of ebb and flood tide, which are caused by the attraction of the moon, is occasioned by solar heat. As, however, the sun loses a portion of his caloric every year, science has lately come to the conclusion that as an emitter of warmth, the sun will only last 17,000 years longer. During that space of time our earth will get colder and colder, in proportion as the solar heat shall diminish. The ice will advance from the poles to the equator; the earth's population will gradually recede before the advancing glaciers; the sun will become less and less luminous, until he will present the appearance of a dark red ball; and finally ice will annihilate all vitality on our planet. But in this age all theories are subject to criticism. It is very easy to establish an admitted hypothesis. If solar heat is the source of motion, of course its withdrawal will produce lamentable consequences. Anyb. dy can understand that. But science has not established any such fact. Another scientific writer, not long ago, demonstrated with mathematical precision, that the earth's orbit is gradually contracting and the earth approaching nearer the sun in consequence, until finally our planet will become food for solar heat, so far as it goes. Perhaps both theories are partially true. If the sun is losing annually a portion of its heat, so also is the earth annually approaching the sun and in about the same ratio, so that terrestrial conditions must remain unchanged. Climate may have something to do with these theories.

Another well-argued theory sets forth that the light and heat experienced by the earth is due to electric emanations from the sun, and that owing to the distance of that orb it is impossible for it to transmit so much heat through space to us.

The Deepest Well in the World.—The sinking of the deep artesian well near Buda Pesth, Hungary, is now completed; the works were commenced as far back as 1868, and during their progress many interesting facts relating to geology and underground temperature have been brought to light. The total depth is 3,200 feet, and the temperature of the water it yields is nearly 165° Fahr. The temperature of the mud brought up by the borer was taken every day, and was found to increase rapidly, in spite of the loss of heat during its ascent, down to a depth of 2,300 to 2,700 feet. Beyond this point the increase was not so marked. At a depth of 3,000 feet the temperature was 177° Fahr., giving an average increase of 1 for every 23 feet bored. Water first commenced to well up at a depth of 3,070 feet; here its temperature was 110° Fahr., and from this point onward it rapidly increased both in quantity and temperature. Thus, at 3,092 feet, its temperature had already risen to 150° Fahr., and the yield in 24 hours from 9,500 to 44,000 gallons. Finally, when the boring had reached 3,200 feet, at which point it was stopped, the temperature of the water, as it burst from the orifice of the tube, was 165° Fahr., and the volumetric yield 272,000 gallons in the 24 hours. This yield was afterward reduced to 167,200 gallons, in consequence of the bore being lined with wooden tubes, which reduced its diam-

eter. The water obtained disengages carbonic acid in abundance, and also contains nitrogen and a little sulphurated hydrogen, and 80 grains per gallon of fixed matters, chiefly sulphates and carbonates of potash, soda, lime, and magnesia.

The Rain Tree.—Some travelers in Colombia, South America, in traversing an arid and desolate tract of country, were struck with a strange contrast. On one side there was a barren desert; on the other a rich and luxuriant vegetation. The French Consul at Loreto, Mexico, says that this remarkable contrast is due to the presence of the "Tamai caspi," or the rain tree. This tree grows to the height of 60 feet, with a diameter of three feet at its base, possesses the power of strongly attracting, absorbing, and condensing the humidity of the atmosphere. Water is always to be seen dripping from its trunk in such quantity as to convert the surrounding soil into a veritable marsh. It is in summer especially, when the rivers are nearly dried up, that the tree is most active. If this admirable quality of the rain tree was utilized in the arid regions near the equator, the people there, living in misery on account of the unproductive soil, would derive great advantages from its introduction, as well as the people of more favored countries where the climate is dry and drouths are frequent.

The Time to Sow the Seeds of Fruit Trees.—The *New York Tribune* says: "For the healthy and perfect germination of seeds, heat, moisture, air, and the exclusion of light are all required. The seeds of apple, pear, and plum trees are usually sown in November, but they will show no signs of germination until the warmth of spring reaches them. Seeds planted too deeply do not grow. The depth of the covering should be regulated by the size of the seed. Small and delicate seeds may be sown almost on the surface, while larger ones may be imbedded to the depth of four or five inches. The small seed requires but little moisture, and has but a feeble force to penetrate a covering, while the large one requires more moisture and has force enough to push its way up. When it is desired to obtain seedlings of a particular variety, free from any cross, cultivators protect the flowers while in blossom to guard against foreign impregnation, and save seeds only from the large and perfect specimens; the seeds should be plump and mature. Mr. Knight's mode of obtaining seedlings of the best varieties was to prepare stocks from some good sort that would strike from cuttings. These stocks he planted in rich, warm soil, and grafted with the kind he wanted the seed from. The first season after grafting he took them up, reduced the roots, and planted again. In this way he succeeded in making them bear fruit in two years. He allowed only two specimens to remain on each tree, and these in consequence were very large, mature, and in

every way fine, and from these the seeds were taken.

"In case of the plum, as disease is now so prevalent, it is generally recommended to have nothing to do with seedlings, unless grown from seed positively known to be the product of sound trees.

"With butternut, as with all forest trees, follow nature as far as possible. Plant the nuts in the fall as soon as they drop from the trees. They may be planted in the spring if more convenient, in which case they should be packed in shallow boxes of sand during the winter. The first year's cultivation of nut-bearing trees consists in keeping the soil loose and free from weeds. A good mulch is also of advantage; indeed, an application of well-rotted barnyard manure perceptibly increases the growth both of butternut and black-walnut trees. When possible, it is advisable to plant the nuts in the place where the trees are desired, to avoid all risk and retarding of growth which accompany transplanting such trees. When local obstacles in the way of soil, undue exposure, etc., exist, the safest plan is to consult a cultivator in the district and take advantage of his experience as to best varieties, etc."

Important Application of a Waste Material.—Slag is now extensively utilized in England for bricks, three million being made annually, and sent principally to London, where they are used for paving streets and crossings. Elsewhere they are used for buildings, river walls, and water-courses. This refuse is also employed in the making of glass. Glass-works are now in operation at blast-furnaces in Northamptonshire, where the slag is run direct from the iron furnaces into the glass furnace, mixed with other materials, and then used for making bottles and other articles of glass.

The Panama Canal an Old Idea.—The idea of cutting a ship canal through the Isthmus of Panama, which now engages the attention of capitalists in Europe and America, is at least three and a half centuries old. Philip II. of Spain had a route carefully surveyed by some Flemish engineers, but never pushed the matter. Peter Heylin, an English writer, in a geographical treatise, published in Oxford in the early part of the seventeenth century, observes that "many have motioned to the Council of Spaine the cutting of a navigable channell through this small Isthmus, so to shorten our common voyages to China and the Moluccoes. But the Kings of Spaine have not hitherto attempted it, partly because if he should employ the Americans in the worke, he should lose these few of them which his people have suffered to live; partly because the slaves which they yearly buy out of Africa doe but suffice for the mines and sugar houses; but principally lest, the passage by the Cape of good hope being left, those seas might become a receptacle of Pyrats." And he gravely argues, as a concluding reason why

the canal had never been constructed, that God is "not pleased at such proud and haughty enterprises."

Recent Studies on the Skulls of Murderers.—One of the most curious collections in the great Anthropological Museum which formed a part of the Paris Exhibition of 1878, was a collection of thirty-six skulls of murderers who have been guillotined in France. This collection has been carefully studied by Dr. Bordier, who published the results of his studies in Broca's *Revue d'Anthropologie*. The most striking result of his observations is the very large cubic capacity of these crania. In fact, the average volume of the thirty-six skulls, measured with shot by Broca's method, is as much as 1,547.91 cubic centimeters. Excluding, however, one of the skulls which is of unusual size (2,076 cubic centimeters) and is obviously abnormal, the average is reduced to 1,531 cubic centimeters. But even this figure is considerably higher than the average of any ordinary series of modern crania. In order to find skulls of equal capacity it is necessary to go back to prehistoric times; thus the capacity of Solutré skulls is 1,615, and that of the type from the cave of L'Homme Mort is 1,606.5 cubic centimeters. The development of the murderers' skulls is not in the frontal, but in the parieto-occipital region; and it appears to indicate a low intellectual standard, with a strong tendency to powerful action. Most of the cerebral characteristics presented by the skulls of these criminals are said to be comparable with those of prehistoric races. A murderer may be regarded as an anachronism, and his character may be explained on the principle of atavism, or reversion to an early type. If a prehistoric savage could be introduced into modern society he would probably become a notorious criminal; on the other hand, if one of the brutal murderers of modern times had lived in prehistoric ages, he might have been a chief of his tribe, highly respected.

Egypt's Gift to America.—According to the latest accounts, preparations for removing the obelisk or Cleopatra's Needle are now fully under way. The machinery used in handling the monolith was made at the Roebling Works, Trenton, under the direction of Mr. Goringe. The *World* says that this machinery aggregates about 80 tons in weight. It consists of two towers, each 26 feet in height, two steel castings, each weighing over six tons, and a cradle 60 feet in length. The towers correspond to the sides of a gun-carriage, and the casting to the trunnions on a gun. Like the machinery for handling the monster gun of the colossal Italian iron-clad *Duilio*, this machinery for moving the Alexandrian obelisk will command the critical attention of machinists and engineers; and it is satisfactory to know that the work of transferring to the New World this great Egyptian monument will be carried out entirely under American auspices.

The method of embarking the obelisk is described as follows: A steam collier having a water ballast compartment will be secured alongside of the pier, and the necessary preparations made for heaving her down to careening lighters placed alongside on the side opposite to the pier. The water ballast compartment will be filled. A port having been opened to admit the obelisk into the fore-hold, it will be launched in. The listing of the steamer from taking its weight will be overcome by heaving down on the careening lighters, and the sinking due to both operations will be counteracted by pumping out the water ballast compartment, thus removing a weight of water corresponding to that of the obelisk. Tidal and wind-drift differences of level will be overcome by means of a float secured at the shore end after the fashion of a ferry-slip.

Lubricants.—The choice of a lubricant is frequently ill-made. Common kerosene oil is too often injudiciously used in place of a thicker or more bland oil, because the heat produced by the friction rapidly vaporizes the oil and leaves the journal dry. Crude petroleum for the same reason is fitted only for very slowly revolving journals, such as water-wheels. For very heavy machinery, or for gearing, tallow and black lead rubbed up together is the best lubricant, and is also the best for wagon and carriage axles during the hot weather. For light-running machinery sperm oil is the best; good olive oil, that has not become rancid and acid, is perhaps the second best, and for winter use lard oil is excellent, but is rather too drying to be a first-class lubricant. Castor oil is better for axles in the winter, and black lead with it is a help at any time.

Effect of Different Colors on Animal and Plant Life.—Two French physicists, M. Burt and M. Yung, have been experimenting upon the effect produced on life by the different colors of the spectrum, the researches of the former having been with plants and of the latter with animals. The results have been communicated to the French Academy, and are thus described: "M. Burt kept plants within a glass trough inclosure containing an alcoholic solution of chlorophyll—very frequently renewed—and exposed them thus in a good diffuse light. The solution, which was very weak, and in a very thin layer, intercepted little more than the characteristic region of the red in the spectrum. This excluded part, then, was proved to be the indispensable part of white light, for the plant immediately ceased to grow, and before long died. It is in this red region—as M. Timirigeff has recently shown—that the greatest reduction of carbonic acid takes place. If red rays are kept from the leaf the plant can no longer increase its weight: it is reduced to consuming reserves previously accumulated, exhausts itself, and dies. This part of the spectrum, however, is not sufficient. Behind red glass, plants may, without

doubt, live long, but they get excessively elongated and slender, and their leaves become narrow and little colored. This is owing to the action of the blue-violet rays. Thus each region of the spectrum contains parts that play an active *role* in the life of plants." M. Yung's experiments during a period of three years, were upon the effect of the different colors on the development of the eggs of frogs, of trout, and of fresh-water snails. It was found that violet light favored the development very remarkably; blue light comes next in this respect, and is followed by yellow light and white light—the last two giving nearly similar effects. On the other hand, red and green appear to be positively injurious, for it was found impossible to get complete development of the eggs in these colors. Darkness does not prevent development, but contrary to what some have affirmed, retards it. Tadpoles of the same size, and subjected to the same physical conditions previous to experiment, died more quickly of inanition when deprived of food in the violet and blue rays than in the others.

The Dalrymple Farm.—Just think of a field of wheat containing twenty square miles—13,000 acres—rich, ripe, golden; the winds rippling over it. As far as the eye can see, there is the same golden hue. Far away on the horizon, you behold an army sweeping along in grand procession. Riding on to meet it, you see a major-general on horseback—the superintendent; two brigadiers on horseback—the repairers. No swords flash in the sunlight, but their weapons are monkey-wrenches and hammers. No brass band, no drum beat or shrill note of the fife, but the army moves on—a solid phalanx of twenty-four self-binding reapers—to the music of its own machinery. At one sweep, in a twinkling, a swath of 192 feet has been cut and bound—the reaper tossing the bundles disdainfully into the air—each binder doing the work of six men. Far off are more of the wonderful self-binding reapers—in all 115 at work. During the harvest about 400 men are employed, and during threshing 600, their wages being two dollars a day, with board.

A Vegetarian Shindig.—The *Providence Journal* gets off the following laughable play upon the creatures of our kitchen-garden: The vegetables had a masquerade ball. The water-melon wore a watered silk, the cucumber came in a green tarlatan, and treated everybody coolly, resenting the exclamation of the awkward vegetable that trod on her trail, and exclaimed, "Here is a pretty pickle." The cauliflower came to call off for the dance, and wanted his celery, cash down. The eggplant was dressed in purple, and would have made a fine appearance but for limited conversational powers, being only able to reply "Eggsactly" to all remarks that were addressed to it. The lettuce family was on hand, but very exclusive. All they asked was, "Lettuce alone." The mustard was seemingly arrayed in yellow satin, but complained

of the heat and wanted to poultice another young lady, who observed that it was pleasant to see so many good people mustered together. Old Mr. Pa Snips and Mr. Carrot were on hand with their two sons, Thomas W. and Judas I.—Thomas W. Pasnip and Judas Iscariot. Also promptly arrived old Mr. Bull-Nosed Pepper, who began a quarrel with a Beet, because the latter termed his language pepper-sauce. Next to Mr. Pepper stood Mr. Potato, wearing a blue ribbon, and claiming to be one of the originators of the Murphy movement. He declined to dance, saying he had an eye out for the prettiest woman in the room. He took a back seat, however, when Sweet Potato came sauntering in and was declared by the ladies to be "too sweet for anything." The Tomato enjoyed himself hugely. He wanted to catch up with the music and trip the light fantastic toma-toe. During the dance a young Rhubarb stalked across the room and trod upon the gouty Tomato, for which rudeness he was denounced as a Rhubarbarian. At intermission a gang of young Caraways got high and reeled into the ball-room, singing, "We'll drive dull Car-away." There was also a disagreement between the Radish and the Turnip families. One of the former family was heard to declare that a female member of the latter family had a Tur-nip nose, to which the Turnips replied that Miss Radish's nose was always reddish, and she should like to pull it. Young Mr. Lima Beans insulted his mother on the floor. He said: "You Li-ma," where-upon old Mr. Bean poled him on the spot. The wealthy Mr. Corn came late—he was of the late kind. Mrs. Corn was silked out to kill, but the children were all smut-faced and spindle-shanked. Young Mr. Bunker Hill Beans, of Boston, was recognized through his costume. He wore a bag domino, which he had untied on account of the heat. So it happened that when Mr. Squash came up, put out his feeler, and exclaimed: "Beans, old boy, how are ye?" that Beans replied: "How did you come to know me, Squash?" "Oh, I know beans when the bag is untied," responded Squash, gayly, as he whirled a crook-neck into the midst of the waltz. It was an amusing sight in the morning to see a Savoy cabbage rolling into a barber's shop to have his head rubbed up, with the complaint that his hair curled and—

A Singular Affection of a Guinea HEN.—A neighbor of mine set chicken and duck eggs under a hen, and as many as eight ducks and several chicks were hatched, making quite a novel family for the superintendence of an old hen. After the hen left the nest with her peculiar family, strange as it may seem, the only guinea fowl on the place took a liking to the young ducks, fought the mother hen away from them, and has been mothering the young ducks ever since. The chicks remained with the hen. The ducks are now of considerable size, and the guinea rambles great distances with them.

WILLIAM W. STOCKWELL.



MRS. C. FOWLER WELLS, *Proprietor.*
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1880.

HAPPY NEW-YEAR, dear readers,
one and all.

Were not the times really improving, especially for the industrial classes, our salutation at the opening of this new year would be just as hearty and consistent. for your real happiness depends not so much upon the incidents of external life as upon your interior sentiments, the manner in which you view the world. Far be it from us to ignore the importance of money and social position as factors in the equipment of one's household, with what are deemed the comforts and conveniences of life; but after all the great basic element in human happiness is contentment, and that is oftener met with in the humble cottage than in the haunts of wealth.

It is customary for the moralist to point to the beginning of a year as appropriate to the formation of new resolutions affecting character and life. Certainly, every day in the year is appropriate to "turning over a new leaf" and entering upon an improved course of thinking and conduct. But the begin-

ning of a fresh twelvemonth naturally suggests new enterprises in both the moral and physical departments of human activity, and hence one feels at this time specially warranted in urging young and old to go forward in the line of duty, and perform, with increased zeal, the work of God and humanity.

We would ask the reader to examine himself critically, and make an honest estimate of mind and body. This he can do with the aid of science. Having done it, he will know his strength and his weakness, and be enabled intelligently to set on foot a course of self-treatment for his mental improvement. Many a young man is discouraged by failures which are due to the influence of strong Cautiousness, or Friendship, or Approbativeness, or even Benevolence, which hampers him in the carrying out of well-devised plans; whereas did he understand himself, were he made acquainted with the nature of the weakness which neutralized his efforts, he would be set upon his guard against it, or rather by its prudent exercise render it an instrumentality of success.

Many are hindered in their daily work, and fail to reach perfect results, because of bodily weakness; their brain being insufficiently nourished, fails to operate with vigor and effect. Such persons should look into themselves, ascertain what there is in their daily habits ministering to this unhappy condition, and resolve to correct every impropriety and irregularity.

We would have every reader resolve to become thoroughly conversant with the theory and practice of Phrenology for his own sake and those around him; that he may, according to his opportunity, be a teacher of truth and righteous-

ness from now on, and so help along the grand work of redeeming society from the rule of appetite and propensity.

DON'T GRUMBLE.

IN keeping with what has been said above is this admonition. With many people it is a difficult thing to avoid fretting and complaining, as somehow they manage to get on the unfortunate side of nearly everything they undertake. They run against the sharp corners, and see the disagreeable phases of nearly everything which comes in their way. Such people usually have a good share of Destructiveness and Caution, and not quite enough Hope and Agreeableness. This being so, they could nevertheless modify their disposition, or, rather, their habit of finding fault, if they would set about it seriously. They usually have intellect enough to perceive, if they will, the worse than useless character of grumbling; and if they would resolve to take their share of life's burdens and carry them bravely, they would ere long come to think that the world after all has a good deal of brightness for them. If every one should do his part—simply what he is capable of doing—what a beautiful harmony would spring up in society! Far too many are striving to do more than reasonably appertains to their natures. Then there are a vast number who seem to do as little as they can. Generally the grumbler falls short of his duty, because he occupies too much of his time in watching the lazy and indolent, and reproaching them for shirking their share of the world's work. They would lose half their inclination to complain if they gave no attention to idlers, and would be more likely to shame

some into industry, by an example of attention to personal obligations.

COMMENDABLE INDEPENDENCE.

GRADUALLY truth wins its way in spite of the strong and high barriers erected by prejudice, and that respect for old and even fossil methods which is commonly called conservatism. Here and there the principles of Phrenology assume a specific form in modifying old practices. There are many who follow the vocation of teaching in this country, who apply these principles in their every-day relations with their pupils. Now and then we hear of a physician who appreciates their usefulness in his calling.

The October number of the *St. Louis Eclectic Journal* contains an article by a physician, which is a very strong testimonial in behalf of our science. The writer declares that a practical knowledge of Phrenology is indispensable to the mastery of medical science. He would have a department in every medical college for the instruction of students in the science of mind. To use his own language: "Now, as man is the subject of medication, it is very readily seen that in order either to prevent disease, or to aid Nature in her efforts to restore man when he is diseased to his normal conditions, it is indispensably necessary for a physician to know all about man; but we boldly affirm, fearless of successful contradiction, that the doctor who does not understand Phrenology and Physiognomy is thus lacking, in part at least, of the most important part of his knowledge of man."

This is a strong utterance, and as candid as it is vigorous. We doubt not that this physician is a man of learning and

ability, the latter quality being especially "reinforced," as a Frenchman would say, by his acquaintance with Phrenology. After stating his own convictions thus clearly and forcibly, he invites the attention of his medical brethren to the subject, and desires their opinion.

Such conduct is manly, and must command the respect of those even who differ with him.

There are many, very many, in the medical profession, who believe in Phrenology, but are deterred from acknowledging it publicly by the fear of exciting the criticism of their fellows. Such an attitude is certainly unbecoming, and indicates a want of manly independence.

A few weeks since we were at the house of a physician with whom we have been acquainted for a dozen years, and while turning over some books on a table, dis-

covered a work of Spurzheim, and a "Self-Instructor." We immediately asked the gentleman if the books were his, and he replied, "Certainly. They were given me by an old friend of mine about fifteen years ago. I think they are very instructive and useful books."

"So, then, you are inclined to accept the doctrine of Phrenology?" we rejoined.

"I must say," he answered, "that I can not see anything in it to which I can seriously object. But on the other hand, it has helped me not a little in my practice."

Previous to this we had never received an intimation that he was favorable to this subject. So there are many other physicians who must be approached in a similar fashion, if we would know where they stand in respect to mental science.



"He that questioneth much shall learn much."—*Bacon.*

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. But one question at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of an early consideration.

IF AN INQUIRY FAIL TO RECEIVE ATTENTION within two months, the correspondent should repeat it; if not then published, the inquirer may conclude that an answer is withheld, for good reasons, by the editor.

WE CAN NOT UNDERTAKE TO RETURN UNAVAILABLE contributions unless the necessary postage is provided by the writers. IN ALL CASES, persons who communicate with us through the post-office should, if they expect a reply, inclose the return postage, or what is better, a prepaid envelope, with their full address. Anonymous letters will not be considered.

MORPHINE.—A.—One who has become an habitual user of morphine, or opium, is so much a slave to the practice that it is quite impossible for him to break off without the assistance of others. We think it is the best course

for such a person to place himself in the care of an institution specially organized for such cases. An opium-eater, who is very anxious to reform, may succeed at home under the guidance of a friend who devotes himself, or herself, to the sick man. The plan most likely to succeed would be the very gradual reduction of the quantity used, so that nature may in the meantime build up the impaired constitution.

MUSTACHE.—T. M. F.—If the hairs of the mustache are soft, they can be easily parted in the middle, but if they are bristly and stiff, they are not likely to take any shape but a straightforward, shoe-brush pattern. Cultivation would perhaps accomplish something in the way of the part which you apparently desire. If the color be red or yellow your upper lip will be handsomer bare.

PHYSICIAN AND SURGEON.—O. W. D.—One who aims at success as a physician and surgeon should possess a good physical consti-

tution, a full-sized head, the intellectual organs being well filled out, especially strong perceptive, well-developed Constructiveness, a fair degree of Destructiveness and Combativeness, and Benevolence, Firmness, and Caution well indicated. He should also have large Friendship. If you wish to study in the line of homeopathy, consult a physician of that school as to the course of reading you should enter upon.

ACCOUNTABILITY AND PHRENOLOGY.

—O. A. K.—You are evidently a new reader of the PHRENOLOGICAL JOURNAL, otherwise you would not ask the question you do. We have not long since considered the matter it involves. Every intelligent man recognizes grades of capability among his neighbors. He knows that some are constitutionally better lawyers, doctors, blacksmiths, grocers, bricklayers, tailors, surveyors, than others, but for all that he does not deem them irresponsible, and expects good work from each so far as he can go. Phrenology is a scientific analysis of the human organization and indicates the difference between one man and another. This difference exists in the physical constitution. Phrenology simply points it out, just as geology points to the differences in the rocky mass; or botany points to the wonderful variations in the floral kingdom. Evil in the conduct of man is the result of unrestraint, maleducation, the influence of improper associations, and so on, things which every economist recognizes. Because men are differently organized, if they are sane, does not excuse bad conduct. There is the Parable of the Talents; because one had but one talent, did not excuse him for its disuse. He could have made the best of it, and, like his neighbor with but two, have received the commendation of the Master.

MORBID ORGANIZATION. — Question :

There is a man in our vicinity who has burned some twenty or twenty-five buildings, and the most of them barns. He confesses to having set them on fire, but can not give any reason for his course. He says that he does not know why he sets them on fire. He is not considered insane, so what ails the man?

Answer : His is evidently a case of perverted Destructiveness; and in so far as it goes, he is insane. The organ is probably large, and owing to some particular trouble or disease has become abnormally excited and exercises a morbid influence upon his whole nature.

CLAIRVOYANCE.—*Question :* Is not clairvoyance closely connected with spiritualism, and is not the study of clairvoyance injurious to the mind?

Answer : We do not consider clairvoyance as related to spiritualism. Some persons who appear to be endowed with the clairvoyant quality

pretend to supernatural powers, mainly for effect upon the credulous. We hold that clairvoyance is the result of physical organism, and those who have it may cultivate it just as any other mental gift is or may be cultivated. We do not consider the possession of such a mental endowment as necessarily injurious, if it have its normal sphere; and if that be simply followed, it may subserve a very useful purpose in the economy of life. Time will come when this quality of mind will be understood, and its importance as an agent in human affairs will be properly appreciated.

EFFECT OF HARD STUDY.—J. F. G.—

Close study will in time increase the size of the organs which are chiefly rendered active by the study. There may be no appreciable increase in the size of the head as a whole, because there is in such cases usually a lack of activity in some regions, and the organs there located tend to atrophy, or decrease. The enlargement will be regional.

PRONUNCIATION.—S. A. S.—There appear to be two ways of pronouncing the name "Jacques." One we can spell, phonetically, Jakes. The other divides it into two syllables, and may be rendered by Jac-kwees. "Lamar-tine" is simply Lam-ar-teen.

BRAIN-FOOD.—E. C. B.—The brain requires phosphorus, and therefore food which contains phosphorus is necessary to its healthful activity. The grains, particularly wheat, contain more or less phosphorus; beans and pease are also rich phosphoric material, but flour or meal which is highly refined, or bolted, is quite deficient; hence we advise that bread be made rather of meal containing the whole wheat than from the superfine or bolted product.

TOPICS FOR ESSAYS.—S. G. A.—You will find it more interesting both to yourself and to your audience if you select topics which are *alive*; that is, related to the affairs of the day. It is tiresome enough to attend Commencements and listen to the changes rung upon old rhetorical subjects, like "Ambition," "The Soul of Man," "The Triumphs of Truth," "True Glory," "Friendship," and so on. In your reading of the current literature of the day you will find many subjects, and in your observations of life you should find suggestions for thought.

CAPRICE.—J. E.—Yours is the first case of a man who loved to dress like a woman, and to whom the temptation is almost irresistible. We do not regard your inclination as criminal, or as the symptoms of disease. Your organization, doubtless, is very strongly feminine. You are probably very fond of the society of ladies, and have indulged a drift of thought which has

resulted in a mental temper which is almost morbid. We would advise you to mingle more with men. Quicken your robust activities; become more masculine; avoid sensational, effeminate literature, and straighten up.

LUNGS AND WIND INSTRUMENTS.—E. E. H.—As a class, those who play on wind instruments have good lungs; and an examination of the members of a band would soon show you that they have more than average chest capacity.

EXECUTIVE ABILITY.—C. E. S.—This characteristic depends upon the development of Destructiveness. A man may have a good intellect, excellent practical judgment, but only exercise them in a passive way, with no personal benefit, because he is lacking in Destructiveness and other stimuli. That organ, when large, contributes energy, force, power; incites the practical faculties to activity for the accomplishment of desired ends.

DIET FOR LEANNESS AND FATNESS.—S. A. S.—We can scarcely prescribe for you or any one, unless we are furnished with particulars relating to physical condition and every-day habits. As a general thing, leanness may be modified by the use of a diet which contains a large proportion of carbonaceous or fat-producing matter. Unless the person had a good degree of out-of-door exercise, however, the eating of an excess of carbon would serve to produce feverishness, disturb the stomach and bowels, and lead to some form of bilious sickness. It is fat flesh-food which produces most of the trouble with people. Those grains, like corn and oats, which are rich in carbon, are not so likely to interfere with digestion. Milk, oatmeal, cracked wheat, barley, rice, etc., tend to fatten; while eating of lean meats, Graham bread and Graham crackers, tart fruits, with abundant out-of-door exercise, will help to decrease bulk. Fat people should not eat much milk or butter, and particularly avoid overeating.

ART OF MAGNETIZING.—M. P.—This subject is thoroughly treated in our new work entitled "Animal Magnetism," by Delouze. About all there is in print on the subject is carefully set forth in this bulky volume. If you are disposed to make experiments, it will prove an excellent guide.

As to your other question: People of dark complexion, dark hair, have a large proportion of the Motive or Bilious temperament in their organism, yet, not understanding the part played in human life by that temperament, do not live with respect to it, and, as a consequence, their systems are thrown out of order, and they become sickly.

TELEGRAPH OPERATOR.—SUB.—You should be a good speller, as well as able to write a legible, fluent hand. Possession of these two requirements and fidelity would insure promotion. You can study between times, and so improve your mind; of course, the more you know the more useful you can make yourself.

LANGUAGE.—*Question:* How can a person who has a small organ of Language acquire a well-developed organ?

Answer: When the organ is small it is not to be expected that it can be made more than average by culture. But that is well worth working for.

LOVER OF MUSIC.—T. J. H.—People having large Ideality and Sublimity, and a high quality of organization, appreciate music; yet such, if lacking in the perceptive and practical faculties, are unable to become performers.

Several ANSWERS must be deferred to the next number.



Communications are invited on any topic of interest; the writer's personal views and facts from his experience bearing on our subjects, being preferred.

NATURAL AND ACQUIRED TALENTS.—In human nature we have the natural and acquired talents. These powers or conditions being so well understood, it does not seem necessary to enter into any definition of terms. Each has its special advocates, who overestimate the one or the other in proportion as either seems to them to be the most essential for the good of the world.

By one class natural talent is considered divine, and the acquired talent only ranked as human; while the other class considers nothing as divine but what is perfection, according to the most approved artificial type. Natural talents are not perfection; they need the master-hand of developed man to drill and expand them, in order to bring out the divine perfection, for they can not be divine in themselves. Acquired talents or powers, after similar reasoning, are not perfection, for they need something to precede them, in order that they may have an adaptability for perfection to develop. One requires development of the base on which it is founded; the other requires the presence of a suitable base on which to raise the beautiful and harmonious superstructure.

With one class, the natural powers only are divine; with the other, only the perfection that comes from them can be such; in other

words, the divine, according to the ideas of this class, is dependent upon the human to develop it. Those who regard only the acquired powers as divine, would hardly be willing to follow out their own course of reasoning, yet this is what it amounts to.

We have not far to go in life to see that the one class has little respect for the other. On the one hand we see little regard for the natural talents and a demand for a high state of artificial proficiency in the acquired arts; while on the other hand we perceive as little, or even less, regard for the stiff and formal acquired arts, and respect only for natural gifts, no matter how crude.

In every branch of life we see these two elements conflicting, with little or no respect for one another; and both considering themselves the all-important element in advancing the progress of the world and humanity generally to a higher standard. This is to be deplored; for it is plainly to be seen, that as separate powers they are weak, and only form a discord that is very detrimental to themselves; while united, they form a powerful combination and a harmony that moves through the world as a physical and moral conqueror, disseminating virtue and even helping to establish humanity upon a higher and more permanent basis, whence it can with better effect prepare foundations for its future steps of progress. Natural talent is too apt to be content with itself in its under-conditions; whatever it is inclined to do, it does so easily that it soon comes to think that it is master of the situation, and that therefore all extra exertions toward a higher perfection are unnecessary. It is too much inclined to cut 'cross lots, when it should carefully follow some well-beaten path all the way 'round. Acquired power, though not content with itself, is as much, if not more, conceited. It is sure to make a difficult task of acquiring knowledge, and to go the most 'round-about and unnatural way to accomplish its purpose. While natural talent is going 'cross lots, and thereby missing some important element of perfection, it will go the greatest way 'round, and that, too, in the most careful manner, whether the necessity of the case require it or not, making a great circle beyond the perfection that mere natural power misses by not taking the trouble to diverge enough in order to attain—one missing an essential element of strength by not going far enough, and the other by going too far.

Natural talent is radical without reason; acquired talent is extremely conservative, having little or no respect for advanced ideas and improvements generally. Natural talent has too much trust in the present and itself; while acquired power has not enough confidence in itself and its age, it is inclined to put its trust blindly in others rather than in itself, especially if there

is some air of authority in what is presented to it. Acquired talent has too much reverence for authority—natural talent not enough. The person of all natural talent is too much inclined to be light and unstable; the person of all culture is too apt to be heavy and inert. The one has too many irons in the fire, while the other keeps its one iron in too long, until the life of the iron is all burnt out—one has too much iron, the other too much fire. There has been a deal of controversy as to which of these two elements is the most important in the development of the world, but I think that such discussions are unprofitable. In civilized society at least they are both important and essential, and in order to secure the highest development, must needs go together. Separate, they are exceedingly weak; united, they become a tower of strength in advancing the cause of humanity. I hope that the tendency will be to unite them. Separated, they will only keep humanity down. United, they will advance humanity more and more toward that divine perfection that has been the hope and aim of the race since the world began. Separated, they make bungling efforts toward attaining perfection; united, they present a line that will move steadily on, neither too fast nor too slow, but with steady, earnest steps that will accomplish grand and permanent results. I. P. N.

A PROPHECIC DREAM.—I am not superstitious, but rather disposed to discredit anything for which I have no evidence. However, I had a dream, some twenty odd years ago, which had so singular a fulfillment, that I am puzzled to understand it. I had been residing in this place (Jackson, Ohio,) about a year, when a friend and his wife visited me, and intended to stay overnight. I had intended to go some three miles into the country on that afternoon, to buy some potatoes from a farmer. I intended to walk, as it was a pleasant spring afternoon. My friend said he would go with me.

Some three months before this, in the winter, I dreamed that I was in a strange place, in the woods, on a high ridge, and the sun was getting low in the west. The wind was gently blowing, and made a lonesome, moaning sound, as the tall, slender white-oak trees swayed to and fro. I went down the west side of the hill, and looking to my left, in a southerly direction, saw a man up a hollow, with a sorrel horse hitched to a sled. He was loading blocks of wood upon the sled. These blocks were such as are split off logs before being hewn, to build log-houses in wooded countries. So much for the dream.

Late in the afternoon my friend and I started to go to the farmer's house. Neither of us had ever been there. We were told to go on a road leading westward about a mile, when the road turned south, but we must keep due west along

a fence until we came to a wood, then proceed over a high hill, still going west, when we would come to another road, which would lead us to the farm.

When we got upon the top of the hill the sun was low in the west, the tall white-oak trees were swaying in the gentle wind, and the moaning sound was very pleasant to hear. Like a flash it struck me that I had been there before. I knew that in reality I had never been nearer that place than the town, over two miles distant. But my dream was all plainly before me. I stopped and related my dream to my friend, and told him about seeing, in my dream, the horse, sled, and man loading the blocks. We could not see the place in the hollow from where we stood, but we proceeded down the western side of the hill, the place now being perfectly familiar to me. When nearly to the foot of the hill, there were man, horse, sled, and blocks, just as I had told my companion. "My God!" said he, "there they are!"

Was this mere accident, or what was it? The dream and its singular fulfillment seem utterly without design or meaning. All I can say is, that I have told it exactly as it took place.

DAVIS MACKLEY.

Office of THE JACKSON STANDARD,
Jackson, Ohio.

FAMILY LETTER NO. 3.—Blinton, Dec. 1st, 1879. Dear Mr. Editor—Since I wrote to you last, I have had worse troubles than before. Not long after my husband brought home them big shoes, he came home one night with a bundle, and looking very smiling and happy says, Josie, I have brought you a present. A new black silk walking suit. O, you dear man, says I, you are coming to your senses and behave like yourself again. Yes, says he, I was never so sensible in my life, and he unrolled the bundle. A pair of big button boots fell out, and he held up a short looking dress. I suppose that the Polynase, says I. That's the dress, says he, and here's the pants. *Pants!* says I. Yes, pants, says he. They're to be tucked inside these hi boots. Now please put it on, for I want to see how you will look. Well, says I, this is a good joke, but I should think that something cheaper than silk would do just as well to play it with. That's all right, says he, for it only took about a quarter as much to make it as it did for your last black silk. Well, I put it on; it was dreadful big round the waste, but other ways it set very good, it came down just to my knees, and the hi boots came most up to it, and between was the pants which was tucked into the boots and hung over the tops a little. It looked very much like the suits which girls wear in the gymnastic class. You've seen them, haven't you? I guess you mean to make a pedestreun of

me says I, laughing. Yes I do, and everything else Good, says he. I expect, under this new freedom, you'll develop powers of Mussel, Hart and Brane such as — Do stop, Moses, says I, and I'll take this thing rite off. It seems to Eckstite you. Do I talk eckstited, says he. I don't no as you do, but you talk so I can't understand what you mean. After you wear that dress a few weeks, you'll be a new woman. The eyes of your understanding will be opened. O dear, dear, says I, I always told you if you Red and Studded so much, you'd go crazy, and now you have, and I started to take off that Dretful Dress. Don't take it off, says he, I want you to wear it rite along. What do you mean, says I, you can't suppose I'm going to wear such a looking thing as that. Won't you wear it to please me? O, Moses, I'd do most anything to please you, says I, but I can't do that. Didn't you promise to obey me, says he. I shouldn't if I had none you was goin to lose your senses, says I. But I see my letter is getting long, so I'll have to love the Rest till next time.

Yours in Grate Trouble,
JOSEPHINE JACKSON.

P. S.—I mean to get one of them books that you speak about in your paper. It said Webster on a bridge, and was to teach about spelling. J. J.

AN OLD SOLDIER'S EXPERIENCE.—An old soldier writes us in the following strong terms respecting his former life, and his observations of his fellows: "I have served my country in three wars; have marched over the burning sands and swampy everglades of Florida, and the plains and mountains of Mexico. And I have for three winters endured the severe colds and north-east winds of Minnesota; I look back and wonder that I still live; but I am scarcely more than a wreck, with my poisoned blood and shattered nerves. I will not say, however, that it was hard marching, hard fighting, or the bullets of my country's foes that have made me prematurely an old man. It was not the fatiguing marches, or the hardships, that have made me the wreck that I am. It was, rather, commissary whisky, quinine and blue pills, that poisoned my blood and broke down a once strong, iron-like constitution. If you would care to see the sad effects of calomel and whisky, come with me to the Soldier's Home; there you can see men who are, if possible, greater wrecks than I am; men whom the doctors think *must* have alcohol, calomel, and opium to keep them alive. When I was an inmate of the Soldier's Home, I told the head surgeon that I would die sooner than touch another drop of whisky, even as medicine. The old surgeon, astonished at my boldness, said, 'When did you take that opinion?' 'I took that opinion,' said I, 'six months ago, in Independence Hall, Philadelphia, where my

forefathers signed their Declaration of Independence from George the Third, and where I signed my declaration of Independence from alcohol.' 'Glad of it! glad of it!' said the old doctor, and away he went and told the hospital steward to let Reese have any kind of medicine he called for. This was about seven years ago; but signing the pledge of total abstinence merely, has not made a sober-thinking man of me. I have been a reader of your JOURNAL and other works on physiology and Phrenology, and have become not only a reader, but a firm believer in the science, so that with God's help, and firm resolution, I have been able to renounce, not only tobacco, but rum also."

His letter is superscribed very properly, "Wisdom Road," a village near Greenfield, Massachusetts; for the old man is certainly on the track of wisdom.

PERSONAL.

MISS HELEN MARIA McDONALD, of Boston, appeared before Judge Blatchford, in the United States Circuit Court, a few days since, and argued in person a motion for an injunction in a patent suit for infringement of a patent of her own.

MRS. RUTH RICHMORE, of Brownington, Vt., ninety-four years old, according to an exchange, has given up her pipe, after smoking constantly for thirty years, and thus far has experienced no ill effects. Strange! Young people, take notice.

PRINCE GORTSCHAKOFF has retired from the Russian Imperial Chancellorship. So say the newspapers, and it is about time it was true, considering the gentleman's age—over eighty—and the many times his retirement has been threatened.

M. MALAREVSKY, another Russian, has been struck by the prevalence of short-sightedness among literary men, and proposes that books should be printed in white ink on black paper, and he has made experiments with fifty persons which tend to confirm his view.

THERE lives in the Republic of Salvador at present a venerable gentleman named Miguel Solis, who is 180 years of age. It is claimed that he signed a document relating to the building of a convent in 1722, being then 23 years old. He takes one strong, nourishing meal each day, except on the first and fifteenth of each month, when he eats nothing, but drinks as much water as he can. We are not told whether he is a teetotaler, or drinks the wine of the country, which is called "tangleleg," but it is stated his skin is like parchment, his hair white as snow, while his eyes have a most lively expression.

WISDOM.

"Think truly, and thy thought
Shall be a fruitful seed."

SELF-INSPECTION is the only means to preserve us from self-conceit.

ANY man pays too much for his whistle when he has to wet it fifteen or twenty times a day.

MANY ways of happiness have been discovered, but all agree there is none so pleasant as loving and being loved.

MIRTH should be the embroidery of the conversation, not the web; and wit the ornament of the mind, not the furniture.

BUT I remember now,
I am in this earthly world, where to do harm
Is often laudable; to do good sometime
Accounted dangerous folly.—*Shakespeare.*

ENERGY will do anything that can be done in the world; and no talents, no circumstances, no opportunities, will make a two-legged animal a man without it.—*Goethe.*

PROFANITY never did any man the least good. No man is richer, or happier, or wiser for it. It commends no one to society; it is disgusting to the refined, and abominable to the good.

DETERMINED beforehand, we gravely pretend
To ask the opinion and thoughts of a friend;
Should he differ from us on any pretence
We pity his want of both judgment and sense;
But if he falls into and flatters our plan,
Why, really, we think him a sensible man.

OVER the triple doorways of the Cathedral of Milan, there are three inscriptions spanning the splendid arches. Over one is carved a beautiful wreath of roses, and underneath is the legend, "All that which pleases is but for a moment." Over the other is sculptured a cross, and there are the words, "All that which troubles us is but for a moment." But underneath the great central entrance in the main aisle is the inscription, "That only is important which is eternal." If we realize always these three truths, we will not let trifles trouble us, nor be interested so much in the passing pageants of the hour. We should live, as we do not now, for the permanent and the eternal.

MIRTH.

"A little nonsense now and then
Is relished by the wisest men."

THE most treacherous memory in the world belongs to a young man with a new watch.

A PAPER in the neighborhood of Rochester, N. Y., advertises a church-pew for sale, "commanding a beautiful view of nearly the whole congregation."

"TEMPER in a wife!" exclaimed old Colonel Firehawk. "I like temper in a wife. I like it so well that I hope my wife'll never lose hers."

THE just published report of an Irish benevolent society says: "Notwithstanding the large amount paid for medicine and medical attendance, very few deaths occurred during the year."

THERE was a young fellow named Knox,
Who concluded to gamble in stocks;
And in twenty-four hours
He swore, "By the powers,
I'm glad to escape with my socks!"

Two darkies were vaunting their courage. "I isn't 'feard o' nothin', I isn't," said one. "Den, Sam, I reckon you isn't 'feared to loan me a dollah?" "No, Julius, I isn't 'feared to loan you a dollah, but I does hate to part wid an ole fren' forebber."

A DRUNKARD is staggering along the street, knocking against lamp-posts, and, with great dignity and earnestness, solving the problem how to be in two places on the sidewalk at once. The passers-by stare at him and laugh till he halts, and, with a painful effort, collecting himself, says: "Galileo wash right—the earth doesh move!" and crumbles into a shapeless ruin upon the pavement.

THE following testimonial of a certain patent medicine speaks for itself: "Dear sir:—Two months ago my wife could scarcely speak. She has taken two bottles of your 'Life Renewer,' and now she can't speak at all. Please send me two more bottles. I wouldn't be without it."

"WIFE," said a man, looking for his boot-jack, "I have places where I keep my things, and you ought to know it." "Yes," said she; "I ought to know where you keep your late hours, but I don't."



In this department we give short reviews of such New Books as publishers see fit to send us. In these reviews we seek to treat author and publisher satisfactorily and justly, and also to furnish our readers with such information as shall enable them to form an opinion of the desirability of any particular volume for personal use. It is our wish to notice the better class of books issuing from the press, and we invite publishers to favor us with their recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

A FOOL'S ERRAND. By One of the Fools. A Novel. 362 pages. 16mo. Silk cloth. Price, \$1. Published by Fords, Howard & Hulbert, New York.

With this unique title a new author sends out a book which is described as "a faithful portraiture of human life" in certain individual re-

lations, these relations being a sojourn in some part of the South since the late war.

The hero of the narrative, the author himself, by the way, buys a plantation and removes his family to it, visions of domestic felicity hitherto unknown, and of an early realized independence in wealth and position, filling the inner chambers of his mind's eye. His first awakening to the sense of foolship is, that he is "a cat in a strange garret." His first experience in an attempt to take some interest in the political agitation caused among the people of his neighborhood by the "reconstruction" measures of Government, exhibit this fact in a startling manner. A forced part at a political meeting gives him the reputation of "abolitionist" and an incendiary—one who "has no business" to be where he has made his residence, and he becomes isolated from the "good society" of his community. He exhibits more and more folly by his bold demeanor in asserting his opinions in the face of people who he knows dislike him and his sentiments, and by assuming positions which render him conspicuous as a politician of a school entirely out of sympathy with the great majority of his neighbors. In the course of the narrative we have a revival of some of the scenes of terrorism peculiar to the days of the Regulators and the Ku Klux, and many incidents are related concerning the life of the people, which are full of humor, especially those descriptive of the characteristics of the country people; while the dashing excitement of the hunt, the oddities of up-country mass meetings, the social lines of caste, the hot passions of politics, the dark and bloody doings of an enraged people, and their startling logic of self-justification, help to make up a peculiar book, which will undoubtedly stir up a variety of opinions. It portrays with great power things which the author claims are unknown to the mass of intelligent people in either section of the land—namely, *the South as it is*.

But *cui bono*? We will confess that while the book is very readable, it contains much that need not have been said, and can not contribute to a better rapport between North and South.

ODDMENTS OF ANDEAN DIPLOMACY, AND OTHER ODDMENTS. By Hinton Rowan Helper. 12mo, cloth. pp. 480. St. Louis: W. S. Bryan, Publisher.

A compilation of correspondence on subjects which the author deems of so great importance that he makes them of personal interest. What he discusses most earnestly is the construction of a "longitudinal, midland double-track steel railway from a point far north in North America, to a point far south in South America," for the carrying out of which he claims to have expended already between eleven to twelve thousand dollars. He is most anxious for the moral and physical well-being of the hybrid peoples of

the Southern continent, yet, strangely enough, would except Brazil from participation in his great scheme; and thinks that a great railway would be a most potent instrumentality for promoting the ends of amelioration he has at heart.

Under the general title of "The Colton Claim against Bolivia," he publishes 250 or more pages of letters relating to an unliquidated debt of that State for certain maps which were prepared by Mr. Joseph H. Colton. And under "The Fielder Claim against Brazil," Mr. Helper sets forth "an epistolary and documentary history of the double-faced and underhanded injustice and injury inflicted on Ernest Fielder, his widow, and children, by the Government of Brazil." In both these cases Mr. Helper appears to have acted the part of an attorney, and his own sayings and doings form a considerable part of the volume. He does not stickle at terms in expressing his reprobation of wrong, and his manner is intensely vigorous. Why he chose or invented the extraordinary title given to his book, he only can answer; nevertheless, there is a close relationship between the eccentricity of that and the literary style of the volume.

TEMPERANCE STORIES AND SKETCHES. Illustrated with Pen and Pencil. By Edward Carswell. Large 8vo. 80 pages, 60 Engravings. Price, 50 cents, board covers. New York: National Temperance Society.

Among the sketches and incidents, which are related in simple yet vivid language, are: Who's Drunk?—The Insulted Goose—Searching for the Bottle—Temperance, Moderation, and Intemperance—The Frightened Children—A Slave to Appetite—The Firm Friend—Old Rye makes a Speech—Miss Vine—The Old Apple Tree—The Seasons. And the accompanying pictures are not only realistic, but likely to impress the truths of the stories upon the mind. The book is a capital one for children.

AROUND THE YULE LOG. By Richard Markham. Illustrated. Small quarto. pp. 234. Price, \$1.50. New York: Dodd, Mead & Company.

A parenthesis in the title, which serves the part of a preface, and avoids the impracticable twistings of phraseology which usually distinguish most prefaces, tells us that "herein are recorded the doings of five boys and five girls on a visit to the sea at Christmas-tide; together with many stories and ballads for young patriots."

The main doings of the little people seem to have been the hearing and relation of stories which are not altogether without foundation in our country's early history, and they are of the sort which please the fancy of our youth—being about Indians, adventures in the forest and on the ocean, life in the early settlements of New England and the South. There were, however, some very amusing adventures of their own,

which imparted particular zest to their holiday visit to the sea-coast, and which the author weaves in with some ingenuity. The illustrations are excellent, and not without instruction in themselves. And the volume, as regards paper and press-work, is a handsome specimen of book-making.

PUBLICATIONS RECEIVED.

UNIVERSITY QUARTERLY. Conducted by the students of the New York University. The October number is an excellent specimen of a live college paper. The article entitled "Was the Natural State of Man Insanity," although somewhat pessimistic, is well written.

THE AMERICAN FARMER. Published by Samuel Sands & Co.'s Son, Baltimore, Md. This represents one of the largest agricultural organs in the country. It contains a variety of matter of interest to farmers North as well as South.

AT BABY'S GRAVE ONCE MORE. For the Piano. Words by Mrs. A. S. Moore. Music by C. A. Fuller. Price, 40 cents.

MANITOBA BELLS. Song. Words by Fordyce H. Benedict. Music by Chas. A. Fuller. Price, 40 cents.

These two publications are just from the press of Spear & Dehnhoff, New York. The music exhibits care in the composition, and is pathetic and sweet.

REVUE D'ANTHROPOLOGIE. Publié sous la direction de M. Paul Broca. The specimen number of this very valuable periodical which lies on our table, contains a very interesting study on a series of crania of assassins, by Dr. A. Bordier. This series constitutes the collection of thirty-six criminals which was on exhibition in the late Paris Exposition.

HANDBOOK OF THE NATIONAL CHRISTIAN TEMPERANCE UNION: Containing a Summary of Plans and Work of the Association; also Constitutions of State, District, Local, and Juvenile Unions, together with Practical Hints in regard to various Departments of Work, including Finance, etc. By Mrs. Annie Wittenmyer, President of the National Christian Temperance Union. Published by the National Temperance Society, New York. Price, 10 cents.

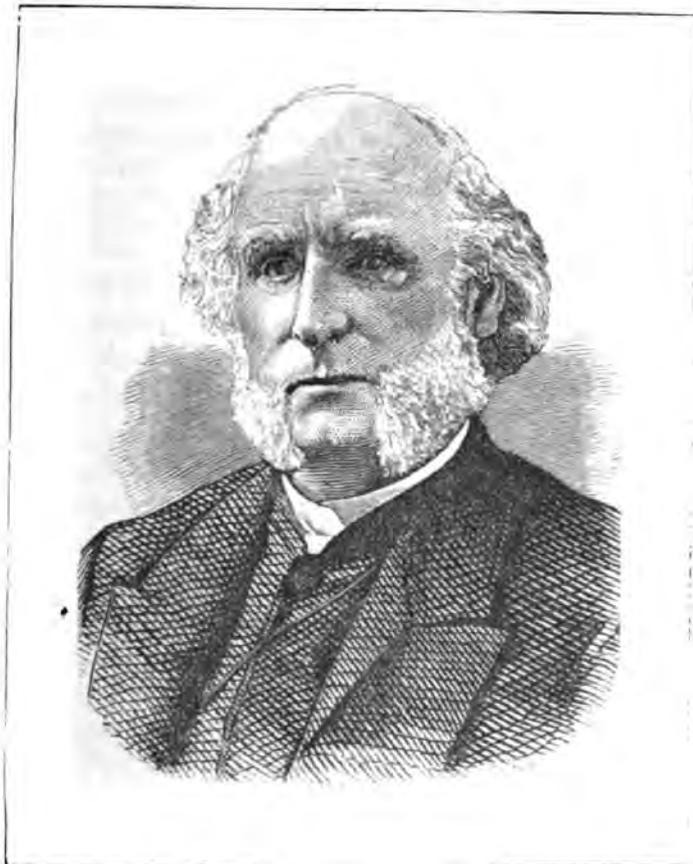
THE THIRTY-SIXTH ANNUAL REPORT OF THE NEW YORK ASSOCIATION FOR IMPROVING THE CONDITION OF THE POOR, FOR THE YEAR 1879. With the List of Members and Contributors. The aim of this Association appears to be the avoidance of promiscuous charity—that system indulged in by so many well-to-do people—mainly with a view to avoid the importunities of beggars, which has for its unfortunate result the perpetuation and multiplication of paupers. The report illustrates the method pursued by the Association. It certainly has many commendable features, and overcomes many of the difficulties attending organized alms-giving.

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[WHOLE No. 495.



ELIJAH D. MURPHY.

PASTOR OF THE NEW YORK PORT SOCIETY.

THIS gentleman has power, both of mind and body, and especially strength of character. And he has this marked peculiarity, that wherever he is, he becomes a positive factor in affairs, a ruling element; no matter where he might devote his attention and strength,

he would be a ruler, a regulator, a mentor; he would give the orders, the directions, plan and superintend, and see that others performed their duty promptly and successfully.

He has a remarkable development of the benevolent element. He inclines to

do good, and insists upon it that people shall do that which is for their good; is generous, sympathetical, liberal; willing to serve, ready to help those who need serving and helping. He takes care to guide and obtain control; generally assumes it; but manages to win it when he does not assume it. He has uncommonly strong Firmness, that gives him positiveness and determination. He has Self-esteem enough to give him confidence in his judgment and personal influence. He has also strong Veneration, and a feeling that the "King of kings" is his friend and backer in all that is good.

He reads character like a book, hence his wonderful power to mold and manage people. He looks through them, reads them through and through; knows what strings to touch to evoke the responses he desires. He knows how to persuade, and at the same time feels that he is endowed with power to coerce. In other words, if he can not persuade, he can compel; hence naturally governs, but seeks to do it in a smooth way. In a convention of his equals he would propose measures which he intended to rush through at all events. He has considerable policy, and at the same time is not accustomed to use much, except where it is absolutely necessary. If he wants to silence a man's opposition, he will give him the opportunity to offer the resolutions which he wishes passed, and that one, being pleased with the distinction, will be likely to adopt his suggestions.

We find in this head great Comparison, power of illustration, ability to teach, and to make dry subjects lucid and fresh. He is full of anecdote; remembers everything. Like the late President Lincoln, he has always ready an anecdote by way

of illustrating any point that may be started. He would speak extemporaneously, would carry his subject in his mind, or he would go into an editorial room, with a ream of paper and a bottle of ink, with no books of reference, and edit an interesting paper, for months, drawing solely upon memory for any facts he wished to set forth. He has quick observation, sees all that is worth seeing, and has something to say about everything.

He is not a very conservative man, not inclined to hesitate about uttering advanced thoughts and opinions; is not so much afraid of criticism as he is desirous of doing good. Hence if he gets hold of a new thought that is worth using, he does not wait to inquire whether "the rulers," or the popular sentiment, will second it. It is enough for him to know that it is true and useful, especially the latter.

He is social, warm-hearted, friendly, enterprising; not extra cautious, not very sly, runs risks, takes responsibilities, pursues his cause, and measures the value of subjects by their results and uses. He would make a fine scholar in classical literature, and especially in Biblical history. His memory is fact-tight, and his observation keen and penetrating. His power of analysis resolves everything into its elements, and his whole intellect is sharp and discriminating.

The father of Elijah D. Murphy migrated when a young man, with three companions, from Vermont into the northern part of New York, then a dense wilderness. They purchased one hundred acres of wild land adjoining each other. The first season Mr. Murphy cleared three acres and built a log cabin, and there laid the foundation of his future home.

In the fall he returned to Vermont, married Miss Lucy Baker, and took her back to his log cabin, and there remained until his death. Eight children were born to him, five sons and three daughters, Elijah being the fourth child and the third son. He was born on the 1st day of February, 1818, in the town of Potsdam, St. Lawrence County. Until he was twenty-two years of age he was a farmer's boy, attending school only about two or three months a year until he had reached seventeen.

At sixteen he united with the Church, and from that moment entertained a strong desire to be useful in some way in Christian work. Having, however, scarcely any education, and no means of obtaining one, he worked on until twenty-two years of age, exceedingly distressed at times, that he could not command the means to fit himself to be a worker in some missionary field, either at home or abroad.

In the fall of 1840, with a younger brother, he started out from the old home to seek his fortune in the Far West. The journey as far as Toledo, Ohio, was made by boat, and there the young men shouldered their knapsacks, and traveled on foot through the States of Michigan, Indiana, and Illinois, and brought up at the little town of Montebello, on the Mississippi River.

The journey made on foot was 520 miles, and was accomplished in thirteen and a half days. That country then was entirely new, and the young men traveled sometimes all day and never saw a house or met a human being.

The wanderers found employment, and for two years Elijah was engaged in manual labor. During this time a revival of religion occurred in the town where he resided, and the old thought came back to him with tremendous force, that he ought to be engaged in religious work, and no consideration of ignorance, age, or unfitness could keep it down entirely.

While much troubled in this way, a missionary from the Dakota Indians came into town in search of young men

to go among the Indians and teach them the art of farming. The Government, settling them on the reservation, stipulated that farmers should be sent to them to teach them how to cultivate the soil.

The missionaries had found that most of the young men who had been sent to them were irreligious, and their influence was bad, and interfered greatly with their religious work. This gentleman was somehow directed to Mr. Murphy, and made a proposition that he should enter upon this work under the direction of a Government agent. After a week's preparation he accepted the proffer, and accompanied the missionary.

On the way up the Mississippi River his companion took him into his stateroom, and gave him some information in reference to his course to reach the new field of labor, after leaving the boat at Prairie du Chien, and some of the details of his duties there, which, had they been given before he promised to enter upon the mission, would probably have resulted in Mr. Murphy's declination. He was told, among other things, that he would have to make a two days' journey on foot and alone, through an uninhabited country, before he should reach the station, and that as he should be out one night, and there were many wolves around, it would be well to spend it in the branches of a good, strong tree; that when he arrived at the reservation, his home would be a log cabin, where he would have the privilege of cooking his own food, doing his own washing, ironing, and mending, and that he should always keep his cabin door locked when out, or the Indians would steal everything he had.

The travelers remained in Prairie du Chien a few weeks, waiting for a steamer, and during this time they were engaged in religious work. Ere an opportunity offered to take a boat and continue their journey, young Murphy, on one occasion, disclosed to the missionary his strong desire to enter the ministry. That worthy gentleman at once gave him warm encouragement and not only released him from his obligation to enter

the Indian country, but helped to secure the means toward the object cherished by the young man. A consultation was held with the pastor of the church in Prairie du Chien, and one of the elders, who was proprietor of an academy in the city, and it was finally decided that he should enter the family of this elder, and remain a few weeks, study meanwhile, and see what progress he could make.

He remained in this relation not only a few weeks, but for two years, until, indeed, he was prepared for college, and then a few friends sent him to New York City to enter the New York University, thinking he could find greater facilities for supporting himself there than perhaps at any other college.

In New York, through the kind interest of his Western friends, he found a cordial welcome. His living expenses were paid by the aid of a wealthy lady of Brooklyn. This lady had an only son, who died a year after Mr. Murphy's arrival here, and he was then invited to stay in her family, and did so during his whole course of study, seven years, without its costing him a dollar. To this estimable friend he very properly feels indebted for nearly all that he has been enabled to do in his ministry.

After graduating at the New York University in 1849, he entered the Union Theological Seminary of this city, was graduated in 1852, and was soon after licensed to preach. He then entered the service of the Brooklyn City Mission, where he remained for two years. During this time he married Miss Harriet L. Jocelyn, daughter of Rev. S. S. Jocelyn, of Brooklyn. After spending two years in the City Mission work, he was engaged to supply a church in Centre Brook, Conn., for one year. At the end of the year's service he received a call from the church to settle as pastor; but declined, and accepted an invitation to preach for the "Indian Orchard Church," of Springfield, Mass. He remained there for two years, during which time a new church building was erected, and the congregation more than doubled. The financial

troubles of 1857-8 took away the ability of the church to support a pastor; but, at this time, he received an invitation to settle as pastor of the Congregational Church at Avon, Conn. This Mr. Murphy accepted, and was installed June, 1858. In this relation he remained six years. In the spring of 1864, he was led by patriotic sentiment into the army as a volunteer chaplain, and served for six weeks. He says of his experience in camp: "The preaching to thousands of soldiers in the open field and in tents, and visiting the hospitals, where hundreds of our noble boys were sick and dying, will never fade from my memory; and I thank God for this experience."

On his return from the army, the Connecticut branch of the Christian Commission, of which Gov. Buckingham was chairman, invited him to take charge of this work in the State. He resigned his pastorate and entered upon the work, and for four months traveled every day and spoke every night, visiting all the prominent cities and towns of the State, and raised, during that time, over \$20,000 for the physical comforts and religious instruction of the soldiers in the field. While engaged in this work he received an invitation to become pastor of the New York Port Society's church, of this city, and, after due consideration, accepted the call, and commenced his labors in the new field in September, 1864. Here Dr. Murphy found most congenial work, and has been a most successful teacher and pastor from that time to the seamen and others who make up his considerable charge.

TRUE christian life is like the march of a conquering army into a fortress which has been breached. Men fall by hundreds in the ditch. Was their fall a failure? Nay, for their bodies bridge over the hollow, and over them the rest pass on to victory. . . . These are the two remedies for doubt—activity and prayer. He who works and *feels* he works—he who prays and *knows* he prays, has got the secret of transforming life—failure into life-victory.—ROBERTSON.

ENTHEASM.

THE concept of actual communication with Divinity underlies all philosophical thought. It is the basis of religious faith. It has in all ages constituted the goal toward which the steps of every believer in a future life have been directed. The world has always had its Mystics fondly cherishing that ideal, sometimes even fondly believing that they had attained it. We may deem them visionary and mistaken, but we can not impugn the excellence of their desire and purpose. If it is meritorious to do good, to be good, to entertain good-will toward others, certainly the highest meed belongs to whomever aspires to achieve the Supreme Good.

Such an attainment requires the most imperative conditions. It is as essential to know as to believe. Indeed, faith is of little advantage where it is not fixed in actual truth, so that it shall possess all the stability of knowledge. It requires all the moral energy of a strong nature to believe. The weak and vacillating character carries doubt for its index. It is often necessary in important undertakings, where all the strength is required to achieve the desired result, to thrust such persons aside. The vision of the Right is darkened in the atmosphere where they dwell. Any transcendent knowledge is rendered imperceptible. They not only shut out the light from themselves, but dim the sky into which others desire to peer. In this way, whether unwittingly or purposely, they do to others the greatest mischief of which they are capable.

The highest attainment, after all, is knowledge. There is really nothing which any one can afford not to know. It is a coming short of the human ideal to be ignorant in any respect. To love knowledge is to desire perfection; to despise it, is equivalent to being content with a bestial life. In all times the wise have won respect, as being the abler and better among humankind; and even when they were passed by and unhonored when living, they have been praised, revered,

and obeyed in subsequent time. They are the luminaries that have from age to age preserved light to the world, and thereby rendered it capable of renovation.

It has always been the aim of every right-thinking person to extend the circuit of his mental vision, and to exalt as well as intensify his perception. The field of the sciences has been explored and mastered with profit as well as pleasure. It is a labor of achievement worthy of human endeavor. The mind is expanded in its scope and faculty, and the power to accomplish results is vastly enhanced. The inventor of a mechanical implement, whether it be a stone hatchet or a telephone—and the discoverer of a new star or a new mineral, is a benefactor. He has given us more room to think in, and with it, the opportunity.

Our earlier lesson of Origins instructed us that man was produced from the spore-dust of the earth—protoplasm, perhaps—and chemistry ratified the declaration. We have since been told that our corporeal substance was compacted from the same material as the stars, and animated by forces akin and identical with those which operate all-potent in the farthest-off world. But what matters it if the postulate of the scientists is true, that we took our origin from molecules not unlike to those of the jelly-fish and fungus! We are not bound to such conditions, but have a universe to occupy. The Delphic maxim—*Gnôthi seauton* (know yourself) is our commission of conquest. The knowledge of the *ego* is to know the *all*; and that which is known is possessed.

Charters and franchises are limited. The right of man to liberty, which we are told by high authority that no man can divest himself of, the ignorant can not enjoy or exercise. They are free whom the truth makes free. The very word *liberty* implies a boon from the *book*.* The liberal are the learned, the intelli-

* *Liber*, a book of writing—*liber*, free, whence *libertas*, freedom.

gent, who therefore are free. Codes and constitutions, whatever their provisions, can declare and establish no more; so necessary is it to eat of the tree of knowledge. But we must begin with our own interior selves. The germ is in us; it may not be transplanted from without. Not letters, but life, chiefly educates him who becomes truly learned. We can not create that which is not inborn; we may only evolve and enrich the natural endowment.

Pause right here, whoever cares for aught rather than for the highest. To such we are only visionary. They have neither time nor ears for us. Where delusion is the breath of one's life, to know is to die. As for Wisdom—

" To some she is the goddess great;
To some the milch-cow of the field—
Their care is but to calculate
What butter she will yield."*

In these days that which has been characterized as Modern Science, is audacious to repudiate whatever it does not canonize as "exact." Unable to cast its measuring-line over the Infinite, it appears to be diligent in the endeavor to eliminate Him out of its methods. The personality of Deity, as implying an active principle in the universe, is now sometimes denied. Whatever we do, think, or wish, must be with no conception of Him in the mind. An actual communion with Him is nowhere within this modern scientific cognition or recognition.

A leading medical journal† several years since contained an editorial article upon this subject, which significantly expresses the view taken by physicians who alone may be esteemed to be learned and regular. "Numa, Zoroaster, Mohammed, Swedenborg," it remarks, "claimed communion with higher spirits; they were what the Greeks called *entheast*—'immersed in God'—a striking word which Byron introduced into our tongue." W. B. Carpenter describes the condition as *an automatic action of the brain*. The in-

* Schiller.

† The *Medical and Surgical Reporter*, 1875.

spired ideas, he says, arise in the mind suddenly, spontaneously, but very vividly, at some time when thinking of some other topic. Francis Galton defines *genius* to be "the automatic activity of the mind as distinguished from the effort of the will—the ideas coming by inspiration." This action, the editor remarks, is largely favored by a condition approaching mental disorder—at least by one remote from the ordinary working-day habits of thought.

This is about the attitude which modern "exact science" has attained in its understanding of man when *inspired*, or in the state regarded as communion with the Deity. We fail to find any better explanation in its definitions. Whoever would know the truth of the matter must "go up higher." It is hardly acceptable reasoning that inspired ideas coming in the mind spontaneously, indicate a condition approaching mental disorder, because they seem to be remote from ordinary habits of thought. In every-day life many faculties are atrophied, because of not having been duly exercised. On the other hand, any habitual employment becomes more or less automatic, and even involuntary. What we habitually do, and often the thing which we purpose to do, fixes itself upon us, insomuch that we perform it almost unconsciously. We awake from sleep at the hour assigned; we become suddenly conscious of a fact or idea from specific association; and do things that we are not aware of or thinking about. The man who has the habit of speaking the truth may do so automatically. Honest and upright dealing may be practiced in the same way. Goodness becomes a part of the being, and is fixed in the ganglia and fibers of the brain. Faith, too, grounds itself in the constitution, and love in the corpuscles of the flowing blood. All this is normal. It is legitimate to carry the conclusions farther, and to consider whether *entheasm*, even though supposedly automatic, is not, nevertheless, a wholesome condition of the human mind, and the true means of receiving actual knowledge.

How, is the next inquiry, how may we know God, or define Him? A king of Sicily once asked the poet Simonides to give him such a definition. He craved a day to consider; then two, four, and eight. The impatient king finally asked why he required so much time. He answered that the more he considered the question, the more difficult he had found the solution. The finite human understanding is not equal to the endeavor to comprehend the Infinite.

In a world of unreasoning disbelief God is regarded as a thing. Even now, in several schools of opinion, it is common to affirm that He is not a person. This seems to be equivalent to declaring Him an illusion of the fancy, a nonentity, and not in any sense whatever a thinking, intelligent Being, but simply a vagary or whimsy of the imagination. It is doubtless a notion evolved by the rebound from that unreasoning faith which requires a thing to be worshiped as God. Somewhere between these extremes is the golden wedge of truth. It is the vocation of the true student to find it. But let modesty go hand in hand with faith. A person was once discoursing volubly with a Spartan concerning the felicities of the future life. "Why," demanded the latter, "why do you not die in order to enjoy it?" It was a pert, if not a pertinent question, and certainly conveyed a taunt that might profitably be accepted as a wholesome reproof. We may not, often we can not, speak profoundly to those who are irreverent or who disbelieve. One may profane the truth by speaking it. In uttering to another something which is real to ourselves, we veil it in a mantle of illusion which may transform its nature, in his comprehension, to something incongruous. The impure ear will tarnish the purest speech. It is well to believe in God, but ill to say much about Him.

We may not reject utterly the methods which they employ who stubbornly, and perhaps obtrusively, demand the reasons on which faith is based. We can hope to be truly spiritual only by being wholly

rational. The true man supersedes no methods because he transcends them. His concepts are characterized by their wisdom. Although in his case it may not be the product of the schools, it is capable of deriving lustre from their light. The plurality of faculties of the human mind exist for a purpose. They are to be trained and employed, but none of them may be eradicated.

Simple men long ago inferred that fire and air or spirit, in some arcane manner, constituted the entity of man. They had noticed that the dying departed with the breath, and that the warmth peculiar to the living body also disappeared. This led to the adoration of the flame as the symbol, and to the contemplation of the spirit as the source of life. Analogy pointed out the fact that as living beings derived existence from parents, man was descended from the First Father.

We are all of us conscious that the individual, as we see him with our eyes and perceive with our other physical senses, is not the actual *personality*. If he should fall dead in our presence, there would still be a body to look upon, as distinctly as before. But the something has gone forth which had imparted sensibility to the nerves and impulse to the muscles. It was the person, the real man, that went. The HE or SHE gives place to the *it*. The person had seemed to accompany his body, but has departed, leaving it behind. We witness the *phenomena*, but ask to learn the *noumena*. Here exterior, positive, "exact" science fails us. Its probe can detect no real personality, nor its microscope disclose any source or entity of being. The higher faculties must afford the solution of the problem on which everything depends.

The witty, but somewhat irreverent, Robert Ingersoll prefixed one of his lectures with the travesty of Pope's immortal verse: "An honest God is the noblest work of man." Many are astonished, perhaps shocked, at the audacious expression. Nevertheless, it has a purport which we will do well to contemplate. If we have an actual spiritual entity exceed-

ing the constituents of the corporeal frame, it exists from a vital principle extending from the Divine Source. A genuine, earnest faith is essential to our felicity. Do we regard Him as having "formed man in His own image" and after His likeness? Are we sure that our ideal of Him is not some extraneous personification, the product of our own character and disposition—created in our image? Have we caught a view of our own reflection in the mirror of infinity and set that up as God?

Certainly we have no medium for the divine ray except in our own minds. If it is refracted, or even hideously distorted, this must be because that medium is clouded and pervaded with evil thoughts, motives, and propensities. The image which will then be formed may be the individual's highest ideal of God. But it will look to enlightened eyes more like an adversary of the good. Fear alone could persuade us to offer it worship. To speak the truth unqualifiedly, we all hate those reflected images that are so often obtruded as the highest concept of the Divine Being. Many of us would say as much if we only had the courage.

Let us bear in mind, then, that what we consider to be God is only the index to what we conceive of Him. We need not hesitate, because His actual Being transcends the power of the mind to comprehend Him. The ability to form an idea, implies that it is possible to realize it. The idea is itself the actual entity; the prophecy of its accomplishment in the world of phenomena. Such conceptions as the being of God, spiritual existence, eternity, the interior union of God with man, the eventual triumph of the Right, could never be found in the mind as dreams, if they had not somehow been there infixed from that region of Causes where real Being has its abode. We must, however, go up higher than external science reaches into the demand of Faith.

The ether which contains the Light is more tenuous and spirit-like than the air that transmits sound; but it is none the

less real because of the greater difficulty to explore the secret of its existence. All that we suppose to be known concerning it is actually a matter of faith, rather than the "exact knowledge" of the scientist. The next lessons pertain to the higher mathematics; how, from what we know of ourselves, to find out God. We must see, if at all, with a sight not possessed by us in common with the animals; piercing beyond that which *appears* clear to that which *is*.

Our searching awakens in us the perception of the Divine One. Our wants indicate to us His character. We need wisdom that transcends our highest learning, a providence that considers all things, a power supreme above our faculty to adopt means to ends, a love ineffably pure to inspire all things for the completest good of all. Knowing that whatever we see is transitory, we are cognizant that we must have other than mortal vision to behold the Permanent. It is enough that we acknowledge Him as the fact of which we are the image; and that we devote our attention accordingly to the clarifying of the medium which receives His effluence. Let the scope and purpose of our life be devoted to becoming what we recognize to be the inherent character of the God that we need. In due time the likeness will be indeed the similitude, and not a "*counterfeit* presentment." We shall embody in our disposition and character the very ideal which the witty unbeliever so strangely pictured. This is the meaning of the problem. A pure man will display the like image of his God.

Entheasm, therefore, is the participation of the Divine nature together with prophetic illumination and inspiration. The modern physician, scientist, and psychologist, it has been noted, define the condition as "approaching mental disorder," and "remote from the ordinary working-day habits of thought." It is doubtful whether they can, from their standing-point, see the matter any more clearly. By their logic, God the Creator is only a myth, or, at most, the cause of

disorder in the minds of men. We can not wisely seek for truth at such oracles. The earlier teachers taught and builded better.

The conviction has been universal that men did communicate with the Deity and receive inspiration from Him. The Hebrew polity had its seers and prophets, schooled by Kenites and Nazarim. There were similar castes of wise men in the various countries of Arabia, Egypt, Palestine, Syria, and Inner Asia. The Greeks, whose arts and poetry are even now praised and imitated, had also their sages, seers, and hierophants. The Romans, likewise, however bestial, cruel, and arrogant, nevertheless endeavored, by means of pontiffs, augurs, and haruspices, as well as by adopting the worship and divinities of other nations, to learn whatever they could from the supernal world. All seem to have believed that the living on earth was really death, and that dying from the earth was a passing from this death to that of actual life. A gill of poison did not extinguish Socrates. The phenomena of the every-day world were regarded as the illusive cheat of the physical senses; but beyond it they contemplated the existence of a region æthereal, and not aerial, with no limits of time or space, where all was real and permanent. Thitherward they aspired in the hope that haply they might unite the potencies of that world with the scenes of the temporal universe. Was it a bootless aspiration, a beating of the air, a vagary of untutored frenzy?

Among the individuals notably regarded as entheasts, were Socrates, also styled *theomantis*, or God-inspired; Ammonius Sakkas, the God-taught; and Baruch or Benedictus Spinosa, the God-intoxicated. Plato, Gautama-Siddart'a, Apollonius and Iamblichus, were also named DIVINE. "They were called *gods* to whom the word of God came." It was the universal belief that men might receive superior illumination, and that a higher and more interior faculty was thereby developed.

It should not embarrass us that pecul-

iar disorders of the body are sometimes attended by extraordinary spiritual phenomena; nor that great and unusual commotions of the mind may occasion them. No more is proved by this than by the fact, equally well established, that shocks and excitement often restore paralyzed limbs and functions. As for fasting and prolonged intense mental action, they are methods in every studious endeavor to develop a more perfect perception. They are legitimate aids to enable the mind to get beyond the impediments to clear thinking and intuition, into a higher spiritual domain. There is no morbidity or abnormality in this, but a closer approaching to the Source of real knowledge. Science owes more to such methods than scientists are aware or willing to acknowledge. It is not fair to cite them as arguments against spirituality.

The entheastic condition indicates a life that is lived beyond and above the physical senses. It is a state of illumination rather than a receiving of messages from the Divinity. Indeed, it is safe to affirm that there are no new revelations. The same word that ordained Light to exist never ceases to so ordain; the same spirit or mighty wind that moved and operated upon the waters at the *genesis*, is potent and active to-day. The world may vary in form and aspect, but that which gives it life is always the same. Whoever will ascend above the changing scenes, will know and mirror in himself the Unchanging. This is what is meant by being involved and included in the divine aura and light.

The old Mystics used to teach that we must be passive and not active. This by no means implied physical or moral inertia, but simply receptiveness. Just as a mirror receives and infixes an image, so every divine radiation and inflowing should be retained and embeiged. The light is not given or received for the sake of having the borrowed splendor to shine with, but that it may be assimilated and incorporated into the life. The word is not mere speech, but the reason taking that form. The true speaking of a man

is itself the man. Every revelation of God is God himself coming to man. Every such one expressing God in his life and act is the word of God made flesh.

Thus we perceive that entheasm is the

participation of the divine nature, spirit, and power. It is the end for which mankind have existed on the earth, the culmination of the divine purpose.

ALEXANDER WILDER.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER I.—Continued.

ARCH OF THE CRANIUM IN BIRDS.

THE cranial arch of birds (Fig. 16) presents the form of an oval, whose greater extremity lies behind. The external surface is smooth, convex, and presents bulges or protuberances, corre-



Fig. 16.—SKULL-CAP OF A BIRD.

sponding to the most developed parts of the brain. One of its more pronounced protuberance corresponds to the cerebellum, and this presents on each side two light depressions. The whole ex-



Fig. 17.—CRANIUM OF WHITE OWL.

ternal surface of the cranial arch is covered with a thin periosteum, and that by the skin. Sometimes muscles or bony processes are found upon this surface, as, for

instance, in the white owl (Fig. 17). The internal face of the cranial arch is smooth and presents three depressions (Figs. 18, 19, 20). The first two, marked 1, 2, 3, 4, 5, 6, 7, (Fig. 21) lodge the cerebral lobes, the other placed behind (C) and upon the middle line receives the cerebellum, and ordinarily a thin crest or raphé separates the two fossæ containing the lobes of the cerebellum, and terminates behind in the form of a V in relief upon the sides of the cerebella fossæ (Fig. 21, etc.) Upon the sides of this are seen cellules which form part of the cavities of the ear in certain species. (Same Fig., N, N, N).



Fig. 18.—SKULL-CAP OF WHITE OWL.

The brain in all species of birds, without exception, has no convolutions. One notices sometimes shallow furrows designed to lodge certain vessels (Fig. 16). All this surface is in contact with the dura-mater as in man and quadrupeds. Two bony plates associate in forming the arch of the bird cranium, and there exists sometimes between them a separation, more or less considerable, filled with diploic matter. We have an example of this in the skull of the owl. In this the tissue is cellular, but it is not the same in some species belonging to the family of the Gallinaciæ, as the chicken and turkey

(Fig. 22) in which it possesses much density. "It often happened," says Dr. Vimont, "that on opening the skulls of very old Brahma-cocks, or very old hens, that I



Fig. 19.—SKULL-CAP OF HEN.

was astonished by the thickness of the bone. The skull, although voluminous to all appearances, disclosed an encephalic cavity of very small dimensions. In the whole family of birds known under the



Fig. 20.—SKULL CAP OF DUCK.

name of the small-billed, such as the titmouse, gold-finch, sparrow, the two plates of the cranium are so closely associated that they appear to form but one."

THE BASE OF THE CRANIUM IN MAN.

The base of the human cranium, which we take up first, for the purpose of com-



Fig. 21.—SKULL-CAP OF BUZZARD.

parison on account of its larger development, presents three distinct regions: 1st, The anterior, A, A, A, A, (Fig. 5 and Fig. 23), upon which are seen the numbers

indicating the different parts of this section of the cranium. 2d, The middle C, E, D, (Fig. 23). 3d, The posterior, K, F, G, H. Taken all together, the base of the cranium presents a plane inclined from front to rear, its breadth increasing in the same direction. The anterior fossa is divided into two parts by an osseous crest M, belonging to the bone known by the name ethmoid; this apophysis has been very

Fig. 22.—VERTICAL SECTION OF SKULL OF TURKEY-COCK.



generally designated by the term *crista galli* in almost all the ancient and modern anatomical books. Upon its sides or lateral parts are seen several holes or small, irregular apertures, through which the olfactory nerves pass. The remainder of the anterior fossa on the right and left, is covered by the inferior part of the cerebral lobes, and forms the *orbital shelf*. One sees that in this region the

convolutions are well expressed upon the cranium: a result attributable to the thinness of the membrane which envelops the brain at this point.

Three bones, which we shall describe later, contribute to the formation of the anterior fossa of the base of the cranium: the ethmoid, the frontal, and the sphenoid. The middle fossa, C, D, E, is narrowest at its middle part, v, where there is a depression, O, O, O, O, containing a small body commonly designated under the name pituitary gland. The sides of the middle fossa are well-developed and

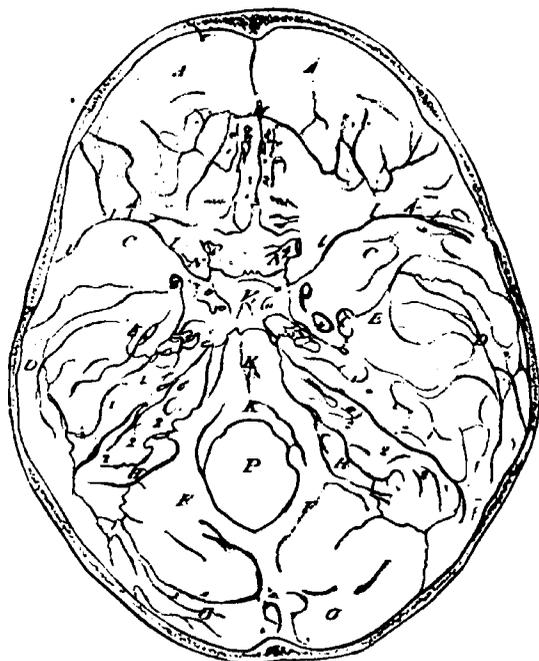


Fig. 23.—OUTLINE OF BASE OF SKULL (MAN).

they lodge the middle lobes and the anterior parts of the posterior lobes.

Two bones enter into the formation of the middle fossa: the sphenoid, which forms the larger part, and the temporals. The posterior fossa, F, G, H, K, is more extended than the two others. It is almost entirely formed by the occipital bone, and its basilar apophysis; although a small portion of the sphenoid and the temporals contribute to it. The posterior fossa corresponds in its lateral parts, F, F, to the lobes of the cerebellum, and in its middle part, K, K, to the expansion of the

spinal marrow. In the midst of this fossa and behind is seen a large oval opening, P, through which passes the spinal column. At the antero-lateral margins, two large depressions, H, H, contain the lateral sinuses. On examining with care the base of the cranium, we perceive several apertures, which have not been noticed. They will be considered in the course of our description of the bones to which they belong.

BASE OF THE SKULL IN QUADRUPEDS.

The base of the quadruped's cranium presents varieties of form which the phrenologist should not ignore. Let us examine with care the most important. Fig. 24 represents the base of the skull of the Sajou. Fig. 25 represents the same drawn openly, and supplied with numbers and letters in a similar manner as in the diagram of the base of the human skull. Examined superficially, this part of the base of the brain would appear to resemble greatly that of man. It offers, however, to the scrutinizing eye very remarkable differences, as we shall perceive. In the ape, the ethmoidal crest, M, is scarcely seen. The orbital plate, A, A, A, A, forms two protuberances, much expanded in the anterior, and does not show, as in man, an almost horizontal plane. One finds, however, depressions there in keeping with the cerebral convolutions. This region presents, as one will see, a great contraction of its lateral and

anterior parts. At the middle and behind the anterior fossæ two openings are seen very close to one another; these afford a passage as in man for the optic nerves. The middle fossa is well pronounced; it presents at the center as in the human species, a cavity, O, O, where the pituitary body lies.

The posterior fossa, F, G, has, as in man, considerable extent, and is likewise in keeping with the inferior surface of the cerebellum. This fossa is ordinarily more extended in the male than in the female. We shall find in other quadrupeds still

more remarkable differences between the bases of their skulls when compared with that of man. We can not at present



Fig. 24.—BASE OF SKULL OF SAJOU APE.

pass them all in review, but must content ourselves with describing those with which it is important to be acquainted. We shall find in the outset, as in man, three principal fossæ, at least in the carnivora, but we shall see that there exist in fact but two well marked in the rodent and the herbivorous. Let us examine first the base of the cranium of carnivorous animals. We notice that in the cat (Fig. 26) there exists at the middle part of the anterior of the middle fossæ, an ethmoidal crest, and on each side several perforations, I, I, I, I, which permit the olfactory nerves to pass. These nerves are especially apparent in the base of the cranium of the marten (Fig. 27). The orbital plate in these two animals shows a striking contrast in form and extent, if one compare it with that of a man and the ape; as in them it is marked with depressions indicating the form of the convolutions in the cat. The orbital plate here is constructed upon a plan more inclined than in the ape. Its most exterior part is more elevated than the external in the marten;

the plane of the orbital plate rises from behind forward, and approaches the perpendicular. It is extremely inclined toward its anterior extremity, where it terminates in a point and presents only the impression of a small convolution. In the cat, one sees that the same region presents more breadth behind the ethmoidal openings; the two optic passages, V, V, are seen directed from without inwardly, and in the marten from the rear forward. The middle fossa, 5, 6, 7, shows generally little depth, while quite wide, its central portion presents a depression in which lies the pituitary body. The posterior fossa, H, H, presents some differences which are very remarkable as compared with that of the base of the skull in man and of the ape. The basilar channel, M, M, forms the largest part of it; the occipital opening which, as we have seen, takes in the ape, and especially in man, a vertical direction, is found here to have a horizontal course, P. Instead of finding, as in man and in the ape, this

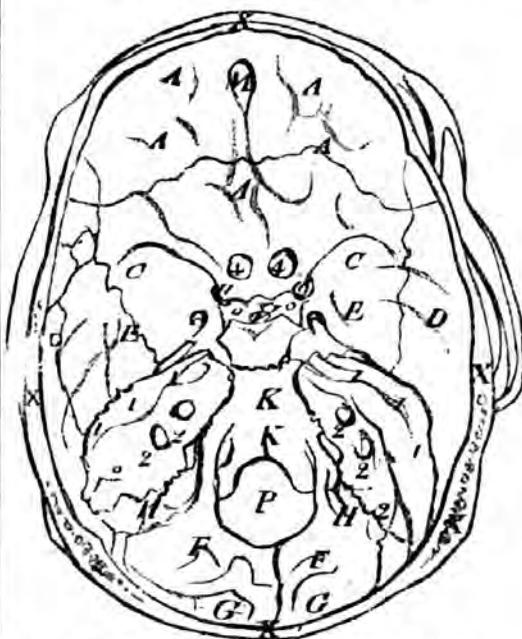


Fig. 25.—SKETCH OF SKULL-BASE OF SAJOU-APE.

opening at the center of the posterior fossa, it is placed here at the farthest

extremity. There is a striking difference between the posterior fossæ in these animals and the same region in man and the quadrumana.

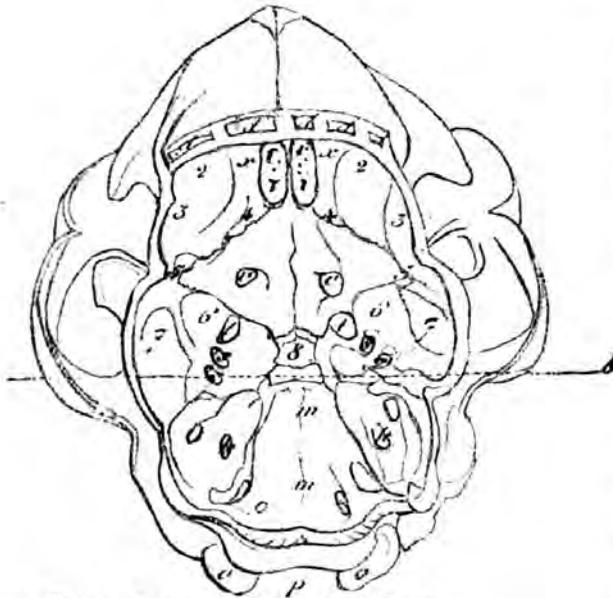


Fig. 26.—SKETCH OF BASE OF CAT'S SKULL.

It is more difficult to establish in gnawing animals a line of separation between the fossæ of the base of the skull. We have indicated by the figs. 2, 3, 4, 5, 6, and the letter c (Fig. 28), the parts which correspond to it. The most interior part of the anterior fossa terminates in a point; at the middle and forward are seen the ethmoidal openings, 1, 1, very marked. In the large ruminants and herbivora the ethmoidal openings are very pronounced, and separated by a strong ethmoidal crest. This is seen in the cow, the horse, the ass, the sheep. Behind the olfactory openings in these animals are the two large depressions in which bulbous olfactory nerves are lodged, which are much expanded.

There exists between the base of the skull of rodents and that of flesh-eaters, a remarkable difference which we shall indicate; if we compare, for example, two skulls of equal volume, one of a flesh-eater (Fig. 26, cat), the other of a rodent (Fig. 28, hare), we find that from the point where the cerebellum begins, to that where it terminates, there is more

area in the first than in the second, consequently more cerebellum. Dr. Gall made a comparison in this respect between the heads of rodents and carnivora, having reference to the history of carnivorous instinct. If one draw a perpendicular line from the external auditory opening, he says, there is found behind it in the herbivora only a small portion of the cerebrum and cerebellum, while in the feridæ such a line divides the cerebrum into two equal parts. This observation is quite inexact: first, because the perpendicular line falls, in the rodent, between the hemispheres and the cerebellum; and the same line instead of dividing the cerebrum of the flesh-eaters into equal parts, divides it very unequally, the larger part being in front.

This mistake must have been due to a superficial examination of the skull; the



Fig. 27.—BASE OF MARIEN'S SKULL.

line being drawn on the exterior, it is impossible to see with what point of the skull internally it corresponds. A trans-

verse line drawn upon the base of the cat's skull in front of the auditory opening (Fig. 26), and a similar line drawn



Fig. 28.—BASE OF SKULL OF HARE.

upon that of the hare (see Fig. 29), will not divide the first into two parts of equal extent; while, as we may observe in the

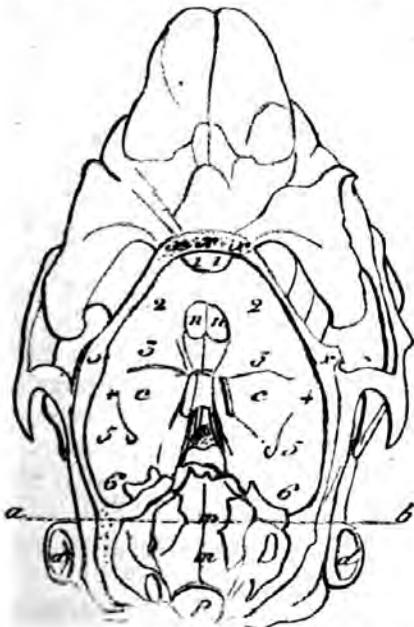


Fig. 29.—SKETCH OF PRECEDING.

rodent (Fig. 29), the line passes almost exactly between the region of the cere-

bellum and that of the cerebral hemispheres.

In the structure of the base of the brain of rodents those depressions are not seen which we perceive in the flesh-eaters; at least, they do not present the same character, from the fact that the brains of all animals of that class are completely smooth or lacking in convolutions. The occipital opening, as in other quadrupeds, has a horizontal position (Fig. 29, P).

BASE OF THE SKULL OF BIRDS.

It has been easy to perceive from the preceding descriptions, that some great differences exist between the base of the skull



Fig. 30.—BASE OF SKULL OF HOODED CROW.

of man and that of apes, and between the ape and other quadrupeds. We will find these differences still more conspicuously marked in birds. Several anatomists, and we cite one of the most celebrated, M. Cuvier, find only two principal fossæ in the base of the cranium of birds. We think, however, that it presents three, which are very distinct. Fig. 30 represents the base of the skull of the hooded crow. We take it by preference as a matter of comparison, because in this bird all the regions are well developed. Fig. 31 represents the same in outline. The two large

surfaces marked A, A, A, A, A, form the principal of them, which we will call the superior. We may divide it into three regions: First, anteriorly, (1), corresponding with the anterior part of the

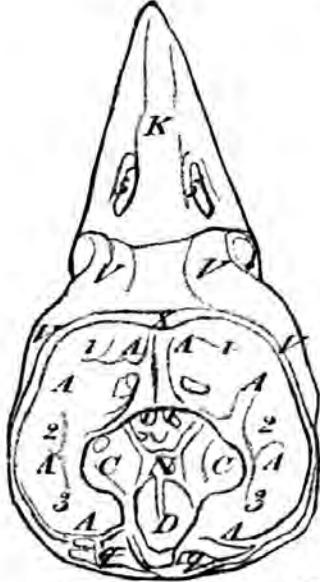


Fig. 31.—OUTLINE BASE OF HOODED CROW.

hemispheres. Second, (2), the middle part in contact with the middle and posterior parts of the same hemispheres. Third, (3), the posterior region which receives their posterior and inferior extremities. The remarkable differences which the base of the skull of the duck, hen, buzzard, owl, and other species present in respect to the region which we have

just considered, are evident upon examination. At the middle of the base of the skull, one remarks a light depression (N) where lies the pituitary body; farther up two depressions (C, C), which are filled by the quadrigeminal turbercles; the posterior fossa, D, presents really but one central part. This corresponds to the cerebrum, and to the beginning of the spinal marrow. Its extent and depth are always in keeping



Fig. 32.—SKULL OF HOODED CROW.

with the development of those parts of the cerebro-spinal system. On each side of the cerebellar fossa we notice a part of the cellules belonging to the organs of the ear, inclosed between the two bony layers of the cranium. Fig. 32 represents the skull of the hooded crow, from which the external table has been partly removed in order to expose the semicircular channels which are highly developed in this species.

SAYINGS, AND WHO FIRST SAID THEM.

No. II.

THE origin of the common saying, "Consistency, thou art a jewel," has been a disputed question among scholars; it has been traced, however, to a ballad published in 1774, entitled "Jolly Robyn Roughhead," in which the poet indulges in a lamentation over the deplorable extravagance of mankind in general, and women in particular, causing Robyn to address his wife in these words:

"Tush! tush, my lassie! such thoughts resign,
Comparisons are cruel,
Fine pictures suit to frames as fine,
Consistency's a jewel!"

A noted French wit of the sixteenth century, Francis Rabelais, gave us the following witty couplet:

"The devil was sick, the devil a monk would be,
The devil was well, the devil a monk was he;"

and, also, the expression: "Robbing Peter, he paid Paul."

Decorous mammas sometimes quote to their hoydenish daughters the old saw, "Whistling girls and crowing hens always come to some bad end," hardly thinking they are using one of John Chi-

naman's proverbs; such is the fact, however, and it is an injunction of the Chinese priesthood to kill every unfortunate biddy that ventures to crow.

To "scrape acquaintance," is a quaint phrase which originated with Hadrian, who, being at the public bath one day, observed a veteran scraping his body with a tile; he at once ordered that the old soldier should be supplied with more suitable cleansing materials, and also with money. When the Emperor again visited the bath, there were a score of old soldiers in the water rubbing away for dear life with their several tiles. Hadrian understood the sight at once, and dashed their great expectations to the ground, by exclaiming: "Ha! ha! you had better scrape one another, my good fellows! You certainly shall not scrape acquaintance with me."

"Oh, rare Ben Jonson!" is a phrase familiar even to those who are unacquainted with the beauties of the works of this celebrated author; these words were cut upon his tombstone in Westminster Abbey by a mason, for eighteen pence, at the request of a looker-on, while the grave was being covered.

We are gratified to learn from both Johnson and Herbert, that "Hell is paved with good intentions," and Beaumont and Fletcher assure us that, "What's one man's poison, signor, is another's meat or drink."

"Though this may be play to you, 'tis death to us," writes Roger l'Estrange in 1704. Milton introduces to our notice "the light fantastic toe" in his "L'Allegro."

"Out of mind as soon as out of sight," is quoted from Lord Brooke; and "Necessity the mother of invention" originated with George Farquhar.

When King Charles was in Parliament attending the discussion of Lord Ross' divorce bill, he declared it to be as "good as a play," and the saying has outlived him.

"Cleanliness is next to Godliness," is found in the Koran. "Evil communications corrupt good manners," is quoted

by St. Paul in his writings, and is found in a fragment by Menander, an ancient Greek poet.

Those people who bore their unfortunate friends with long stories, and receive in return the compliment of "going all around Robin Hood's barn," may better appreciate its meaning, if they understand that that hero's said "barn" was erected by Nature in the form of that grand forest in which Robin Hood and his chosen band saw fit to roam. We often read of a defeated political candidate as being "sent up Salt River." Mr. Bayard Taylor, in one of his works, explains the origin of this saying, in this way: "Salt River was at one time noted for its pugilists among the salt miners, consequently the boatmen on the Mississippi would threaten any of their offending comrades with being sent up Salt River, to the far-from-tender mercies of those who made it famous.

Every one knows the "Hub" is Boston; but, perhaps, every one may not know that the bright New England metropolis received that name from Oliver Wendell Holmes in his "Autocrat of the Breakfast-Table," where is found this line: "Boston State-house is the hub of the solar universe."

From that American of Americans, Benjamin Franklin, came many wise, quaint sayings, familiar as household words, and among the many, we will mention but these:

"Many a little make a mickle;" "Three removes are as bad as a fire;" "One to-day is worth two to-morrows;" and "Early to bed and early to rise, makes a man healthy, wealthy, and wise."

ALMA L. ROCKWOOD.

SCULPTORS of Life are we, as we stand with our lives uncarved before us,
Waiting the hour, when at God's command, our life-dream passes o'er us.
Let us carve it, then, on the yielding stone, with many a sharp incision—
Its heavenly beauty shall be our own—our lives that angel vision.

—EMERSON.

FAMILIAR FACES.

I know the words are beautiful,
That those well-chosen rhymes
Fall smoothly, clear, and musical
As softly calling calmes.

But seldom now I heed the flow
Of rhymes so often told,
Although the thoughts that lie below
Seem sweeter than of old.

'Tis much the same, O friend, with you :
I often hardly see
How darkly fringed and deeply blue
The eyes you turn on me.

Yes, words and faces that we know
Will pall at times, I fear :
'Tis thoughts and souls that do but grow
More intimately dear.

ETHEL TANE.

WILLIAM MANNING LOWE.

COL. LOWE has an organization of an impressive type. His head is large, being about twenty-three and a half inches, with fine quality, well filled out in the base and indicating great constitutional vigor. He is a close observer, possessing an excellent memory; few men correlate facts and ideas into the higher forms of scientific propositions and practical deductions with such ability and clearness as he.

He is eminently religious, yet believes nothing which does not seem reasonable to him. His religion is of the philosophic type, and his philosophy partakes largely of the transcendental. Plato, Berkeley, Spinoza, Spencer, Mill, and Emerson are his favorite authors. He is in literature an epicure; delights in good books, but is select in his reading, and the authors he honors by a careful study become his constant companions. Still he delights in the society of thoughtful men and women, although his intellectual and moral faculties must be gratified as fully as his social, or he is not inclined to pursue the acquaintance. He is a charming conversationist, if permitted to select his subjects and his associates, but in ordinary society he is very quiet, even reticent. Humor of a refined and subtile order is a characteristic of his conversa-

tion and his public speeches. But logical force, rhetorical polish, and philosophical breadth are his chief characteristics as a writer and speaker. He has Self-esteem and Firmness, without pronounced egotism or obstinacy; he is dignified, but not haughty; high-spirited and progressive, but not fanatical. He is a natural leader, yet he leads men without appearing to do so. He simply stands for an idea, and men fall into line to sustain him, without any flourish of banners or blow of trumpets. His brain is well sustained by a well-formed, fine-tissued, healthy body. He is six feet high, with a weight of 175 pounds. His habits are based upon temperance in all things, save that he smokes—a vice which he will abandon when personally convinced of its injury to his health.

Col. Lowe is of English stock, being a descendant on the father's side from the original founder of the American branch of the Lowe family, who came to this country with Lord Baltimore, and his mother being a scion of the Puritan New England family of Mannings, which was transplanted from Old England about the middle of the seventeenth century.

The subject of our sketch was born in the city of Huntsville, Alabama, January 16, 1842. His father was a successful merchant and honored citizen. He gave

his son the best possible opportunity for securing a good education by sending him first to Green Academy, Huntsville, then to Wesleyan University at Florence, Alabama, where he was graduated at the age of sixteen, in 1858. From there he went to Lebanon, Tennessee, and entered the Law Department of the Cumberland

ing to their homes or enlisting in the army.

Young Lowe was opposed to secession and though but a youth, delivered some eloquent speeches against the proposed withdrawal of the South from the Union. He was in Washington on the 4th of March, 1861, and listened to the calm,



University, from which he was graduated in 1860, with high honors, being chosen valedictorian for the class.

On leaving here, he entered the University of Virginia, with a view to graduating from that institution; but the war burst upon the country, and the university was broken up, the students return-

but earnest and patriotic inaugural address of President Lincoln, which made a strong impression upon him.

When, however, his State seceded from the old Union and joined the Southern Confederacy, he acquiesced in this action of the majority of his people, and at once joined the Southern army,

enlisting as a private in the 4th Alabama Infantry, in the latter part of April, 1861.

He was in the battle of Manassas, where his regiment did perhaps the hardest fighting at that day. It lost all its field and staff officers, and half its men. Young Lowe was dangerously wounded in the left temple, by a musket-ball, which shattered a section of the frontal bone and a part of the temporal bone. He was entirely unconscious for three weeks, and carries a large scar now. On his recovery he was appointed Chief-of-staff to Governor Starter, of Alabama.

In the autumn of 1862 he became a member of Gen. Withers' staff, with the rank of Captain, and subsequently he served on the staff of Gen. Alanton. He was seriously wounded during an attack on Nashville, in 1863. Early in 1864 he was commissioned Lieutenant-Colonel, and put in command of a battalion of cavalry in Alanton's brigade. He took part in all the battles with Rosecranz during the celebrated raids into Georgia and Alabama. He was captured by Gen. Stanley's forces in the latter part of 1864, and held a prisoner in various prisons until the close of the war, when he was released on parol from Fort Delaware.

Col. Lowe comes of Democratic stock, his father being an elector for Gen. Jackson, and a strong partisan. In 1866 the Legislature of Alabama elected him to the office of Solicitor of the Fifth Judicial Circuit, of which position he was deprived by the Reconstruction laws of 1868. He was elected a member of the State Legislature in 1870, and in 1875 chosen a member of the Constitutional Convention, in which he was a leading spirit. He is the author of the clause in the Bill of Rights of the Constitution of the State of Alabama, which declares that no educational or property qualification for suffrage or office shall ever be required; he is therefore very popular with the poor whites, and colored people especially.

Col. Lowe has been a Greenback man

ever since the subject attracted his attention in 1868. He most earnestly advocated the nomination of Pendleton for President that year. He supported Horace Greeley in 1872 with all the ardor of his nature, making an active canvass in his behalf.

He preferred Hendricks for President in 1876, but supported Tilden under protest, on account of his position on the currency question. In 1878 he refused to go into the Democratic Congressional Convention, but announced himself an Independent candidate on the National Greenback platform, and was elected over the regular Democratic nominee, Mr. Garth. The contest was one of the most active ever witnessed in this country. Every newspaper in the district, with one exception, opposed Col. Lowe, and besides having to meet his regular opponent on the stump, backed as he was by the heretofore dominant Democratic party, with all its machinery and orators, he also had to contend against Governor, now Senator, Houston, Senator Morgan, Gen. T. P. Walker, and Gen. Wheeler, all of whom canvassed the district against him, with the determined purpose of crushing the young Independent, who had dared appeal to the people against the old Bourbon party. Nor was this all the opposition he had to contend with. The bankers and a majority of the clergy and members of the bar threw their influence against his election. Yet when the polls closed, it was found that Col. Lowe was elected by a handsome majority of near twenty-five hundred.

Col. Lowe took his seat as a member on the opening of the Special Session of the Forty-sixth Congress; and he has already made a record as an able debater and an industrious and talented legislator.

"THERE is a creature," says Rev. Phillips Brooks, in his Yale lectures on preaching, "who ought to share with the clerical cheat the abhorrence of the people. I mean the clerical jester. He lays his hands upon all sacred things. He is

full of Bible jests, and he talks about the Bible with jests that have come down from generation to generation. The

principles, which, if they mean anything, mean life and death to the soul, he turns into material for jest."

CHARACTER IN THE VOICE.

WE are very much given to forming estimates of persons by the tones of their voices, and in the absence of other and better data, a tolerable judgment may be so formed.

It is said that Socrates judged the quality of a man by the tone of his voice, as may be inferred from his well-known "Speak that I may see you."

Dr. Durant has prepared a formula which embodies his conclusions on this subject, viz:

"We perceive in a stutterer one that is easily enraged and as easily pacified, vain, officious, inconstant, and ordinarily quick.

"A person whose utterance is thick and coarse is malicious, cunning, and disdainful.

"A coarse voice indicates a robust physique, a great talker, quick-tempered, though conspicuously discreet.

"A piercing, fine, or weak voice is indicative of timidity, cunning, and generally of quick wit.

"An attractive and clear voice expresses a man who is prudent, sincere, and ingenuous, but proud and incredulous;

whereas a firm voice, without harshness, denotes a person who is robust, intelligent, circumspect, and benevolent.

"A man possessing a trembling and hesitating voice is timid, weak, vain, and sometimes jealous.

"A voice combining great sound and firmness indicates a man who is strong, audacious, rash, obstinate, and self-important.

"A sharp and rude voice, in singing as well as in conversation, denotes a coarse mind, inferior judgment, and strong appetites.

"A hoarse voice, seemingly the effect of a cold, signifies a person more simple than wise, credulous and untruthful, vain and inconstant.

"A full and sweet voice denotes a man who is peaceful, inclined to timidity, discreet, and self-willed.

"A voice at first grave and then sharp and piercing denotes the quick temper of an impetuous, arrogant, and impudent man.

"A soft, sweet voice is found in a person of a peaceable and suitable character."

AGREEABLENESS.

IN that portion of the brain lying a little on each side of the upper part of the forehead, phrenologists locate the organ of Suavity, or Agreeableness. Upon this, large or deficient, depends, in a great degree, the natural politeness of its possessor. Some men are so organized that it is only with difficulty they can even force an appearance of politeness. Without intending it, their manner is repellent, and if they have a fair share of Combativeness, antagonistic to such an extent as to make their society unsought and disagreeable. They receive favors

ungraciously, and grant them in such a manner as makes the recipient regret having asked them. Of this kind was the young lady in the rail car, who took a seat offered her by a gentleman old enough to be her father, without remark. Perceiving that he stood by her side longer than she thought necessary, she asked, rudely, what he was waiting for. "Merely to hear you say thank you," he replied, much to her annoyance, and to the merriment of those sufficiently near to hear the remarks.

Sometimes a person really possesses a

desire to be polite, the result of the action of other organs, as Benevolence, Reverence, etc., but lacks the power of expressing it by acts or words. Such are unfortunate, and are constant sufferers in consequence. Their questions are often put in such manner and word as to give unintentional offense, and their replies are shot out bluntly, and without the respect the circumstances demand. We know of more than one really kind-hearted and affectionate man, who impress a large majority of merely business acquaintances with the idea that they are ugly, unsocial, disagreeable individuals whose company is to be avoided.

On the other hand, there are those whose brain is so largely developed and active in that region, as to make them so desirous of appearing polite and agreeable, that they often sacrifice truth itself in the endeavor. Of this class are those who treat you as if they desired to make you their dearest and most confidential friend; parting with you with an appearance of great sorrow, only to meet the next moment another person with the same expressions of affectionate regard. Their desire to please is so great, that their words are not always measured by the strict rule of fact, but expand or contract therefrom as it seems to them will best please the listener. Nor can those people be called really hypocrites or deliberate falsifiers. They act out their natures as inheritance and circumstances have made them.

But between these two unhappy extremes are various gradations tending to the happy mean. We occasionally meet men (would it were oftener), whose every look and action have attractions, and whose words, not studied, are as agreeable as possible, who can say unpleasant things in such a way as to deprive them of half their bitterness, and even decline a request in such a way as makes a friend of the applicant. We can not all attain this degree of perfection, but "character is not writ in marble," and it is left for each of us, by care, atten-

tion, and cultivation, to make ourselves better or worse than nature leaves us.

There is no place where true politeness is worth more — is productive of better results, than at home. And by this we do not mean the house and family circle merely, but everywhere about — on the farm, in the garden, among the animals. What, be polite to animals, do you ask? Most certainly, we say. And leave it for your own observation to discover how much gentle words, pleasant tones, and kind looks can accomplish. The best cattle-trainers we know, have learned by experience, it is not necessary to scold and abuse oxen to render them obedient; and a horse soon comes to love a gentle master. Try it with your farm hands. A request pleasantly preferred is complied with quite as readily, and with a better spirit, than a mandatory order. "Please" is an entering wedge to a man's good-nature, and often opens the way through which the sentence following passes without friction, where otherwise it would chafe and rub.

Capt. Gardner, an old friend of ours, was a student of human nature, and knew men, their ways, their weaknesses, and their deserving, too. After one of his long trips, he called on us. In conversation, he said he believed since he saw us before, he had done what no other man ever did. He had sailed a ship around the world without using an oath or striking a blow. He believed it was possible to be kind and agreeable to his sailors, and still maintain their respect and obedience. He determined to try it, and proved by practice what he inferred from theory.

There are many rough places in life's journey. We can not make them too few, try how we may; but most of us can, by a little self-control and will-power, keep back a disagreeable expression, and replace it with one not only more polite and quite as effective, but which is less a stumbling-block in the way of our neighbor.

L. A. ROBERTS.

THE PILGRIM.

FROM THE GERMAN OF SCHILLER.

In life's sunny spring inviting
 Once I went afar to roam,
 And the dance of youth delighting
 Left I in my father's home.
 All my heritage forsaking,
 Like a careless child I went,
 None of all my treasure taking
 With my pilgrim-staff content.

Onward, mystic tones inspired me,
 Mighty hope's encheering song,
 "Toll thee up thy soaring pathway
 It will open wide ere long.
 Thou shalt reach a golden portal,
 Through its archway enter free,
 There shall all earth's changing mortals
 Changeless and eternal be."

Ever departing, morn returning,
 Never, never stood I still ;

In the darkness ever hiding
 What I seek and what I will.
 High the mountains towered before me,
 Torrents hemmed my eager way,
 But I raised an arch that bore me
 O'er their wreathing, whirling spray,

Till I reached at last a river,
 Onward to the east it flowed ;
 Trusting to its guiding favor
 Calmly on its breast I rode.
 Ever onward to the ocean
 Do the waves that bear me roll,
 But their dreary, restless surging
 Never nears me to the goal.

Ah, no bridge can lead me thither,
 Heaven the earth can never near ;
 Always far and blue forever,
 Never can the there be here.

LYDIA M. MILLARD.

ANCIENT POPULATIONS OF NORTH AMERICA.

FROM an essay read before the State Archæological Association of Ohio, by Rev. Stephen D. Peet, we make the following eloquent and instructive extract :

"It is proper to observe that there are traces of a numerous prehistoric population scattered over nearly every part of the broad continent. No one who has not made a point of observing, would understand how numerous these vestiges are, or understand their design or purpose ; yet they are here to present their evidence, to invite our study, and we ourselves are at fault if by comparing and analyzing and attending to their testimony we do not understand the tale.

"Let any one go forth into the fields and the meadows, into the hills and valleys, and search for these records of the past, and he can not fail to trace out an alphabet more striking than the hieroglyphics of Egypt, or the inscription upon the buried palaces of the East. These works are replete with a varied story ; everywhere the decaying skeletons and the silent skulls remind us mournfully of the death that has swept over the

land ; but the remains of fires, the débris of camps, as well as the running stream and sparkling spring from which they drank, all remind us how recently the living have passed away.

"As we go through the silent earth-works, and see all the preparations they made, the walls and ditches for defense, the inclosures they erected for worship, and the monuments or mounds they erected for tombs, we are astonished at the great variety and the wonderful significance.

"If there are modes of life which we do not understand, and structures which are still mysterious in their design, yet they are very expressive of the strange unknown life, of the mysterious religion, the wild aboriginal state. It may not compare with our later civilized condition and modern ideas, for they are only expressive of another condition than that to which we are accustomed.

"But the picture of the prehistoric condition can not be excelled.

"Let any one visit one of the renowned defenses situated so beautifully on the lofty hill-top, and commanding the dis-

tant view of stream and valley, of hill and forest, and then look about him and behold the wonderful adaptation for defense and protection, and he will appreciate what were the dangers from the secret foe, and how the war-whoop must have startled the peaceful inmates.

"Let him visit again the quiet village inclosure, and see the surrounding wall, and trace the place of palisades, or tread the path to the unfailing stream, and walk over the happy hunting-ground and the delightful valleys, and he has a picture of peace which nothing else can give.

"Let him then enter the corn-fields or the garden-beds, or surmount the elevated platform, or enter the ancient courts and court-yards of the agricultural people, and he again has a view of another state of life which he did not know. Again, let him enter one of the sacred inclosures and look about him and see the altars and the temple platforms, and all the complicated structures, wherever the social fires were lit and the victims of sacrifice were offered, and even if he knows not the worship that then prevailed, it is not difficult to imagine something of the religious customs of the people.

"The grand pageant of the assembled

multitudes passes before him as they gather at their annual feasts or at their religious ceremonies, or their great burials, or for their war expeditions. In imagination he sees in one place the merry-making and the dance, he hears the music and the laughter; but at another he looks upon the smoke and the slaughter and the many mysterious rites. Here he beholds the 'very great burning,' the solemn mourning, the sacred burial; there he sees the plumed warriors, armed with their stone axes and flint spears and maces, either in fleets of canoes, navigating the waters, or in long lines traversing the forests. Everywhere the scene is suggestive of a life that has passed away. Whether one stands on the lofty pyramids of Mexico, which once reeked with the gore of human victims taken in battle and slaughtered as sacrifice, or among the extensive dwellings of the Pueblos where such multitudes gathered for defense or for residence, or among the sacred inclosures of the Mound Builders, where a still stranger people once lived and toiled and worshiped—yet each structure is suggestive of a life which once prevailed, but which has passed away, and of the prehistoric condition of this continent."

ABSURDITIES OF ARTISTIC DESIGN.—The anachronisms of painters are remarkably amusing, and are to be found in all ages, even in our own; but never nowadays from hands so distinguished as those that three or four centuries ago indulged in them without stint. Down in the Hartford Athenæum there is a picture of St. Peter calmly reading his own epistles in German, in a Bible bound in stout leather, with big brass clasps, and, if we remember rightly, a pair of big spectacles lying upon the open page. Verrio placed periwigged spectators of "Christ healing the sick;" exhibited Abraham about to shoot Isaac with a pistol, and depicted an Ethiopian king in the old costume of a surplice, boots

and spur. Albert Dürer added insult to injury when he painted the expulsion from Eden, and represented Adam and Eve as fleeing before a preposterous angel in a flounced petticoat. Cigoli painted "Simeon at the Circumcision" with spectacles on his nose, and the Virgin Mary helping herself to coffee from a chased coffee-pot. Nicolas Poussin represented the deluge with boats. Dubufe's "Prodigal Son," which has been in such vogue as a present to London school-teachers, is most atrociously offensive in this direction, not a thing in the whole meretricious composition having any relation to the time and circumstances of the Bible story, or even to Oriental life.—*Springfield Republican.*

AN OLD CUSTOM WHICH OUGHT TO BE REVIVED.

[THE brief article with this title, which is contributed by "Ceres" to the *American Farmer*, of Baltimore, pleases our home sentiment, and we take the liberty to copy it here. Doubtless many of our older readers will be reminded of their childhood's home as they read it, and will join us in approving the writer's appeal for a restoration of an excellent fashion.—ED. P. J.]

IT were well if those lovers of antiquities who cherish everything which has descended to them, or may be supposed to have done so, from ancestors more or less remote, however ugly or defective it may be, would bear in mind that in the course of time their own belongings may possess a like value; and therefore it behooves them to have a care that there may be left to those descendants some of the beautiful things of our day.

Seemingly the mania for old things has destroyed all sense of the value of new ones, especially in table furnishings; valuable, and likewise beautiful, china, cut glass, and silver, are left to the merciless handling of servants, notwithstanding they may have an acknowledged genius for breaking things in a manner which ought to cause the lady or ladies of the establishment to blush for their own uselessness, instead of bewailing the carelessness of the servants. To see the waiter piled up with delicate china and glass, the unique and tasteful designs of which should inspire almost any one with such a regard for its preservation as might insure its dainty handling, and then to be carried out by clumsy hands to the butler's pantry or kitchen to take the chance of the rough ways of Bridget or Dinah, seems a sacrilege.

What has become of the old-time custom when ladies would have a suitable vessel with hot water and cloths for the purpose brought to her before she left the dining-room, and with her own hands wash, wipe, and place all the finer appointments of her table? Nor was it an unpleasant task. In many households it was, and in a few exceptional ones it con-

tinues to be, not only to the mother, but to different members of the family, a most enjoyable time; where free and easy discussion of whatever is of most interest just then, keeps not only members of the household, but visitors, lingering about, sometimes lending a helping hand, and always watching with more or less interest the dexterity of the experienced housewife in the handling of her tea-towel and china. Nothing displays a woman's personal charms more than some womanly employment; and I doubt whether there is any other in which she may do so more effectually than in this pure womanly one, of caring for her household valuables. This habit cultivates a just and becoming regard for one's personal possessions, and serves to give them an historical value to our children and their children in after-years, and promotes frugality both in ourselves and them. The universal yielding to fashion which leads to so much furnishing and refurnishing to suit her every whim, is bad enough in the parlor and bedroom, where it leaves nothing for associations to fasten upon, but at the family board it is unpardonable; here at least there should be some attachment for the things we handle so freely, and the family cheer which may be supposed to have hovered about them would help to make of them in after-years sacred mementoes, and when one and another of those who have encircled the table shall have been scattered abroad, do not even the cups and saucers they were wont to handle still speak of the absent ones, and also bid them welcome whenever they return to their old places again?

I once met somewhere in print the idea that if a gentleman would, in the matter of dress, have one particular article perfect from which to tone the rest, he would be sure always to impress others with the gentlemanliness of his appearance. Whether it were his linen, his boots, or his hat (but it must be something seemingly next to his person), the next might

then be only an approximation to it, yet the effect would remain. I have very much the same view of this habit of the lady of the house washing her own china, glass, or silver; if she is careful about this, the care will extend to other parts of her house. If she cultivates an affection for her possessions here, the feeling will extend from this to her linen closet,

and so on throughout the house; moreover, in our regard for the things which belong there, we may become less willing to change or part with those we use in other portions of the house. In these days, when artistic talent is cropping out everywhere, why not make of the washing of our china a fine-art, and the placing of it exact as science?

UTE PASS.

In her silver gown descending
Laughs forever Fountain Run;
Singing, shouting, leaping chasms
Till the Pass of Ute is done.
Singing freedom from the mountains,
Dancing on to meet the sun—
Dancing on to clothe the river
In the crystal robe she spun.

In their livery of labor climbing
Up the canon gray
Go the dust veiled teams and teamsters
All along the Leadville way;

Wearry, hopeful, heavy laden,
With their journey just begun,
And a narrow ledge to plod on,
How they wish the Ute Pass done!

Meeting, greeting teams and streamlet
Little heed ye grandeur free,
Or that God has cleft the mountain
Just as Moses did the sea;
That He walls the Pass with glory
As you move with your supplies
Down to river, up to mankind
In a gray and labor guise!

MRS. S. L. OBERHOLTZER.

THE YOUNG FOLKS OF CHERRY AVENUE.

CHAPTER II.

HOME LIFE AT THE MANLEYS.

MR. HORACE MANLEY'S family was made up of himself, Mrs. Manley, and five children. Horace, Junior, a youth whose nineteen years seemed to him to warrant his claiming some of the notice due to manhood; Clara, a maiden of sixteen, who had inherited her mother's disposition to quiet ways and her father's intellectual quickness; Edith, the impulsive, passionate girl, whose willfulness disturbed the game of croquet at the beginning of chapter first; Talbot, whose portrait has been drawn already to some extent; and Paulina, a little woman of five years, a delicate child, and well-nigh spoiled by the petting she received from most of the household, both on account of her age and tender health. Besides these an unmarried sister of Mr. Manley had lived with him for several years, and assisted in lightening the cares

of the wife and mother. Mr. Manley was part-owner of a grist- and saw-mill in the lower part of the town. The business was not large, so that his income did not permit him to live in "style," yet he tried to be content with such reasonable comforts as he could procure.

The house occupied by the Manleys was an old-fashioned one—such as is found in every country town which has grown from a petty village. In its early history it was thought to be a very respectable farmer's home, but in our era of improvements and art, is looked upon as quite too plain and out of date. Mr. Manley had secured the house and the adjoining grounds at a low price, and by making some repairs and adding a window or two, and putting a piazza in front in place of the old, half-decayed stoop, had given it a cheery, cosy look. A wide

nall ran through the center on the first floor, two rooms of considerable size being on one side, and three on the other. Up-stairs on the second floor there were six bedrooms, and over all a large, open garret, which served as store-room, drying-room on wet wash-days, and play-room for the younger children.

Near the house rose several fine elms and maples, with here and there a silver poplar, and a straggling catalpa, so that the grounds were well shaded. In fact, the shade was too dense in summer, particularly under the maples, for the grass to make a strong growth. Mr. Manley loved trees, and beyond a little trimming off of unsightly and decayed branches, would not hear of having any of the trees cut down; and the children of the neighborhood apparently shared his affection too, for they were permitted to romp under the spreading limbs on hot afternoons, and to play school and jack-straws on the two or three benches he had built against the trunks of as many of the larger trees. With such a delightful shade and such helps it was not at all strange that Mr. Manley's court-yard was a favorite place for the children. Farther up the avenue there were handsome modern villas with grounds beautifully laid out in lawn and flower-beds, but the "old place," as they called it, had the most charms for them.

Thinking the hour late Tal ran home with all speed, and found the family at the supper-table. Going into the back shed he hastily washed his hands and face, and brushed his hair into something like order, and slipped quietly into his place at the table.

"Excuse me, papa and mamma, for being late," said he timidly.

"Why is it that my boy is late to-night?" inquired Mrs. Manley.

"Oh, he's been off in the woods, I know, with that Truman Burr," spoke up Edith.

"Why, mamma, I wasn't with him at all this afternoon," protested Tal.

"I am sorry, Edith, that you are so ready to accuse your brother without

cause," said Mrs. Manley, in a tone of rebuke. "Besides, my dear girl should not answer a question which is not addressed to her."

"Well, he's almost always with that boy when other folks want him."

"Mamma, I never"—

"Never mind Truman Burr, Tal," interrupted Mr. Manley; "but be kind enough to answer your mamma's question, and then attend to your supper, if"—The meaning of this "if" was clear enough to the younger children; for one of the methods of punishment in the Manley household was the withholding of a part, especially the dainties, of a meal, for improper conduct.

"When I went out, it was just about four o'clock, as mamma and Edith know, 'cause Edie"—

"Because"—corrected Horace.

"Because Edie had just come in, and I was going round to see Fred, Mr. Deane's man, who told me they'd got some new Leghorn chickens. And when I got there, the girls were playing croquet, and asked me to take Edie's place. Then I played croquet with them a little while, until a great fuss among the chickens made us all run down to the chicken-yard. And there was a black dog, Jim—Williams' man"—

"Mr. Williams' coachman, you mean to say," prompted Mr. Manley. "Go on."

"Yes, papa. Mr. Williams' coachman said the dog belonged to Mr. ———, and was a great fellow for killing chickens. Fred wasn't home; and there was only Mrs. Deane, the servant-girls, and us, and that dog was a running round the chicken-yard chasing and biting the poor things as if he was crazy."

"Poor, poor things!" exclaimed Clara.

"Poor little chickens!" cried Paulina, whose interest in the story had led her to get down from her high-chair and go to the back of Tal's, where she peered over his shoulder into his face, as he went on.

"I suppose you killed the dog, valiant Hercules? Of course—went into the poultry-yard and seized him by the throat,

and at once put an end to his foul diversions," remarked Horace.

"I guess, if you'd been there, and seen that dog, you wouldn't have been so smart," retorted Tal.

"Well, what was done to stop the dog from killing the chickens?" asked Mr. Manley.

Tal then went on, and was permitted to relate the remainder of his story with but little interruption, until he described his sudden fall into the yard, at which Horace, Edith, and little Paulina laughed heartily; while Clara said, half reproachfully:

"I think it is no laughing matter. Tal might have been severely bitten by that furious dog. It is a very great wonder that he was not; don't you think so, papa?"

"Yes, my dear boy," Mr. Manley replied; at the same time placing on Tal's plate a liberal share of the supper; "it was a narrow escape. You should have made your seat on the shed more secure."

"Tal is entirely too venturesome. I fear that some day he will meet with an accident that will cripple him for life," said Mrs. Manley.

"I don't think he's so venturesome, mamma," rejoined Edith; "only when he wants to tease some of us girls, or to show off, because he thinks himself so smart."

"That's what she always says," complained Tal; "when I aint thinking of doing anything smart at all."

"Why, Edie, are you so much disposed to twit your brother for anything he does which may be creditable?" asked Mr. Manley. "Try, my dear child, to get rid of that jealous spirit, that dislike of seeing your little brother or any of your companions treated well or commended. It will make your life bitter if allowed to grow, Edith."

Tears of resentment and wounded self-regard filled the girl's eyes as her father chided her, and with a faint "Excuse me," she rose, and left the room.

"Wasn't Mrs. Deane and Sophie real

glad 'cause you frightened away that bad, cruel doggie?" asked Paulina, who still remained by Tal's chair, gazing with admiration into his face. "And wasn't you hurt the least tiny bit by fallin' so far?"

"I'm sure, Paulie," replied the boy, eating, as if his adventure had added to his usually good appetite, "if I hadn't fallen right smack down upon 'm, I'd been hurt a good deal. When I got up it seemed as if I'd broke my leg, for it somehow got twisted 'round under me. But I soon got over it, and was all right again."

"Oh, if you'd got your leg broke off, Tally, wouldn't that be too bad?" exclaimed the child, placing her soft cheek against that of her brother, and caressing his hair.

"I suppose, Paulie," remarked Horace, with a laugh, "you'd take care of Tal if he were laid up with a broken leg for two or three months?"

"I guess I would take care of my own little brother," answered the urchin, tenderly putting both arms around Tal's neck.

"Why," persisted the young gentleman, "you'd have to carry up his breakfast, bring him water, soap, and towel, help him to wash, comb his hair, and do a great many things, besides playing with kitty and running around the house and out on the lawn. You couldn't play with Jennie Trevor much; for sick people, little ones especially, are very troublesome, and keep one waiting on them about all the time."

"Well, if my brother Tal was so very sick that he wanted me all the time, I'd just stay with him all the time. Wouldn't I, Tally?"

Tal smiled in the little one's face, and gave her a kiss, saying:

"Yes, I know you would, Paulie."

"That would be quite right, my darling. But I hope that your little brother will not break any of his limbs so as to need your nursing," said Mrs. Manley.

"I wonder that the daring rogue didn't tear his clothing, at least," remarked Clara.

"Yes," added Horace, "the hero should have a scratch of some sort to display as a trophy of the encounter."

Tal hadn't spoken of his torn jacket, and when thus rallied, he turned red, and was silent. Seeing his confusion, Mrs. Manley asked kindly:

"How is it, my dear boy, were you unfortunate? And has mamma or sister a great break to cover?"

Encouraged by her tone, Tal replied:

"Indeed, mamma, I quite forgot to tell that I did tear my jacket, here on the shoulder; but Mrs. Deane mended it right away. She *would* do it, mamma."

"Well, my dear Alice," remarked Mr. Manley to his wife, "you escaped one of the usual consequences of a boy's prank—excuse me, Tal—we won't call your feat to-day a prank—an hour's darning. I've no doubt Mrs. Deane felt indebted to him, and did his mending as a kind of payment. As your sharp eyes, my love, didn't at once detect the damage, I am sure the work has been well done."

"Come to me, for a moment, Tal," said his mother, "if you can leave that marmalade so long, and let me see how much damage was done."

The boy sprang from his chair with a biscuit in his hand.

"Yes, it is very well mended. See, Clara dear, how nicely! It must have been a bad rent, too.

"It looks, mother, as if it had been done by a nail," said that maiden.

"I guess it was done by a sharp piece of wood that was stickin' out where I fell off the shed," rejoined Tal.

"Well, I am very thankful you did not injure yourself severely, my child. You may finish your supper, and as the rest of us have done, if papa please, we'll go into the sitting-room."

Tal was thus left to himself, but soon laid down knife and fork and went into the kitchen, where, according to his custom after meals, he washed his hands. "Nellie," said he to the maid-of-all-work Mrs. Manley hired, "it's your turn now, but I'm thinkin' there isn't much left for you. Not much of that marmalade anyhow."

"Likely enough; he's such a pig," said Edith, who sat by a window with Paulina's cat in her lap.

"Ach, now, de poy was hungry," rejoined Nellie, who had not quite mastered all the difficulties in pronouncing English, especially the words of her native German, which are like many in English; "und I hab not much fear that he's left for me some."

"You don't know how he eats what he likes particularly. Yesterday morning he ate three baked apples because they were Baldwins, and I had only two."

"Yes, I did eat three; and Nellie, she knows that her two were bigger'n my three, for mamma said that at the table. I don't see why Edith must be watchin' me all the time!" exclaimed Tal, indignantly.

"Vat for you want to be quarrelin' so," asked the girl sharply. "Don't you 'nough get, you Edie. It is too much shame that such little girl mus' such bad tongue use. I feel sorry, berry sorry, as I see tempers so much bad when eferyding is so blenty here, eferydings so nice, I just dink dat is de trouble, you hab too much nice tings efery day."

Nellie then left the kitchen and went into the dining-room, where she sat down to her supper. The brother and sister being left alone were quiet for a few moments, till Edith broke out with:

"I don't like Nellie to talk to me that way; she has no right to."

"Well," responded Tal, who was taking off his shoes, "I guess she has a right to 'spress her opinion 'bout things just as much as anybody."

"She hasn't any right to *express* her opinion about me, Mister Tal, anyway, and I won't stand it."

Ph-e-e-o-u-o, whistled the boy. "How're you going to stop it, young lady?"

"I know, and that's enough."

"All right, go ahead," half sang Tal, who by this time had drawn on his slippers. "I guess I'll go and look over my geography lesson."

"Oh, I've got two examples that I want Clarie to show me how to work

out!" cried Edith, jumping up, and following her brother out of the room. "And, Tal, after you've studied your lesson won't you play a game of words with me?"

"Of course, and let's get Clarie and mamma to play with us. It's such fun when a good many are playing to see 'em lose two or three, when they think they're getting ahead of everybody."

The evenings at the Manley home were usually busy ones, for as soon as the supper-table was cleared and the dining-room put in order, father and mother, Miss Manley and the elder brother and sister assembled in the ample sitting-room, and if there were no visitors, Clara would play on the piano awhile, or sing, perhaps accompanied by her father and Horace. After this, one of the party read a part of some popular book, and comments were made now and then. An hour spent in this way was followed by conversation, a game, or music. Horace had begun the study of German, and generally devoted an hour to that before going to bed. For the younger children eight o'clock was the hour for getting to bed. Little Paulina, however, was usually fast asleep in her snug crib at seven.

Clara's fingers were gliding through the tender passages of the "Song Without Words," as Edith entered the room and made her way to the piano, where she stood until the sweet melodies died away, wistfully gazing in her sister's face. Clara was an ardent lover of music, and in playing gave her entire mind to the expression of the composer's thought. As soon as the piece had been finished, Edith asked:

"Won't you please, Clarie, come for a minute and show me how to do a real hard example?"

"Yes, Edie, if papa will permit me. He wants me to play 'Monastery Bells' now."

"Perhaps Horace can help you through, my child?" inquired Mr. Manley.

"Horie always makes so much fun of me, and asks me so many strange questions while he's doing anything for me,"

answered Edith, "while Clara doesn't tease me at all."

"Well, this time, Edie, I won't tease you," said Horace; "I'll be as mild as a four-weeks'-old lamb." And rising as he spoke, he went into the dining-room, followed by Edith. And he was almost as good as his word, for he very patiently explained the puzzling examples so that the girl could work them out, and then returned to the sitting-room.

"There, I've proved it so; I'm sure it's right!" exclaimed Edith, a few minutes later; "and now I've only to copy these two on my paper and I'm done. Tal, aren't you almost through yet?"

Tal, who was deeply absorbed in the boundaries of Georgia and Florida, and their natural productions, and had his head bent low over his book, did not hear the question. Edith, a little irritated by his inattention, spoke out in a high key:

"Tal Manley, I want to know if you're not done with that lesson yet?"

"Not quite," the boy replied; and, going on with his lesson, recited: "'The climate of Florida is very moist, owing to the situation of this State between the Atlantic Ocean and the Gulf of Mexico.'"

"I don't care anything about the Atlantic Ocean or the Gulf of Mexico; but I tell you, if you don't stop bending over so much, you'll be just as crooked as old Joe Winkle," responded the girl sharply. Edith prided herself on her erect form: and certainly no girl who went through the daily calisthenics at school was more shapely and graceful. Joe Winkle was a poor, miserable drunkard, who was more than half-dependent upon Mr. Manley for his living, as, in his sober moments, he was often given a job at the mill.

"Fudge!" said Tal, straightening up. "I'll never be as crooked as Joe, 'cause I'll never drink liquor, and that, you know, is what's made him so."

"Why don't you turn 'round and keep your book toward the light?" went on the girl in the same tart manner. "You know papa has said a hundred times

that you mustn't sit and read with the light shining in your eyes."

"The light isn't shining in my eyes, so, Miss Persimmon. And didn't I have to put this great big atlas on the table so's to study the boundaries? If you'll just let me alone three minutes, I guess I'll get through this, and then we'll have words. Go in and ask papa if he'll play."

"Yes, papa will play a game with you," answered Mr. Manley, who was standing in the door-way to the sitting-room. "I heard such loud talking a moment ago, that I stepped here to see what it was about. Try to speak gently, my children, when in the house. People who are excited generally keep themselves excited by talking loudly, while if they try to talk in a moderate tone, they will usually cool off."

Word-making is a game in which a large number of bits of card-board, on which are printed letters and syllables, are used. Each player receives an equal number of these, and in turn endeavors to form a word. He has the privilege of asking the next player for a letter or syllable needed to complete a word. A mistake in spelling a word forfeits all the letters in it to the next player. And the one who at the end has the most

words on the table before him wins the game.

Not a little mirth is found in the mistakes and surprises which occur in its course, especially if five or six are playing. Edith was an excellent speller and very quick in making-up words, and so she often came off victor; but to-night Clara was the winner, while Mr. Manley had the poorest display of words of all.

"Now, papa, you must pay a fine for being such a poor player," said Tal.

"Make it light, my boy, and quickly done, as it is your bedtime, and perhaps I will try to do it."

"Well, carry me up-stairs, for you know my leg's weak since falling off that chicken shed," cried Tal, springing nimbly up and perching himself on his father's shoulders.

"Carry me up, too, papa," cried Edith.

"I suppose the babies must be humored," said the good-natured father, and having mounted the broad stairs to the second story with Tal, he returned, and taking Edith in his strong arms carried her up also.

"Good-night, good-night," sang out the pleased brother and sister.

"Good-night," replied father, mother, and the rest as they re-assembled in the sitting-room.

CLARE.

THREE RULES FOR LIVING.

WHEN I was eleven years old (said Mr. S., an eminent American merchant), my grandfather had a fine flock of sheep, which were carefully tended during the war of those times. I was the shepherd boy, and my business was to watch the sheep in the fields. A boy who was more fond of his book than the sheep was sent with me, but left the work to me, while he lay under the trees and read. I did not like that, and finally went to my grandfather and complained of it. I shall never forget the kind smile of the old gentleman as he said:

"Never mind, Jonathan, my boy; if you watch the sheep you will have the sheep."

"What does grandfather mean by that?" I said to myself. "I don't expect to have sheep." My desires were moderate. I could not exactly make out in my mind what it was, but he had been to Congress in Washington's time; so I concluded it was all right, and I went back contentedly to the sheep.

After I got into the field I could not keep his words out of my head. Then I thought of Sunday's lesson: "Thou hast been faithful over a few things; I will make thee ruler over many things." I began to see through it. "Never you mind who neglects his duty; be you faithful, and you will have your reward."

I received a second lesson soon after I came to New York as a clerk to the late Mr. R. A merchant from Ohio, who knew me, came to buy goods, and said: "Make yourself so useful that they can not do without you." I took his meaning quicker than I did that of my grandfather. Well, I worked upon these two ideas until Mr. R. offered me a partnership in the business. The first morning after the partnership was made known, Mr. G., the old tea-merchant, called to

congratulate me, and he said: "You are all right now. I have only one word of advice to give you. Be careful whom you walk the streets with." That was lesson number three.

And what valuable lessons they are! Fidelity in all things; do your best for your employers; carefulness about your associates. Let every boy take these lessons home and study them well. They are the foundation stones of character and honorable success.



REMARKS ON HOUSE-DRAINS, AND A PLAN FOR VENTILATING THEM.

THE development of some plain, simple measure that comes home to everybody's practical life is oftentimes more important to the welfare of the individual and the community than the advancement of a great political measure, the production of a great poem, or an important scientific or mechanical discovery. In many things our interests are clannish, and the well-being of the many may be sacrificed or neglected for the benefit of the few. We see this in trade; in a high or low tariff, and other things; but when it comes to the health of the world, here is a department which affects all, and in which all should be interested. Nothing is more conducive to health than good sanitary measures. Though queer, it is true that the well-being of society and the advancement of the human race are oftentimes as much a product of the nar-

row and meaner qualities in man (externally at least) as of the more noble ones. This is a fact that can not well be gainsaid; yet it is often offset by the impractical assertions of many good men whose conceptions for the benefit of mankind are superior to their practical knowledge.

The more artificially we live—the more we crowd together in large communities, and the more we create unnatural conditions—the more must we contrive artificial offsets or preventives. In the country, where houses are a great distance apart and few people live in a house, sewer drainage is not once thought of or required. When we advance to the village, some little attention is paid to this matter; still not much, and all seems well. But when we advance to the city it becomes a matter of importance how we shall dispose of the waste material from

the house and shop, and how it shall best be controlled, in that it may produce the least possible injury to the health of the community; and the larger and more densely crowded the city becomes, the more difficult and trying becomes this problem. The general health of the few rests upon the health of the many, therefore it is the interest and mission of the intelligent few to look after the salvation of the whole.

The subject of drains has been much discussed: much money has been expended in their construction. At first it was the capacity of a sewer to carry off the refuse water that was the main consideration, but soon it became evident that other considerations besides the capacity of a pipe or drain were involved, and now there are two systems which may be called the *trap* system and the *ventilating* system.

The object of the first is to prevent the foul gases that are generated in the drains and sewers from entering the house and causing injury, and even the destruction of life. This for many years back has been attempted, though imperfectly, by the various contrivances called traps—all, or most all, constructed on the principle that a body of water some way held in the pipe, generally by a crook, will, to a considerable extent, act as a barrier to the impure gases formed and gathered in the sewers. Much ingenuity has been concentrated in these traps, in order, if possible, to make them effectual, but they have all more or less been a partial (and some say a complete) failure. Gas will pass up through water; and as the water must flow in the pipes, there is always a medium of communication for these foul and destructive gases.

The *trap* proving ineffectual, the second, or *ventilating* system, has of late years been agitated. These two principles would go together, and in a perfect drain are inseparable. In regard to the controversy on these points, some practically wise men say, "Why have this necessity for so much drainage?"

It is queer to notice the advancement

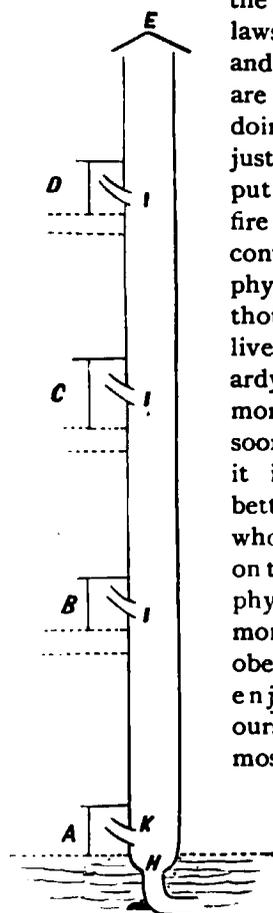
of improvements. A certain condition of things exists; a new idea is advanced or new conditions introduced. This necessitates certain changes, which are thought for the time being to be great improvements, but which in turn prove ineffectual or defective, and there is a partial return to old ideas as the only way out of the difficulty. So ideas go advancing through the world, elbowing their way, as it were, too often against the wishes or selfish aims of those they would help the most.

Water is introduced into a city; immediately follows a radical change in the disposition of much of our waste material. The part that was appropriated to fertilize the land is turned into another channel—not only a channel of waste, but a channel of great harm and injury to the human race. By the bright idea (?) of instantaneously getting rid of what is obnoxious to our senses, we are all the while only laying up a store of filth in the bottoms of our rivers or bays, that will sooner or later rebound upon us with terrible effect. By this process we deceive ourselves; and it would seem to be wisdom on our part to perceive the end. We load the camel with the very last straw.

The wisdom of the world has spoken; and now for some years the attention of the public has been drawn to the subject of the pollution of our water-courses. It is to be hoped that the pertinent question of these wise men, "Why have this necessity" for loading our drains with matter that could and should be put to some use?—why make our drains a mere temporary expedient of ridding ourselves of foul matter by the ounce and storing it up by the ton a short distance away, all along the bottom of our streams, where it can not help but sooner or later become a most repulsive and dangerous element to the public health? will soon be practically answered.

It seems to be forgotten, yet it should not be, for the fact is too well known, that filth buried in our water-courses is not buried out of harm's way; for after a while it makes itself evident, and in a

most repulsive manner to the eye as well as to the sense of smell. Water is no element to bury filth in and expect thereby to get rid of it forever. It requires but a very little knowledge of chemistry to know that gases will readily pass through water. This simple fact is contemptuously ignored every day and every hour and minute of the day by men who know better, and who repeatedly break one of



NOYES' SYSTEM OF DRAINAGE.

the grand physical laws of the universe and think that they are very wise in so doing. It would be just as wise in them to put their finger in the fire and burn it. Such contempt for a great physical law, whereby thousands of precious lives are put in jeopardy, becomes a great moral crime; and the sooner the world sees it in this light, the better it will be for all who are destined to live on this earth, where the physical as well as the moral laws must be obeyed, if we would enjoy and improve ourselves to the utmost while here.

For the purpose of preventing as much as possible the foul gases generated in our sewers and drains from entering our abodes, the trap has been long in use, but it is not effectual; so of late more and more attention has been paid to ventilation; some authorities go so far even as to say that the *trap* is of very little or no account as a preventive, and that our whole relief from sewer gas must come from ventilation. We may still hold on to the *trap* as an adjunct, and under many conditions it may be advantageous;

still, in the main, our escape from the ill effects of sewer gas must depend chiefly on the ventilation of our drains. The subtle and poisonous gas is there, and it is doubtful if any trap will ever be anything more than an adjunct; it therefore becomes us to provide such practical methods for its escape as will do the least harm. Perhaps some day we may chemically neutralize its injurious effects or prevent it from forming; but until then the best and safest measure seems to be to ventilate—to let it pass off through such channels as seem likely to produce the least harm.

Many plans are in operation. One is based on the idea that it is best to connect the terminus of the drain with the chimney flue of the kitchen, as this is the flue that is mostly used, and therefore affords a current of heated air that will generate an upward draft the greater part of the time. This not only seems to be a good idea, but is practical, and has produced good results. Another plan is to continue the upright pipes from the basins and water-closets out through the roof; but there seldom being any heat for the purpose of creating a draft, it does not seem generally to produce any very favorable results; though perhaps it may under some circumstances be better than nothing.

Another plan is to ventilate the house-branch of the sewer before it enters the house. But as this simply depends upon a cold-pipe for carrying off the injurious gas, it is only a precarious adjunct that may occasionally accomplish some good, but which can not be depended upon. Still another plan is to have a large chimney, generally isolated, with ducts connecting with the various closets and sinks about the building, and creating an immense draft that will overcome all obstacles, and by main force draw the foul currents in that direction. This, though a good, practical, and efficient method, is only practical in large institutions like hospitals, and perhaps hotels and large works generally.

What we want is an arrangement that

will be practical for all grades of houses—the small private house as well as the large hotel or hospital.

SUGGESTION FOR THE VENTILATION OF HOUSE-DRAINS.

In the plan herein described, it is proposed to do away entirely with the present system of connecting the branch or minor pipes from the basins, sinks, and water-closets of the house directly with the main pipe connecting with the sewer, and in lieu thereof have all the minor pipes from the several stories, A, B, C, and D, empty directly into a large ventilating shaft, H, E, that shall be near or beside the kitchen flue, whereby heat may be obtained for the purpose of creating and establishing an ascending current of warm air. At the bottom of this shaft to have outlet, H, connecting with main drain pipe, F, G, that is to connect with the street sewer, and this outlet itself to be trapped, as an auxiliary, if not an absolute preventive.

On the several stories are the minor pipes to enter shaft at I, and at this point to be trapped in the most effectual manner. Shaft H, E, to have opening at the top protected by covering, E; ample openings being left under this for the free passage of air which will materially assist the draft of the flue when there is a current of wind outside. The bottom of the shaft, H, is to be carried sufficiently deep, so that the lowest entrance pipe, K, shall be a few feet above the bottom of shaft; the bottom of shaft to be curved, or inclined to the center, at H, in order to secure a free passage of the waste into the main drain. As to the size of this flue in an average-size house, 16 x 20 inches would seem to be ample; yet its size should not be too much contracted, for that would rob it of much of its virtue, unless, perhaps, an iron pipe be introduced that may be well supplied with heat, whereby a powerful draft may at all times be maintained. Under some circumstances an iron pipe, say eight or ten inches in diameter, might be fully as effectual as the flue; still a flue of this nat-

ure is not expensive, and once well built will not readily get out of repair; and if large, can be more easily gotten at for repairs if desirable.

The object in having the minor or sub-pipes enter the shaft directly from the several stories, is to prevent the concentration of the waste into one pipe; being thus divided up, a good ventilation thereof may be more easily and effectually obtained; as filth concentrated becomes more obnoxious and difficult to dispose of; subdivided, it may be better aired, and its evil effects more easily dissipated. In a large building, like a hotel or hospital, this flue might be increased to the size of three or four feet square, or more, or be made circular.

It might also be well to have a man-hole connected with this shaft, whereby at times a hose may be introduced for the purpose of washing out the lower part of the shaft with clean water; but under no circumstances should a clean-water pipe, connecting with the public or private water-works of a city, be introduced into this shaft as a permanent fixture, as the consequences resulting therefrom might become most injurious to the public health.

By some such large flue-ventilation as this, I think that we may rid ourselves of many of the evils of sewer-gas; that is, if the plan is honestly and generously carried out, and if meanness and narrow-mindedness do not enter into its construction and rob it of its virtues.

The first thought in this matter should be to abstain from making the drain do what should be done through other channels; that we may not add unnecessary burdens only for the purpose of temporary makeshifts that are all the while, through short-sightedness on our part, making a great store-house of evil and corruption about our cities. That which is obnoxious to us may, by judicious treatment, be turned into a vital blessing; while if we continue to disregard the teachings of our practical sense, we turn it into an absolute and all-powerful curse.

ISAAC P. NOYES.

CHILL-AND-FEVER SOUTH.

WITH A CRITICISM.

I FIND that chill-and-fever have no dependence on malaria, but rather on a want of circulation of the air in a warm climate: as we find any spot that shuts out the air in warm climes is sure to produce sickness, and any place well ventilated is sure to be healthy, let it be ever so close to decaying vegetable or animal matter. On the sea-coast at New Smyrna, Fla., the lagoons exposed to the sun at low tide rendered the air so unpleasant to breathe that it was almost as much as I could do to breathe it, but the incessant sea breeze rendered it healthful. The regular burning of the forests by the stock-raisers causes our summers to be hotter and dryer; and so making vegetables and fruit scarcer, no doubt has a very marked effect to increase disorders of the liver and pave the way for yellow fever and such violent disorders.

Pure air, pure water, and pure diet are all necessary to perfect health in so warm a climate as this, where decomposition goes on so rapidly. It is not necessary to call in guesswork to say malaria produces, and contact spreads, the contagion that expands so dreadfully over our land.

Is it any wonder, when we consider the immense amount of pork made in the West from hogs so often dying with cholera, and used in the South, and the various compounds of lard and butter which are served on the tables, that the human system becomes broken down?

"Died of a Frying-Pan," the deserved epitaph of this lovely land, is too true to be laughed at. The tobacco curse also is having far more effect in paralyzing all good efforts and schemes, and laying in the grave prematurely its countless thousands. The disgusting black mouths and sallow skins of so many here, one would think, did they ever see their faces in a mirror, would be sufficient to cause them to quit so filthy a habit. But, alas! they are so fascinated by the use of the weed they would sooner stay poor and use to-

bacco than be rich and not use it. I find the most observing and thinking class are being convinced that more depends on their diet, and manner of using it, than all else combined. Men here, often cultivating the low lands along the river, at distances of two or four miles from their homes, eat a small amount of corn-bread and pork for breakfast and dinner, and when home at night have their vegetables, and make a full meal only a short time before they go to bed. Is it any wonder such persons have the fever as soon as they get their crops cultivated, and often before? and then they say it was working in the river fields that caused the fever. Yet their own children have it, who never saw the river. I am told the negroes did not have the fever before the war as they do now, as their diet was very simple and largely of corn-bread and salads, turnips and potatoes.

Nor did they have so much drug medicine as now. Families from the North that come South and continue their usual meat diet, are sure to be seriously sick before many years pass by; but if they use largely the fruit and vegetables, and but little meat, have much less sickness.

OLIVER TAYLOR.

As the whole subject of malaria seems curiously misunderstood by Mr. Taylor, it is deemed best to present a statement of the facts in the case. The word "malaria" means in Italian "bad air," because they found certain spots, otherwise as beautiful as could be desired, surely producing in those resident a special form of intermittent and remittent diseases, from which other localities were free. Not knowing what to call it, they thought the air must be bad, and said so.

The poisonous material is not as yet cognizable by the senses, any more than that of small-pox or scarlatina; but, like them, equally well known by its effects. Several factors combine to produce it.

viz: vegetable matter susceptible of decay; moisture, either on the surface of the earth, or just below, and a certain elevation of temperature. One factor wanting, *no malaria results*. Thus, just as we approach the Torrid zone, so do we find marsh fevers more and more deadly.

The places most productive of this poison are salt or fresh marshes, and ground alternately flooded and drained (*e. g.*, the fatal rice swamps).

A ground which retains the moisture close to the surface will, even if the surface is dry, be a fruitful source of malaria; the ground cracking under the sun's rays will allow the "fungi" to escape. Other things being equal, the presence of putrefaction alone will not produce malaria. Putridity is not necessarily its source.

In the tropics, low grounds by lakes and river bottoms are always more or less malarious, but in situations where the winds have free access, the fresh, pure air so dilutes the poison that it becomes partially harmless; at least, a much longer sojourn is needed to become infected. In the same way your arsenic-eater lives long because he dilutes his poison, while if he combines a week's dose in one day's he dies like another man.

In India, where all vegetation is so luxuriant, the jungles are almost sure to produce malaria in one who passes the night there; so much so, that the "*marsh fever*" of the Temperate zone is "*jungle fever*" in India.

A marshy spot covered by water is innocuous; but when the moisture dries up in the sun's rays, the air becomes pestilential.

Whatever be the exact nature of malaria, abundant experience shows it most concentrated on the surface of the earth, being weaker as we go up. It is also more active at night; a single night's exposure frequently bringing down a man whom prudence and care had preserved well for months. It is noted that those who sleep in second or third stories escape, when those on the ground floor do not. Hence, as a rule, hills are much less unhealthy than the low ground, and any

exceptions to the rule may be explained *always* by local causes.

For example, the winds frequently blow strongly over the marshy borders of Lake Agnano, in Italy, so that in the season of the winds the poison is blown *three miles* to the Convent of the Camaldules, situated on a high hill, while other hills not in the line of the winds are healthy.

It is an interesting and well-known fact, that groves situated between a house and a marshy spot to windward, will often keep the malaria in abeyance, while if an avenue be cut through the forest, allowing the current of air to come directly to the house, malaria often at once follows. This fact has been often noted, both here and in Italy.

From its effects we judge the cause to be certain germs, hitherto not recognized on account of the innumerable germs that normally fill the air. Professor Salisbury is of the opinion that he has recognized the fungus, and reproduced the disease in persons never before attacked. Other observers have not as yet succeeded in repeating his experiments.

In the Temperate zone, malaria often appears in healthy localities after plowing up marshy land which had laid fallow for years, the presence of air, sunlight, and *less* moisture sufficing to produce a rapid increase of the poison.

We have known localities where no malaria had ever been known since the country was settled, high and dry and salubrious locations, to be almost decimated in a few months after plowing up less than half an acre of swampy ground by the side of a brook, never before cultivated, the cases, as intimated above, being many of them fatal.

As regards race, the negro is native of a malarial country, and by acclimation is hardly ever as susceptible as the white races, natives of more temperate climes.

As to age, children are often very much more susceptible than adults. Women often escape from not frequenting marshy spots, where men have to work.

As to diet, we may say that the more

healthful the diet, the more likely is the patient to do well.

Natives of temperate and cold regions going to the tropics should conform to tropical diet, eschewing hydro-carbons, which only supply heat to the body; fruits

and vegetables are more suitable and cooling.

Lean meats, if healthy, are not objectionable, as only fatty foods "clog the liver, as any one can see," and as every one knows.

N. B. SIZER.

CLEAN BEDS.

A WRITER in the *Congregationalist* writes intelligently on this topic, and on clothing, as follows:

"It must be a false idea of neatness which demands that beds should be made soon after being vacated. Let it be remembered that more than three-fifths of the solids and liquids taken into the stomach should pass off through the pores of the skin—seven millions in number—and that this escape is the most rapid during the night, while warm in bed. At least one-half of the waste and putrid matter (from twenty to thirty ounces in the night) must come more or less tangled in the bedding—of course, soiling it—and a part of this may become re-absorbed by the skin, if it is allowed to come in contact with it on the next night, as it must if the bedding is not exposed for a few hours in the air and light. We may well imitate the Dutch example of placing such bedding on two chairs near the window, in the sunlight; or in the window, that the best purifier known—the light of the sun—may dissipate their impurities, or neutralize them. At least three hours on the average is as short exposure as is compatible with neatness. It is also desirable that the

air shall pass through open doors and windows, and that as much sunlight be admitted as possible to the room in which about one-third of the time is spent. In addition to these measures, it is well to have the attic windows wholly or partly open, and the doors leading to it, so that a free current may pass through all of the rooms, up the stairs, and out into the outer world, to become purified by vegetation, etc., before being again respired. Clothes thus aired and sunned will not demand more than half the usual washing, though they can scarcely be washed too often. Another means of promoting personal cleanliness is by the absolute change of all clothing morning and night, wearing nothing by night that is worn by day, and *vice versa*. Such clothes as are hung to sun by day and dry by night, and such only, are fit to be worn by those who have a reasonable regard for personal cleanliness. And I may remark that when such clothes are removed for the change, it is of the utmost importance to the health that the skin should be subjected to a reasonable friction—as by a flesh-brush, a crash, a coarse flannel, or the hand, as a means of cleanliness, and of improved circulation."

SLOW POISONING, BUT SURE.

THE German *Chemiker Zeitung* contains an article by Prof. Fleck, of Dresden, on arsenic in water-colors. His attention was directed to the subject by a case of apparent arsenic poisoning in which he conducted the post-mortem examination. A young engineer, while engaged in drawing for his father's machine manufactory, suddenly dropped down dead. As there was no visible cause for his death, a post-mortem

examination was made, and the presence of arsenic was discovered in the liver, kidneys, lungs, heart, and brain. There was none in the alimentary canal, and extremely little in the stomach. The poisoning had thus evidently been a very slow process, and the possibility of suicide was excluded, owing to the temperament and circumstances of the young man. His whole course of life was accordingly very thoroughly gone into,

and Dr. Fleck analyzed everything which had been used or handled by the young man for some time back. It was in this way that he also came to examine the composition of water-colors, many of which he has found to contain arsenic.

He discovered that the particular colors used by the young man contained a large proportion of arsenic, and came to the conclusion that his death had been due to a habit of pointing his brush between his lips.

NOTES IN SCIENCE AND AGRICULTURE.

Primitive Home of Man.—Many of our best authorities place the cradle of our race in that corner of land which lies westward of the steep range of the Beloot Tagh Mountains, an offshoot of the Himalayas, and northward from the high barren land of Cabul. This country, the ancient Bactrina, is the most habitable district to be found anywhere in Central Asia. There the hills stretch out in gentle slopes toward the west, and inclose fertile valleys, whose innumerable streams, fed by the mountains east and south, all go to swell the waters of the Oxus, now called the Jihon. Farther north lies another fruitful country, watered by the Jaxarates, separated from the first by a range of high hills much inferior to those which divide both lands from Yarkand and Kashgar on the east, and from Cabul on the south. Both the great rivers empty themselves into the Sea of Aral, between which and the Caspian, sharply cutting off the fertile country from that sea, stretches the Khiva desert, a barren land affording a scanty nourishment to the herds of wandering Turkish tribes. There is good reason to believe, however, that this desert did not always exist, but that in times not extraordinarily remote, the Caspian Sea, joined to the Sea of Aral, extended over a much larger area than it at present covers; it is known even now to be sinking steadily within its banks. With such a contraction of the great sea the desert would grow by a double process—by the laying bare its sandy bed, and by the withdrawal of a neighboring supply of moisture from the dry land. So it may well have been that the fruitful territory wherein in remotest ages were settled our Aryan ancestors stretched so far west as to border upon a large inland Asiatic sea. It has even been conjectured that the turning of so much fertile land into desert was the proximate cause of those migrations which sent the greater part of the Aryan races westward—to people, at last, all the countries of Europe. The root which is common to the European languages for the names of the sea means, in the Indian and Iranian languages, a desert.

Wheat Crop of 1879.—The statistician of the New York Produce Exchange places the wheat crop of the United States for 1879 at about 425,000,000 bushels. The spring wheat crop is not so large as was at first expected, that of Minnesota being not

more than 28,000,000 bushels, instead of 40,000,000 as estimated early in the season. The amount consumed by 48,000,000 persons, the supposed population of our country, plus the amount required for seed and other purposes, is placed at 250,000,000 bushels, leaving 175,000,000 bushels for export, 160,000,000 bushels for Europe, and 15,000,000 for other ports. The deficient wheat crop in Europe this year makes the demand there—provided the people are able to pay for so much—above 300,000,000 bushels, two-thirds of which will be required in France and Great Britain.

Farm Life.—From *Scribner's Monthly* we get the following: "It is a common complaint that the farm and farm-life are not appreciated by our people. We long for the more elegant pursuits, or the ways and fashions of the town. But the farmer has the most sane and natural occupation, and ought to find life sweeter, if less highly-seasoned, than any other. He alone, strictly speaking, has a home. How can a man take root and thrive without land? He writes his history upon his field. How many ties—how many resources he has! His friendships with his cattle, his team, his dog, his trees; the satisfaction in his growing crops, in his improved fields; his intimacy with Nature, with bird and beast, and with the quickening elemental forces; his co-operations with the cloud, the sun, the seasons, heat, wind, rain, and frost. Nothing will take the various social distempers which the city and artificial life breed out of a man like farming—like direct and loving contact with the soil. It draws out the poison. It humbles him, teaches him patience and reverence, and restores the proper tone to his system.

"Cling to the farm, make much of it, put yourself into it, bestow your heart and your brain upon it, so that it shall savor of you and radiate your virtue after your day's work is done."

A Prehistoric Well in Maine.—John Upham, of Camden, Me., had occasion to dig a ditch on his farm, sinking it between one and two feet deep. After proceeding some distance he encountered a rock-maple tree, over a foot in diameter, lying between one and two feet below the surface. Following this up he found it separating in two branches, one of which he cut off with an axe, and, removing the branch thus severed, dis-

covered under it a well, all stoned up, about three feet deep and about the same diameter. Contained within this inclosure was a boiling spring of excellent cool water, which has supplied the family since, never becoming dry in summer, nor freezing in winter. The wonder is, when and by whom was this well dug, and how long has the earth which was above it been swimming? It would seem to be too limited an estimate to calculate by a few hundreds of years, and not too great a stretch of credulity to look back some thousands of years for its origin.

Color-Blindness of Seamen.—

Some interesting quotations from an article in the late number of the *English Mechanic* on the subject of "Color-Blindness of Seamen" have appeared in an exchange, from which we glean an interesting paragraph:

"One seaman, a candidate for a second master's certificate, described green glass as 'dark red;' in another case a green card was called 'yellow;' and a man who had been over eighteen years at sea was reported as quite unable to distinguish any of the colors. Another who had been more than seven years at sea described the red glass by daylight as 'green,' the dark green as 'red,' and the yellow as 'red;' while by gaslight he named the light blue 'green,' the dark green 'red,' and the yellow 'red.' This appears to be a case of Daltonism, or incapability of perceiving the red end of the spectrum. There are several similar instances which differ only in details; but perhaps the most interesting case is that of a candidate for a second mate's certificate who had served nearly five years at sea—a case that ought to have been sent to a court of appeal. By daylight he described the red card as 'green,' the yellow and green glasses 'red,' and the red glass as 'dark green.' By artificial light he called the yellow and green glasses 'red,' and the white glass 'dark green.' This man obtained a certificate from the London Ophthalmic Hospital, testifying that he was not color-blind, but on re-examination he still described dark green as 'red,' light green as 'neutral,' and yellow as 'red' by artificial light, while by daylight he called the green glasses 'red' once and 'yellow' once. This last difference may have been caused by the manner in which the question was put, and the ignorance of the names of colors. In view of these facts, the query suggests itself, may not the recent dreadful accident to the steamer *Champion* have been due to the inability of the look-out to distinguish the lights on the other ship, which was discovered only when near enough to take in her general outline?"

Our Indians.—Mr. E. A. Hayt, the Commissioner of Indian Affairs, in his annual report, which has just been submitted to the Secretary of the Interior, says that the progress of the Indians in civilization during the past year has had no parallel in any previous year, and this in spite of wars and

persecutions. The following table gives the results of Indian labor during the year:

By Indians exclusive of the five civilized tribes of the Indian Territory.

1879.

Number acres broken.....	27,131
Number acres cultivated.....	157,056
Number bushels wheat raised.....	328,637
Number bushels corn raised.....	643,286
Number bushels oats and barley raised.....	189,054
Number bushels vegetables raised.....	390,698
Tons hay cut.....	48,333

By the five civilized tribes.

Number acres cultivated.....	273,000
Bushels wheat raised.....	565,400
Bushels corn raised.....	2,015,000
Bushels oats and barley raised.....	200,000
Bushels vegetables raised.....	336,700
Tons hay cut.....	176,500

The Commissioner is of the opinion that the best way to promote Indian civilization is to make the Indians landholders in severalty, giving to each head of a family one hundred and sixty acres of land, and to each unmarried adult eighty acres, issuing patents therefor and making the allotments inalienable and free from taxation for twenty-five years. As to the Utes in Colorado, his judgment is that the Government should, with their consent, purchase the 12,000,000 acres belonging to them in that State, and then, with their consent, remove them to some location in the Indian Territory. He thinks that if a proposition of this kind were properly presented to the Utes they would accept it. This would be no violation of treaty obligations, and would, in the end, be much better for the Indians themselves. It would give them an abundant supply of arable land for cultivation, and at the same time secure them, at least for the present, from encroachments by the whites.

We are glad to note that President Hayes, in his late message, recommends a measure similar to the above for the Indians of the Indian Territory, by which they will be rendered independent and responsible.

Cleaning Sink Spouts and Pipes.—Dissolve four or five pounds of washing soda in boiling water and throw down the kitchen sink to prevent the pipes stopping up with grease, etc. Do this every few weeks. Clean lead pipes leading from wash-bowls by pouring down them a strong solution of potash dissolved in hot water. Don't get the mixture on the hands or clothing. It destroys all animal matter, hair, etc., and saves employing a plumber.

Can You Spell Them!—A copy of "Webster's Unabridged Dictionary" was offered at a Teachers' Institute in Pennsylvania to any teacher who would read the following paragraph and pronounce every word correctly, according to Webster. No one succeeded in earning the Dictionary, although nine teachers made the attempt:

"A sacrilegious son of Belial, who suffered from bronchitis, having exhausted his finances, in order to make good the deficit, resolved to ally himself to a comely, lenient,

and docile young lady of the Malay or Caucasian race. He accordingly purchased a calliope and a coral necklace of a chameleon hue, and securing a suite of rooms at a principal hotel, he engaged the head waiter as his coadjutor. He then dispatched a letter of the most unexceptional caligraphy extant, inviting the young lady to a *matinée*. She revolted at the idea, refused to consider herself sacrificable to his desires, and sent a polite note of refusal; on receiving which, he procured a carbine and bowie-knife, said that he would not now forge fetters hymeneal with the queen, went to an isolated spot, severed his jugular vein, and discharged the contents of his carbine into his abdomen. The *débris* was removed by the coroner."

Temperature of the Head.—Some investigations have recently been made by several physiologists concerning the effect of mental activity upon the temperature of the brain. Several thermometers are placed on different parts of the head and fastened there by means of straps; then the person subjects himself to various intellectual processes, and the result shows a decided increase of temperature in certain parts of the brain. The temperature of the brain of a professor was elevated several degrees while delivering a lecture. Even the slightest intellectual effort raises the temperature of the head above that which it reaches in idle conversation. It is interesting to note that certain parts of the brain show a greater increase of temperature than others, showing that certain organs may be more active and stimulated by the blood at a given time than others. Where the temperature of the head is increased beyond a certain point, intellectual effort takes place with difficulty or with pain. This is very apt to be the case with persons of a very nervous temperament. It would, therefore, be prudent for such to cease intellectual effort before this temperature is reached, and devote themselves to some physical exercise which shall equalize the circulation and restore the normal temperature to the extremities.

How to See the Wind.—A contemporary says how this may be done: "Take a polished metallic surface of two feet or more with a straight edge—a large hand-saw will answer the purpose. Take a windy day—whether hot or cold, clear or cloudy—only let it not rain or the air be murky; in other words, let the air be dry and clear, but this is not essential. Hold your metallic surface at right angles to the direction of the wind—*i. e.*, if the wind is north, hold your surface east and west; but, instead of holding the surface vertical, incline it about 45° to the horizon, so that the wind striking glances and flows over the edge (keeping it straight) as water over a dam. Now sight carefully over the edge at some minute and sharply-defined object, and you will see the air flow over as water flows over a dam. Make your observations carefully, and you will hardly fail to see the air, no

matter how cold. The result is even better when the sun is obscured.

The Pine-Nut.—The Pignon or Pinyon Nut is a product of the pine-trees of California. There are on our western coast several species of pines which bear an edible nut, or rather seed. The tree which produces this nut is called by naturalists Sabine's Pine (*Pinus Sabiniana*). In California and Southern Oregon, where it abounds, it is known as the Nut-Pine. The nuts or seeds are contained in a cone, which looks not unlike a large pine-apple; the scales ending in sharp, curved points. This cone is frequently a foot long and six or seven inches in diameter. There are some two hundred scales, each of which contains two seeds. As the seeds ripen the cone cracks, much as a chest-



THE PINE-NUT.

nut burr does, and the seeds fall out. At this time they are provided with wings (as shown in the engraving), but these soon drop off and are not seen in the nuts as they come to our market. The shell is so hard that it would not be easy to extract the meat, were it not that when the shell dries it cracks open on one side, into which a knife-blade may be inserted, and the shell is then easily pried into two halves, disclosing a little, oblong, white kernel, something like a peach-pit. The tree is very tall, with spreading branches thickly covered with cones, growing in clusters of from three to nine. As each cone contains some four hundred seeds, the produce of a single tree is enormous. These pine-nuts were the chief source for the supply of winter food for the Indians of California. Our illustration shows a scale de-

tached from the cone, with its two inlying seeds, and a nut itself detached from the scale. These are of the natural size. The cone, which is also represented, is much reduced of course.

How our Cow is Managed.—Our milch cow is treated as if she were a living, breathing, walking, and analytical laboratory—which she really is. She eats hay, corn-stalks, cabbage-leaves, potatoes, bran and meal, and drinks water; and the product is, rich and excellent milk and cream, all smoking and fragrant. Let the water be withheld, or let her be supplied with no fodder, grass, or other feed, and she will yield no milk. "Well, who don't know all that!" But who feeds his cow in cold weather, as if it made any difference whether the animal receives one feeding per day, or water when drink is greatly needed, or whether she gets a full or half a supply at regular periods.

Our cow is attended to with more regularity than the meals of the family. About six o'clock, every morning and evening, I take a twelve-quart pailful of hot water to the barn, pour a pailful of cold water in her slop-tub, then turn in about two quarts of corn-meal and eight quarts of wheat-bran, then add the hot water and stir the mixture and let the cow drink it while it is warm, which she will do quicker than a person can drink a cup of fragrant coffee. This makes over ten gallons of slop every day, given with the regularity of the opening and closing of the day. A spoonful of salt is usually put in the water. After the cow has swallowed her slop, a pailful of cold water is poured in her tub; and she will sometimes drink a pailful of cold water during the day and one during the night, which amounts to over sixty quarts of water (or fifteen gallons) during twenty-four hours. These statements show how much a cow will drink when water is accessible. If water were not needed, the cow would not drink so much. At morning and evening she receives as much prime hay as she will eat. At noon she is fed about one sheaf (of medium size) of corn-stalks after they have been run through a fodder-cutter, which cuts the pieces about two inches in length. When roots of any sort are fed, they are given at noon. The cow has a box-stall about nine feet square, and which is always kept well-littered with leaves or the butts and larger joints of the cut corn-stalks. She is never kept tied in the stable. I would as soon have a hole to fit my neck made in the head-board of my bedstead and sleep in such a disgusting yoke, as to put the neck of the cow in stanchions or tie her to the manger. A cow (and horse, also) needs liberty to turn round, change position, and scratch herself when she feels like it. When a cow wants feed or water, she needs a supply. To be brief—our cow is in a plump and round condition both summer and winter; and she rolls out the milk, which is milk that's milk! She now yields about nine quarts per day, and will probably

give seven to eight during the entire winter. We sell to near neighbors, who come for the milk, more than enough to pay for all the feed the cow consumes. The milk is not as blue and thin as chalk and water, but it is thick, of a rich yellowish color, like thin cream.

A great many people affirm that "IT DON'T PAY TO KEEP A COW." They say the truth, as it will *not* pay to keep a cow the way family cows are usually managed. Hundreds and hundreds of families manage their cows as follows: The cow is fed with surprising irregularity. Many times she does not get half enough to eat. John forgot to give her water last evening. She was left out in that cold and pelting storm all night. She does not have a comfortable place during cold and stormy weather. Sometimes she gets rough and injurious treatment, and will not give down her milk to the ill-natured boor that feeds her. Besides these items of bad management, there are many other things the operation of which contribute toward diminishing a full flow of rich milk.

SERENO EDWARDS TODD.

NEWARK, N. J.

Analysis of an Orange.—A medium-sized Florida orange, purchased in Faneuil Hall market, afforded upon analysis the following results:

The skin weighed 57.5 grams, which is 23.33 per cent.
 " seeds " 7.0 " " 2.84 "
 " pulp " 182.0 " " 73.83 "

The skin contained in 100 parts:

Water and volatile oil 78.00
 Organic matter 21.36
 Ash64

The seeds contained in 100 parts:

Water..... 50.00
 Organic matter..... 48.64
 Ash..... 1.36

The pulp contained in 100 parts:

Water..... 90.90
 Organic matter..... 8.68
 Ash..... .33

The pulp contained in 100 parts: 4.3 grape sugar
 " " " 4.2 cane
 " " " 1.0 free acid.

The free acid consisted of about equal parts of malic and citric acid.

The ash constituents of the orange were as follows:

Potash..... 38.7
 Soda..... 7.6
 Lime..... 23.0
 Magnesia..... 6.5
 Ferric phosphate..... 1.7
 Sulphur..... 2.9
 Silica..... 5.2
 Phosphoric acid..... 14.1

—Boston Journal of Chemistry.

Women and Constructiveness.

—For the past ten or fifteen years a considerable number of ladies have been employed in the Patent Office, some of whom have occupied the position of examiners. They have shown a great deal of ability and activity in the discharge of their official duties, and the experience and knowledge acquired ought to qualify them to serve acceptably as attorneys.



MRS. C. FOWLER WELLS, *Proprietor.*
H. S. DRAYTON, A.M., *Editor.* N. SIZER, *Associate.*

NEW YORK,
FEBRUARY, 1880.

THE MEMORIAL BUILDING.

IT may not be known to many of the readers of the PHRENOLOGICAL JOURNAL that its late proprietor, Mr. Samuel R. Wells, was earnestly desirous of securing a fire-proof building for the proper arrangement and preservation of his valuable anthropological collection. His aim was to establish a museum of human science, which should be open to the public, and serve as a perpetual means of free instruction to visitors in that most important of subjects, Mind. A short time before his death, he advertised for such a building, and had several answers, but none of the buildings offered were suitable in design or location for the purpose. Then it became necessary to remove from 389 Broadway, where the publishing office of the PHRENOLOGICAL JOURNAL was, because the owners desired to erect an entirely new set of buildings on the old site, and "737" was taken temporarily. It was Mr. Wells' purpose to prosecute the matter as soon as he had become fairly settled in the new office.

Man proposes, God disposes. The fatigue of moving and rearranging was too much for his strength; the weather was cold and damp, and in the unusual exposure he contracted a severe cold, pneumonia resulted, and he departed this life, his cherished wish unfulfilled.

During his business career he had always spent his income for the dissemination of Phrenology, and so nothing was left besides the business, no fund with which such an edifice could be purchased. His successor has endeavored to prosecute the same undertaking, but a lack of means precludes a first step toward its accomplishment. Now, too, the matter has assumed a character quasi sacred, for its accomplishment would not only set on a perpetual footing of usefulness the Phrenological Museum, but it would have the nature of a memorial of the earnest, philanthropic man who conceived it.

I feel that this effort commends itself so positively to all who have the welfare of their neighbor at heart, that nothing need be said in its behalf, and I would ask the aid of such persons in carrying it forward to completion. From those who have been benefited by Phrenology, and they certainly are numbered among the thousands, I would ask a loan, a gift, or a bequest. From those who are not able to bestow money, I would ask advice or suggestions with reference to the proper method which should be pursued to attain the desired end.

Being very anxious to have this work done in my life-time, I would be grateful for an expression from those who feel interested in its success.

CHARLOTTE FOWLER WELLS.

THE ORGANIZATION OF CRIMINALS.

NO. II.

A NEW CONTRIBUTION TO PHRENOLOGICAL SCIENCE.

MORALISTS who have shown an unfriendly spirit toward Phrenology, have been disposed to censure us for ascribing to the criminal class a mental organization which conduces to their lawless conduct. They take the view that according to our doctrine such unfortunates are vicious of necessity, and, therefore, irresponsible. It has been almost useless to reply to such attacks, that nearly all men, and particularly those distinguished for strength and power of character, possessed the same elements as the criminal in perhaps as great a degree of development, but that such elements were controlled, regulated, and made subservient to normal uses. It has been almost impossible to impress upon opponents that vice and crime are the result of perverted faculties, not results of organization vicious *per se*. We have never taken the ground that this or that person was a predetermined scoundrel, for the reason that we hold every organ of the brain, every faculty of the mind, to be essential to the completeness of brain and mind, and that men are one-sided, unbalanced, erratic, simply because they have been either defrauded of their birthright through the ignorance or misdemeanor of parents, or they have been improperly trained in childhood and youth.

It is not because a man has large Combativeness, Destructiveness, and Secretiveness, that he becomes a scoundrel and a terror to the community, but because wise measures have not been taken early in his life to restrain their manifestation, and to educate into activity compensating faculties. Men have shown

vicious tendencies who were weak in those elements—deemed by the world as possessed of the essential features of depravity, but possessed in an excessive degree Benevolence, Hope, Approbativeness, Friendship—qualities generally deemed by the world as essentially virtuous. Men have often defrauded others, not on account of excessive Acquisitiveness, but for the purpose of gratifying a large unbalanced Benevolence. Women have committed serious improprieties for the sake of indulging dominant Approbativeness or Friendship. In this way the high and noble elements of character may become the controlling agents of crime.

The newspapers of late have copied widely M. Bordier's study on a series of criminal skulls, which was published in Dr. Broca's *Anthropological Review*, and pretty generally the criticisms upon it have been reasonable and fair, indicating that there has been a very marked change of front with reference to the influence of cerebral organization upon character. An article in the London *Daily News* of November 13th last, discusses Dr. Bordier with much candor, and as we feel warranted in taking the views of the writer as reflecting those of a large class of educated people, we are pleased to quote what he says with reference to the conclusions of the French physiologist:

"The murderer's skull is developed in another direction; namely, at the sides. The sides of the head, it seems, are the seat of the impulses, and the murderer is the creature of impulse. He has far too much mental activity in proportion to a most stunted quantity of reflection. The same abnormal development of the sides of the head, the same reckless impulsiveness, marks the savage. He takes no thought for the morrow, but, like the Tunghuzians lately visited by the Vega,

eats all the seals he has caught to-day. With a scanty development in the frontal region, and an abundant development in the parietal region of the brain, both savages and murderers are prompted to go straight to their object, without pausing to consider the consequences. Now, the difficulties of life are almost invariably caused by the presence of a person *de trop*, a wife, a child, a mistress, a friend, or an enemy, who is sadly in the way. It is but too true that the impulsive savage generally solves the problem with an assegai or a boomerang, and simplifies life considerably by removing one factor altogether out of the sum. The murderer who inherits the structure, and, therefore, the ideas of the savage, does precisely the same thing. He does not stop to think about duty, morality, the guillotine, or religion, but destroys the life that he finds inconvenient. This action is the result of his unlucky parietal development, and of the other fact, that he often has lesions in the brain—is, in fact, slightly cracked.

“The practical result of these speculations may at first sight seem alarming to the moralist. How can we punish people, he may ask, who are so far from being responsible for their actions? How is a man to blame for being an interesting though dangerous illustration of ‘atavism?’ The old answer to this sort of question is still as good as ever. Assassins are born, like poets, M. Bordier thinks. *Sicarius nascitur*, but one may become an assassin without having been born to the manner, and one may be born to it, and yet escape being an assassin. People come into the world with parietal formations for which they are not responsible. Again, changes may take place in the brain after birth for which the sufferers are not to blame. But whether these formations are to produce the extreme possible results or not, depends a great deal on social environment and on education. If the born savage is left to his instincts and desires, if his mere physical nature is allowed to exercise unchecked dominion over his will,

he may become a monster hateful to humanity. But his reflection and his will may be trained and strengthened by outward influences. His impulses may be subdued, overpowerful and active as they are, and his reflective nature may be fostered and encouraged till it asserts its superiority. Thus the homicidal and generally criminal tendency may be checked all through life, and the born murderer may die almost in the odor of sanctity. The American moralist truly says that many a saint is a sinner who has never really worked down to the bottom of his character. Murder may lie at the bottom of many a character, and yet may never be brought out to the surface. There can be no doubt that one of the weights which keeps down the savage in the man is the fear of punishment. A man may be impulsive, and yet the fear of the guillotine may be just strong enough to overcome his impulse. Indeed, when M. Bordier talks of savages, we are reminded that there is much of the savage, much of his selfishness, thoughtlessness, and readiness for evil, in most of us in childhood. If every critic carries in him a dead poet, most men (and women) carry in them a dead savage. Education has overcome the old hereditary propensities, and education and fear may overcome them even when they take the shape of a pronounced parietal development. In short, these physical researches really neither add anything to, nor remove anything from, the old moral difficulty. We have always known that some individuals have strong depraved instincts and impulses to evil. We have always known that these may partly be checked by punishment and example. Our conduct can not be altered, supposing it to be proved that these depraved instincts and impulses are always accompanied by a certain physical development. We can not influence the skull, but we can introduce motives strong enough to counterbalance the fatal physical temptations of the embryo criminal. We can also keep out of the way of men whose heads are developed in the wrong direction.”

There are some points^o in this which we do not altogether accept; the reasoning has much of the old, hard-and-fast method, yet its general tenor is in accordance with science and correct moral discernment. Such views on the part of journalists should stimulate effort toward correcting the many influences for evil which exist among us. There are many practices now having the sanction of law which are directly conducive to vice and crime, and that in the face of facts recognized by a large proportion in the community; for instance, it needs no argument to convince an intelligent man of the pernicious influence of the sale of alcoholic liquors. The testimony of those who administer the affairs of our courts, jails, hospitals, asylums, almshouses, positively declare that from 70 to 90 per cent. of those who are punished or cared for at the expense of the State, are the victims of intemperate habits. Furthermore, the statistics of crime, supplied by districts in which no liquor is sold, are overwhelmingly conclusive of the great improvement in morals which immediately follows such an establishment of decency. Edwards County, Illinois, with its empty jail, and Vineland, New Jersey, with its one policeman, are good illustrations, and suggest the inquiry as to whether or not those large lateral or parietal organs which are so prominent in the criminal, do not owe their manifestation as agents of evil in the character, to the abnormal excitement of alcohol.

SOME NOTES FROM THE LOUVRE.

IN Paris, on a rainy day, the question occurs almost on awakening, what of the long list of interesting objects I am desirous of contemplating with both the

physical and mental eye, can well employ me to-day? I glance down the column of items in my note-book, and the word "Louvre" catches the eye. My hotel is within a few squares of that magnificent museum, wherein so many of the French kings stored priceless gems of art of ancient and modern times. After the late breakfast of the hostelry and a cursory reading of the morning newspaper, I rapidly make my way through the throng which fills the covered sidewalk and passages of the Rue Rivoli, and, turning down, soon find myself at the grand entrance of the immense structure. Ascending the beautiful staircase to the left, instinctively my footsteps turn into the section where are grouped the treasures of Greek and Roman art. Lines of statues and busts fascinate the gaze. Can I devote even a minute to the consideration of each? The hours are short, the minutes nothing when one is engrossed in the contemplation of so many thousand objects, each of which has its history, and each its instruction for the attentive observer. My time is necessarily short in this magnificent city, and I could spend the whole of it in these grand buildings by the Seine, and yet not take in appreciatively one-half of their contents. The impression is forced upon me that it were better to examine with care but a twentieth part of the great assemblage of treasures, than to rush through galleries, halls, and alcoves, bestowing only passing glances to the right and left as I go.

Now the ancient world is around me—seemingly I breathe the atmosphere which Augustus, Cicero, Cæsar, Scipio breathed, for on both sides are representations in statue and bust of ancient greatness with whose names history has made me familiar.

One of the first of the marbles which attracts my attention has "Demosthenes" inscribed upon its base—Demosthenes the wonderful orator of Athens. I study its features and contour according to the principles of science, and find them to indicate force, nervous susceptibility, strong perception, decision, taste; the full eye indicates power of language, the head is massive between the ears. Near by is the bust of another famous Athenian, Eschines, who, like Demosthenes, was possessed of a "golden tongue." Even in the marble I see the impress of a warm and sprightly temperament. The full forehead indicates logical power; the lively features show feeling and impulse; the poise of the head ambition and self-respect. A little further on the great Macedonian, Alexander, looms up. A handsome head with a colossal neck. The organs are very strong in the base. I do not wonder at his fall into the meshes of appetite and propensity. The length from Individuality to Philoprogenitiveness is remarkable; both back-head and forehead are large. The lines of the face indicate a splendid vital organization, and the general contour is the heroic oval.

Among the statues of the gods at hand the solid front of Mars attracts me. There is a repose in its square features which reminds one of our General Grant. The forehead, however, is low, the back-head strongly developed, the side organs conspicuous; but who would expect great elevation either in character or brain in the ancient genius of destruction? Alcibiades, the brilliant Athenian leader of the eventful period of the Peloponnesian war, has a handsome face; his perceptive intellect is very prominent, the forehead low, however, and the side-head bulging.

The marble exhibits a man of brilliant parts, highly ambitious, selfish, aggressive, yet impressive and winning. Caracalla, the emperor of whom history relates deeds of monstrous atrocity, next draws my attention. His is a massive head. There is grandeur in its expression, although the outlines have a barbaric tone and the organism is one of immense force. He was a colossal ruffian of whom judicious training might have made a great leader.

As we look upon the marble which represents Scylla, we are struck by the correspondence of his head and face with his infamous record. The features are stern; the development of the brain shows arrogance, ambition, pride, selfishness, and appetite. In Constantine, the Christian emperor, we find evidence of intellectual quickness, ambition, strong will, allied to good-nature and love of ease. His Constructiveness and Ideality are well marked. Germanicus, the famous soldier of Augustus and Tiberius, shows splendid natural talents of intellect, with large Benevolence and a conspicuous endowment of the organs contributing to force of character. Face and head wear the marks of a nice esthetic sense. His Constructiveness is very large.

Among the noble women of Rome, Julia Paula, the gifted daughter, we presume, of Cæsar, is there in marble form. The head is finely molded, showing a practical intellect and marks of culture, while the face is gentle yet firm in expression. Julia Donna, the wife of Severus and mother of Caracalla, somewhat contrasts with the last. Her sharp nose imparts a tone of peevishness to the expression. The head is broad, the forehead well filled out. Elsewhere we meet

with a second representation of this lady, a bust made perhaps at a later period of her life. In this the disposition appears softened even to mildness.

Faustina, whether "Senior" or "Junior" is not stated on the stone, has a full, plump face, with plain features. The head is broad and rounded well at the corners, and strongly organized in the occipital region. The character is one of independence and self-will; as we regard it, faces common enough on the promenades of New York occur to the memory.

Marcus Aurelius, otherwise known as Antoninus, appears very frequently in bust and full-length statue, as if the Roman people so much loved him that his effigies could not too often employ the chisel of the sculptor. The face and head are those of a handsome, well-balanced, highly-educated man, whose motives are in the main of a noble character. The bust of Galba reminds one of a country deacon, or a successful farmer. I look with some curiosity at the busts of Nero. There are three or four in the Louvre. In nearly all the face is certainly handsome in mold, but the head is low and immensely developed in the back part, and region of the ear. Selfishness is a speaking characteristic. Vitellius, whose feats of eating and drinking gave him, although a Roman emperor, his chief reputation, is drawn here in the solid stone truly enough. Grossness and sensuality are written in every line. The sculptor was faithful.

Augustus, the great and glorious, has many representations, the most prized being a statue representing this most famous of the Cæsars at the age probably of thirty-five or forty. It stands upon a mosaic platform. I lingered several min-

utes in contemplation of its exquisite grace. The head is beautiful indeed; kindness, culture, taste, sympathy, delicacy are graven in its features. Later, approaching the portrait-bust of Julius Cæsar, I was not disappointed in observing the strong contours indicating force, stability, executiveness, associated with an active temperament and a powerful intellect. The Motive temperament is particularly marked in the strong angles of forehead, cheek, and chin. The ancient artist was faithful here also.

Titus, the conqueror and would-be preserver of Jerusalem, looks the soldier with his front so square, massive, and noble. Caligula, the detested of his time and of all succeeding time, has a head and face which are very repulsive at first sight. The brain is low and flat; selfishness and cruelty are specially marked upon the features. Unscrupulous, sensual, are terms which at once suggest themselves to the observer.

The hall devoted to the marbles of the Cæsars is especially beautiful in its finishing and decoration. The ceiling is elaborately painted, representing in its succession of circles and panels the Muses accompanied with poets of world-wide fame. Here I meet with many repetitions of the subjects already noted; and besides them, Vespasian, the warrior-emperor, who raised himself from obscurity to the first rank. His broad head has great Constructiveness, and a corresponding development of the perceptive organs of the intellect. Self-esteem is marked, and Conscientiousness by no means small. The full-length statue of Vitellius in this hall, shows a massive back-head, predominating Self-esteem, Caution, and the great appetite, of the bust I have already described. Trajan has a crown

that is well built up, but the forehead appears low on account of the protuberant perceptives. His intellect was eminently practical.

Hadrian, the successor of Trajan, attracts me with its pleasant expression and its general elevation of intellect and character. I am reminded of the busts of the same person which I saw a year or so ago in the Metropolitan Museum of New York. Commodus, of whom there are statues and busts representing him at different ages, was evidently a very handsome man, and much like his father, Marcus Aurelius. Unfortunately, he did not show the greatness of his sire. I can trace the growth of his character from youth to advanced manhood, and in all the marbles the same weakness and vanity are seen. Mæcenas, the patron of letters, made famous by the verse of Horace, has the appearance of an industrious go-ahead man of business. One would infer from the organization that he was an ancient banker or operator in public funds—perhaps a contractor for the building of large works.

Thus I wandered slowly from one subject to another, oblivious to the dripping world outside of the massive walls inclosing this wonderful collection. In another paper may be continued the recital of similar pencil-jottings of the men who made history.

♦ ♦ ♦

"A PIECE OF YOUR MIND," DEAR READER.

WE have a chronic dislike to blowing our own trumpet. We know that is the fashion nowadays, at least nearly all publishers of newspapers and periodicals "put their best foot forward" in parading the peculiar merits of their respective literary properties. We prefer

to let our subscribers and readers speak for us, and will confess that however great may be our modesty about "speaking in meeting ourselves," we do like to hear others descant upon the good things they find in the PHRENOLOGICAL JOURNAL. An intelligent and philanthropic lady residing in one of the most prominent manufacturing towns of New England, recently sent us a letter, in the course of which she made the following allusion to the JOURNAL:

"DEAR JOURNAL, do you want to know what I had before I had you? These are a few of the articles: I had no idea what I was born for; I had the record of my birth, but no faith in it, feeling one hundred years old. I had physicians from far and near. I had debts, which to pay I had no hope. I had headache, oh, what headaches! I had a chronic disease of the bowels; numerous corns on my toes, rheumatism in every joint, and even blindness. I had nothing but dried bones and a parched skin, and the 'blues.' . . . I had bad help, a tobacco-smoked house, and crabbed children. I had tea and coffee-pots to attend to daily; pies, cakes, puddings, and sauces to make. I had no time to read, not even the Bible. Indeed I had no faith in anything. I had nothing to give away, and no desire to keep what I owned. I had no God, no hope in this life or the next.

"Now I ought to tell what I gained by reading the JOURNAL, and how; but it must suffice at present to say that I feel like a new creature. Instead of growing old, I am younger than ever."

This is written in a half-sportive vein, but it is an earnest avowal, and deeply significant, to us at least.

The writer also suggests sundry topics for future consideration in these columns. We like this part of her letter almost as much as her "confession," because it helps us to set before the readers of the

PHRENOLOGICAL such matter as will be interesting and serviceable to them.

We would invite our readers, generally, to send us their views on the character of the JOURNAL, especially what it needs to render it more useful to the communi-

ty. We invite criticism on the methods of its teaching. The PHRENOLOGICAL JOURNAL is published for the good of the people who read, and we are desirous to know from them how it can be made more influential.



"He that questioneth much shall learn much."—*Bacon.*

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. But one question at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of an early consideration.

IF AN INQUIRY FAIL TO RECEIVE ATTENTION within two months, the correspondent should repeat it; if not then published, the inquirer may conclude that an answer is withheld, for good reasons, by the editor.

WE CAN NOT UNDERTAKE TO RETURN UNAVAILABLE CONTRIBUTIONS unless the necessary postage is provided by the writers. IN ALL CASES, persons who communicate with us through the post-office should, if they expect a reply, inclose the return postage, or what is better, a prepaid envelope, with their full address. Anonymous letters will not be considered.

ORDERLY CHARACTER.—The organization which you describe may be as you represent it, but we must assure you that one possessing a small degree of Firmness, Combativeness, and Self-esteem, if grown-up, is not likely to train those faculties into very positive manifestation. If you have good intellect you may hope for fair success, however, if you select a vocation or business in life wherein you are not likely to be called upon to contend with others. Yours is not a character adapted to a life of conflict. A business which is stable, steady, and a routine which has little change, would help to give symmetry to your life. You must endeavor to act in accordance with the impressions of your intellect, and avoid influences or temptations that would interfere. Large Ideality will not hurt any one unless its influence is permitted to grow, so that it leads its possessor away from the practical and the useful, those most important relations of life which are often classed as commonplace. While Ideality affords variety and pleasure by introducing breaks now and then in the dull course which most of us are compelled to pursue, it operates as an instrumentality of enjoyment and refinement.

CONSTIPATION.—F. H. P.—Eat food which is readily digested and assimilated. Bread made of whole wheat, or, as it is commonly called, Graham bread, oatmeal porridge with but little milk, will help toward your object. Of butter, eat none at all, if the trouble be obstinate. At this season of the year you can get a variety of dried fruits, which may be stewed or cooked in various forms, and be most agreeable to the palate. You should eat fruit liberally with your meals. Do not put much sugar with it, as you want the acid effect for the regulation of the stomach. Vegetables are excellent in their place, and they should be plainly cooked; celery is best eaten raw. You should avoid all fried food, for the reason that it is next to impossible to cook in that way without using fat or grease of some sort.

DEPRESSIONS AND ORGANS.—A. J. K.—If there be a decided depression on any part of your head, it must be due to the lack of the brain beneath. You may have strongly-marked Benevolence and also large Firmness, while Veneration is relatively less than either. You should know yourself whether or not your disposition has a good share of respect for others and of the religious element. Send stamp for "Mirror of the Mind."

INFLUENTIAL ACQUISITIVENESS.—J. T. L.—*Question:* I have known persons to be kind and obliging to neighbors and strangers, doing all in their power to please them, while they were just the opposite in their family. What is the cause of this?

Answer: Strong Acquisitiveness is the chief organ in the accomplishment of this apparently inconsistent manifestation of character. At home, engaged in his own affairs, the person so organized being master, he exhibits the peculiarity you mention sharply, on account of his desire to accumulate. Away from home, among neighbors and acquaintances, feeling compelled to act be-

comingly, other organs come into exercise, and his Acquisitiveness is, for the time, subordinated. The reason why so many people act in a very engaging manner when out in the world among strangers, whereas while at home they are peevish, irritable, overbearing, and generally disagreeable, is due to the same fact—that different organs are exercised which may be under constraint while they are, as it were, before the public. At home they do not feel it necessary to rein in the selfish faculties.

THE FARMER.—J. T. D.—The farmer needs a good vital organization; in other words, a strong frame, indicating a predominance of the Motive temperament. He should have a good intellect and a brain well built out at the sides; he should have also Destructiveness, with a large social development; he should also have a large moral development, with a strong sense of self-respect, as well as the sense of duty; he should not be deficient in the reflective talent; in fact, a thoroughly good farmer has such a variety of thought and employment that he is pretty well built up in all directions.

BRAIN DEVELOPMENT.—J. A. C.—Length of brain fiber from the medulla oblongata, that part being usually taken as the center, indicates organic development. The brain fibers run from that point in all directions. Communicating with the gray matter in the convolutions, according as the distance is to the surface, say to the frontal region, so is the thickness or depth of the convolutions. It is in these convolutions that the organs lie and exert their functional wills upon the body through the fibers which communicate with the spinal column.

CHARACTER BY CORRESPONDENCE.—*Question:* What kind of photographs must you have of persons who desire to have their characteristics explained? What charge do you make? I desire to know, but fear the expense will be too great for a poor girl.

M. E. N.

Answer: In nearly every number of the PHRENOLOGICAL a question like this is answered. We have a circular specially prepared for those who desire to have their characters described, and who can not personally visit this office. A photograph or two which faithfully represent the head and face can, in the hands of an expert, be made almost as serviceable as the veritable cranium of one who desires the examination. This circular is called the "Mirror of the Mind," and is sent to all those who write for it and enclose a three-cent stamp to pay the necessary postage. As for the expense of the delineation, we would state that it is \$5. And that is certainly not high, when the value of a proper delineation of character is considered. We have the testi-

monials of hundreds of persons to the fact, that such a written description has been worth thousands of dollars to them. While a single prescription given by an expert physician may cost that amount, and may have to be repeated a hundred times before there is recovery, no extra charge is made for additional hints which may be asked by the phrenological subject.

MEASUREMENT OF HEADS.—*Question:* Is it a right principle that two heads should be marked alike, showing that they both measure twenty-two inches, but one person weighs two hundred pounds and the other one hundred and forty pounds, organic quality and activity being alike?

J. N. L.

Answer: If the heads measure precisely the same, of course they should be marked alike so far as size is concerned. But it is scarcely to be supposed that two persons, one of whom weighs sixty pounds more than the other, can have the same organic quality. One having a head measuring twenty-two inches, with high quality of activity, should weigh one hundred and fifty pounds at least; so that, granting the fat fello to have equal quality and activity, he has fifty pounds of brawn more than is necessary.

THE UNKNOWN FUTURE.—*Question:* We are instructed that our instincts and conscience dwell in the sensory ganglia; that memory is an organic register of facts or impressions; that the cerebrum is the seat of ideas, the home of thought and reason; but when the gray matter that composes this thinking mechanism becomes diseased and the chill touch of death stills the action of fiber and physical life, what light can our teachers pour upon that coagulated substance, where once reigned hope, ambition, love, or hatred, those gray granules that once were memory? Certainly Physiology has grown to giant stature since the days of St. Paul. Please answer these thoughts, and do not forget my JOURNAL, as I must have it.

Answer: Some of the doctors have certainly ventured beyond the boundaries of reason in their hypotheses, with reference to the functions of brain and the nature of mind. We are not of those who would identify thought and idea with material substance, and count thought but a mere distillation or evolution. We consider the brain organs but mere agents of the mind. What that mind is *per se*, we confess ourselves unable to reveal. When this engine of the mind, this delicate tissue of matter, is no longer active, under the touch of chill death the mind survives the effect, how, we do not know. "The spirit returns to the God who gave it."

Several ANSWERS must be deferred to the next number.



Communications are invited on any topic of interest; the writer's personal views and facts from his experience bearing on our subjects, being preferred.

PRESS OPINION.—As a home companion, a help to the parent, the teacher as well as the individual, the PHRENOLOGICAL JOURNAL has no superior in periodical literature. A candid public will acknowledge this. In no respect is man's ignorance and distress more marked than with reference to himself, his mental and physical organization, and, consequently, there are thousands and tens of thousands groping in darkness and bewailing misfortunes and errors which a little scientific light shed upon their capabilities would have helped them to avoid. It is the mission of the PHRENOLOGICAL JOURNAL to put men and women, old and young, in the way of helping themselves. It begins at home, at self-improvement, showing how an individual can better himself in mind and body; regulate his thoughts and habits; study and observe with effect; adjust himself to his place and work; obtain higher rewards for his industry; and secure his proper share of comfort and happiness.—*Watsonville (Cal.) Transcript.*

THE PHRENOLOGICAL JOURNAL for December is before us, replete as usual with an interesting variety of sound, practical common-sense productions, that can not fail to profit all who will give them a careful perusal. One great fault of the American people is that in the bustle and excitement of this fast age, all rush heedlessly on, knowing quite too little about themselves and seemingly caring little how they treat their minds and bodies, until they are broken down, when, alas! it is often too late. One of the best guides in this direction is this Journal, and everybody should read it.—*New Holland (Pa.) Clarion.*

"THE WONDERS OF LIGHT, COLOR, AND THE FINE FORCES."—The following letter in relation to a book with this title which we recently noticed, has been received:

Editor of JOURNAL:

"DEAR SIR:—In my 'Principles of Light and Color' I have presented an array of facts and new discoveries which, as it seems to me, would be for the good of all mankind to become acquainted with, and I regret that in your short notice of the work given in the November PHRENOLOGICAL JOURNAL, you have not had time to give some of them to your readers. The work has cost me years of severe investigation and experiment, during the whole of which I

was sustained and led on by the enthusiastic feeling that I should be able to bless others and unravel a great number of mysteries. I am well aware that hundreds of people get astride of some hobby or proclaim some new invention, by means of which they expect to turn the world upside down, when after all they are pursuing a very small thing; but I have ransacked our great libraries and studied into the science of the day to learn what was known by our savants and what not known, so that I might proceed with open eyes, without being deluded by any false self-esteem. I think I see as clear as the lightning, that the basic principles of force and of all our concrete sciences are not understood by Tyndall, Huxley, Faraday, Huggins, Carpenter, Helmholtz, and other scientists, however marvelous their achievements in the realm of physical phenomena; for none of them can tell what is electricity, or heat, or cold, or magnetism, or light, or color, or chemical action, or nervous force, or psychic potency. They do not know whether all these styles of force are *things*, or mere '*motions* of the ultimate atoms of matter,' or both; but have rather concluded that they are mere *motions*, and not entities at all, contrary to all phenomena of the known universe. Happily Professor Crookes has lately given powerful demonstrations before the Royal Society of Great Britain of my own position, which is, that light, color, shadow, etc., are actual *entities* as well as *motions*. I have repeatedly collected the different colors of the sunlight directly from the sky as actual substances, and I am constantly charging water and other substances with the solar rays of different colors, by straining away the light through various hues of glass, and thereby filling them with a medical element of the most exquisite and penetrating character. I will show your readers how they may prove the same point for themselves in a very simple way. Let them get a yellow-orange or amber-colored bottle of as deep color as possible, and after filling it with pure water, set it in the sun for at least an hour, although a day is better. This will transmit the yellow and some red rays to the water, so that if it is drank, one or two swallows at a time, before meals, it will be bound to animate the whole nervous system, acting especially upon a dormant liver, proving to be a gentle laxative to constipated bowels as well as a diuretic. A cathartic drug will frequently leave the bowels exhausted and weaker than before, but this charged water will leave them in a more active condition. I have tested this matter in hundreds of cases.

"Again, let them charge a blue bottle of water in the same way, and drink from it a tablespoonful at a time, before meals, and especially on retiring, and it will be found to be nerve, narcotic, anti-inflammatory, astringent, and cooling

generally. I have cured some bad cases of chronic diarrhoea with it after all other treatment has failed, and relieved many cases of colic, inflamed stomach, neuralgia, sleeplessness, cramps, etc. The trouble with the ordinary blue bottles is that they are generally of the mazarine style, being colored with cobalt, and, consequently, are not so cooling and soothing as other grades of blue, as they transmit more or less of the red and other warm rays.

"But time and space are wanting here to speak of the very numerous cases that could be quoted in corroboration of these principles, or of the numerous other discoveries equally or more important, which I have been enabled to develop from having ascertained the basic principles of things as seen in the law of atoms and of ethereal forces. By understanding these principles we shall see, that both the chemical and therapeutical power of all substances may generally be understood by their colors, although it is sometimes necessary to use the spectroscope to learn what is the real color potency of a substance. It is a fact, that by this knowledge we shall be able to go through field and forest and determine approximately the power of every plant, tree, flower, root, bark, and other object that we may see, by its color.

"I regret, dear Editor, that you have not found time to refer to the psychic and phrenal developments of this work, especially as a new argument for phrenology is adduced by means of color. The *North American Journal of Homoeopathy* speaks kindly of what it calls the 'beautiful chapter on the brain.' In that chapter (Chromo Mentalism) I have shown that many persons are at times able to see brilliant radiations of colors from every part of the brain, which exactly harmonize with the character of the organs that phrenologists have pointed out. These colors, though invisible to the ordinary external eye, belong to the higher and more exquisite portion of the solar spectrum, and are manifestations of those refined mental ethers which course through and animate the different organs of the brain. In the lower and back brain, where the animal and pasional nature rules, the warm red or red-orange predominates. In the front brain, including the reasoning and perceptive region, a beautiful blue, the element of coolness, may be seen, and this melts into the violet as we go toward the temples. In the upper brain, where the religious aspirations find their seat, a golden radiation approaching to a dazzling white in a high pure nature appears. In a noble and refined nature the colors are especially bright and pure, and indescribably beautiful. In a low nature they have a muddy cast, especially in the region of Amativeness.

"Respectfully, EDWIN D. BABBITT."

A WOMAN'S TROUBLES.—FAMILY LETTER No. IV.—*Dear Mister Editer*:—I dont no as its best for me to tell enny Moar of the konversashun that I begun telling in my Last letter. Its enuf to say that I wore that Dress evry Afternoon for a weak for the Sake of peece. And I grew to kinder like it. It wus reel Kumferble and I kood go Up and down Stares so Easy in it but (as Moses sed) a Krisis Kame. There wus goin to be a Konsurt and Moses had told me that be wood take me to it. So I got awl redy. Ov kerse I didnt keep on that New fangled Dress and I put on my korsits tho tha felt ruther tite and unkumferble. After Supper Moses went to reed in his Paper and I spoke to him about the konsurt and says he Im not agoin with you with them klose on and says I you didnt spose I was goin to ware that new Fashioned dress you brot me did you? To be shure I did, says he. Youve worn it a weak and it didnt Hurt you did it? Well he was Set and I was set, and at last he sed unsted of goin to the konsurt by my leev heed reed me a Fu chapters out of sum Books he had. . . . Then I wus Mad—its verry seldum I get Mad I'm not hi Tempured but I wus mad then. There Id wore that Dress to home for a hole weak to plees Him and to plees me he Woodnt go to the Konsurt with me in the klose I wanted to ware. Says I Moses Jackson I dont want enny of youre reedin if its goin to turn my Hed the way it has Youre you aint the same man you was Six Monthis ago. I dont want to be says he I beleev in goin on and on—Well says I interruptin him if youre goin on this wa I dont no what will bekum of me.

The Fittist will Servive says he or something like that, and then got his books and Lade em down on the Table. There wus kwite a Pile of em. The top one wus What to Wear by Elizabeth Sewart Phelps and the next one was Dress Reform by Abby Gould Woolson. I opened to the fi leef and saw Missis Dawklus name ritten in it. . . . I took up that hole pile of Books and and Marched strate into Missis Dawkinse house and says I Missis Dawkins I dont never want you to lend my husband anuther book as Long as you Live, and then I slammed the door and went out tho I heerd her say whats the Matter Missis Jackson.

In a minnit or too she kum over. Moses wus lookin kinder sheepish and says he I eckspeted new devellupments in you Josie after youd wore that Dress awhile but thecs aint egsackly the kind I wus a Lookin for.

What dus this awl meen says Missis Dawkins?

It meens says I that youve bin givin my Husband books to Reed that have turned his hed.

Then I gess we both tawked to gether but tenerate she finally Understood what the trubble was and says she Im astonished Mister Jackson.

Befoar she had time to say enny more he says I wish my Wife to ware a Sensable Helthful dress. She promised when we was married to oba me didnt she. I urn the munny that Blize her klose and I hav a rite to say what she shall ware Especially when its for her good.

Mabe thats so says I but if it is Id Ruther take in Washing and urn my own klose and ware what I want to.

You poor child says Missis Dawkins I dont Blame you. Mister Jackson I Am Astonished I thaut you beleaved in Wimmins Rites?

So I do says He. A womman has a rite to the free youse of all her Powers—the Powers of Res-purrashun and Lokomoshun inklooded and you No that in such klose as tha ware tha kant have them. I thaut you beleaved in Dress Reform Miss Dawkins? I do says she but I beleave in Wimmins Rites first. As you verry sensserbly remarkt Wommun has a rite to the free Youse of all her powers but you seem to forget that the Power of Choise is one of them. You hav fallen into the Error that all men seem Prone to—of thinking tha must tell a Wommun what her Rites are. A Wommuns Rites is liberty Mister Jackson—Liberty. Perfekk freedum to Chooze for herself in evrything as much as you do. You hav no moar rite to tell your Wife she shall ware a short Dresar than she has to tell you you shall ware a long one. But my leter is a gittin tu long Im Afearred and if it isnt tu much fur your Pashense Ill just finish wot tha sed in my nekst.

JOSEPHINE JACKSON.

WISDOM.

“Think truly, and thy thought
Shall be a fruitful seed.”

Do not anxiously hope for what has not yet come.

PROMISES made in affliction require a better memory than many possess.

NEVER resent a supposed injury, till you know the views and motives of the author of it.

YOU can not dream yourself into a character, you must hammer and forge yourself one.

AN ounce of generous praise will do more to make a man your friend than a pound of fault-finding.

MAN in society is like a flower,
Blown in its native bed; 'tis there alone
His faculties, expanded in full bloom,
Shine out, then only reach their proper use.

—Cooper.

THE fire-fly only shines when on the wing; so it is with the mind, when once we rest we darken.—P. J. Batley.

HE who, with health, has a true wife, a dutiful child, and a true friend, may laugh adversity to scorn and defy the world.

MIRTH.

“A little nonsense now and then
Is relished by the wisest men.”

DYSPEPSIA shows itself when the head of a family quarrels with the cook.—*New Orleans Picayune.*

IF a man really wants to know of how little importance he is, let him go with his wife to the dressmaker's.

A NEW-MADE granger out in Illinois said to his wife: “Martha, we'll have lots of pumpkins next year. I planted about forty; had to dig awful big holes to put 'em in though.”

“THE pleasantest way of being hung,” says a contemporary, “is in a hammock. The whole body is then hung at once.” The assertion is as positive as though the writer had tried both ways.

“DID you ever know such a mechanical genius as my son?” asked an old lady. “He has made a fiddle out of his own head, and he has wood enough for another.”

“DAWKTER,” said an exquisite, the other day, “I want you to tell me what I can put into my head to make it right.” “It wants nothing but brains,” said the physician.

A GEORGIA colored debating society was lately discussing “Which is the best for the laboring man, to work for wages or part of the crop?” An old “uncle” spoke the sense of the meeting when he said: “Bofe was de best, ef dey could only be brung togedder somehow.”

PERSONAL.

MR. JOHN B. CLAY is the only surviving child of Henry Clay. He has a comfortable home at Lexington, Ky., owning two hundred of the paternal acres and many beautiful horses.

MISS C. L. RANSOM has been commissioned by the Treasury Department to paint a portrait of Alexander Hamilton from original pictures in New York.

COURBET, the illustrious French artist, whose death was announced not long since, brought on the dropsy, which killed him, by excessive beer-drinking. He sometimes drank as many as thirty-five glasses a day.

MADAME CHARLTON EDHOLM has assumed editorial control of a department in the Omaha *Evening News*, devoted to the interest of temperance.

MRS. CATHERINE HOGARTH DICKENS, the wife of the great novelist, is dead. It is twenty-one years since she and her husband separated, after having seven children. He with the children of his fancy to care for, and she with the children of her body to foster—they insensibly fell apart from some incompatibility in their pursuits.



In this department we give short reviews of such New Books as publishers see fit to send us. In these reviews we seek to treat author and publisher satisfactorily and justly, and also to furnish our readers with such information as shall enable them to form an opinion of the desirability of any particular volume for personal use. It is our wish to notice the better class of books issuing from the press, and we invite publishers to favor us with their recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

SHAKESPEARE'S MORALS: Suggestive Selections, with brief Collateral Readings and Scriptural References. Edited by Arthur Gilman, M.A., Editor of the "Poetical Works of Geoffrey Chaucer." 12mo. pp. 265. Satin cloth. New York: Dodd, Mead & Co.

This compilation is the result of original study on the part of the editor, and will be welcome to all who love Shakespeare and the great principles of life supplied us by that grand text-book of Christianity, the Bible. It is not realized, probably, by the majority of those who deem themselves familiar with the works of the wonderful English poet, how much of his moralizing is related to the Bible, or was derived immediately from its pages; and when his indebtedness in this respect is perceived, the superiority of Shakespeare over other writers in the domain of æsthetic literature is clearly enough understood. Bishop Wordsworth, in his volume on Shakespeare's knowledge and use of the Bible, writes: "Take the entire range of English literature; put together our best authors who have written upon subjects not professedly religious or theological, and we shall not find, I believe, in all united, so much evidence of the Bible having been read and used as we have found in Shakespeare alone."

The editor has arranged under suitable headings, such readings as he has found convenient to associate in this volume. The number of extracts is 241, the number of Scriptural quotations related to the extracts is 249, altogether forming a capital little cyclopedia. The publishers must be credited for having brought out the book in elegant style.

HOW TO EDUCATE THE FEELINGS OR AFFECTIONS. By Charles Bray. Edited, with Notes and Illustrations, from the Third London Edition, by Nelson Sizer, Author of "How to Teach," etc. 12mo, extra cloth. Illustrated. Price, \$1.50.

This excellent work is reproduced in this country under the impression that there is a welcome place for its teachings and influence in the public mind. No subject to-day is of greater importance to our people than the cultivation of the feelings, from which character and happiness spring. The world has studied and la-

bored in the direction of intellectual culture, and great advancement has happily been made in this field; but the systematic and properly directed culture and regulation of the propensities has received too little attention, because the public mind has not understood this part of human nature in such a sense as to be able to educate and regulate it. Laws with penalties have been enacted, and justice in the way of repression and punishment, have been brought against the result of propensity; but how to educate and guide aright human propensity in the interest of virtue and social order, has been overlooked. An ounce of prevention in the field of human depravity, is worth a ton of cure in the line of imprisonment, stripes, and the halter, inflicted upon the wrong-doers. If we can educate the passions and propensities so as to make them subservient to moral and social law, we have worked toward the disuse of jails, prisons, and the gallows, and prevented the waste of human life, hope, and happiness, and the infliction of crime and its results upon the well-meaning and reputable portion of the race. The virtuous portion of the people must bear the expenses of crime—the thefts and forgeries are a tax on virtuous industry, and then all the cost of police, courts, jails, and prisons, are a burden to be borne by the law-abiding part of mankind. For the good of those who may be saved to virtue, as well as of the virtuous, the feelings ought to be educated and brought into obedience to law and morality. To promote such ends this book is put forth.

MILDRED AT ROSELANDS. A Sequel to Mildred Keith. By Martha Finley (Martha Farquharson). Author of "Elsie Dinsmore," "Wanted—A Pedigree," etc. 16mo. pp. 341. Cloth. Price, \$1.25. New York: Dodd, Mead & Co.

Mildred, not yet recovered from a severe illness, which, we presume, is related in "Mildred Keith," is so weak and pale that a wealthy uncle proposes to carry her to his own home in the South, where it is believed her health will be soon re-established. After certain preliminaries of shopping, dressmaking, etc., which are detailed with a good deal of minuteness, the invalid maiden is ready for the journey to Roselands, where her uncle's plantation was situated. Here she finds herself surrounded by the evidences of luxury and refinement, and the kind attentions of her uncle quite overwhelmed her grateful young heart; while the listless, indolent, and superficial habits of aunt and cousins throw many obstacles in the way of the performance of the religious and moral duties which it was her wont to respect at home. She, however, makes a firm resolve, in which she has the sympathy of her uncle, to live more consistently with Christian principle, and the reader is told in the course of eighteen or more chapters, of her struggles in carrying into practice that re-

solve. She finds in the fashionable family a sphere of labor for the moral reform of its members, and helps to frustrate the scheme of a wicked fortune-hunter. This is the romantic spice of the book, otherwise its general character is of becoming simplicity, and suggestive of excellent principles.

KEY TO GHOSTISM. Science and Art Unlock its Mysteries. By Rev. Thomas Mitchell, author of "Philosophy of God and the World," etc. 12mo, pp. 249. Cloth, price \$1. New York: S. R. Wells & Co., publishers.

The literature of the day is not wanting in attempts to refute the philosophy and to expose the arts of Spiritualism. Some of our writers and investigators in science have devoted much time to analyses of the peculiar mental condition of the multitudes who are more or less taken in the toils of this belief, and have given to the world treatises which are more distinguished for profundity of reasoning than for clear and practical teaching on the subject. Mr. Mitchell strikes at the root of the matter in the outset by imputing the existence of Spiritualism to man's love of the marvellous. As a preliminary to the special treatment of his subject he analyzes the nature of mind, showing its relation to the body and the laws of its exercise. This part of the work shows careful study, and helps, in itself, to clear away much of the obscurity which to the uninstructed eye envelopes Spiritualism. In his "disclosures" he draws largely from the avowals of "mediums," and of men and women who have been engaged in practicing upon the credulity of the public for gain. He shows how science and invention are made subservient to deceit—how magnetism, electricity, and prestidigitation may overawe the ignorant and superficial. He has gathered evidence from all sources of authority, and makes a book which is full of interest to the reading and thinking community.

HOW TO LEARN SHORTHAND; OR, The Stenographic Instructor. An improved System of Shorthand Writing arranged specially for the Use of those desirous of acquiring the Art without the aid of a Teacher, being the simplest, most practical, and the best adapted for Reporting. By Arthur M. Baker. Oblong 12mo, paper covers. Price, 25 cents. S. R. Wells & Co., Publishers, New York.

It is unnecessary to add a word to the many thousands which have been uttered with respect to the great utility of shorthand, for its practical application in a hundred ways to the business of life is too conspicuous an evidence of that utility to be overlooked by any intelligent person. Text-books are multiplying for the instruction of young would-be reporters, and Gurney, Pitman, Taylor, Scovill, Munson, Lindsley, and others, have each their advocates. The above entitled manual is founded on the really excellent system of shorthand invented by Prof. Taylor, but is a very

considerable improvement of it in many particulars. The author is a shorthand writer of experience, and has embodied in his little book the valuable results of his own varied practice. It is claimed that this text-book, although small, contains all that is necessary for the student who would master the department of verbatim reporting. Mr. Baker does not mark out a "royal road" for so desirable an accomplishment, but says that with a thorough acquisition of the principles of his system, the student can by systematic practice advance steadily toward it.

PUBLICATIONS RECEIVED.

THE NATIONAL TEMPERANCE SONGSTER. By W. O. Moffitt. A collection of fresh and sparkling original Temperance Songs, set to familiar tunes; well adapted to Temperance organizations, casual meetings of a Reform Order. Price, 10 cents a copy. Published by the American Temperance Publishing House, New York.

THE THEOSOPHIST. A Monthly Journal devoted to Oriental Philosophy, Art, Literature, and Occultism; embracing Mesmerism, Spiritualism, and other Secret Sciences. Conducted by H. P. Blavatsky. Bombay, India.

We have received the first numbers of this novel publication. Some of our readers remember a lady by the name of Blavatsky, who visited this country a year or so ago, and attracted no little attention on account of her singular mental gifts, and particularly by her work entitled "Isis Unveiled." She was extensively informed in Oriental literature and life. Returning to India (where she had previously resided for many years), she commenced, in association with Col. H. S. Alcott, the *Theosophist*. As indicated in its title, its domain is the discussion of occult science, especially the beliefs and arts of supernaturalism recognized by the mystics of Asia. The price of the publication is \$5 a year, or 50 cents each monthly number. Orders received at this office.

THE BLACKSMITH AND WHEELWRIGHT. Devoted to the interests of Wheelwrights, Blacksmiths, Machinists, Carriage and Wagon Builders, Gunsmiths, and all workers of Iron and Wood.

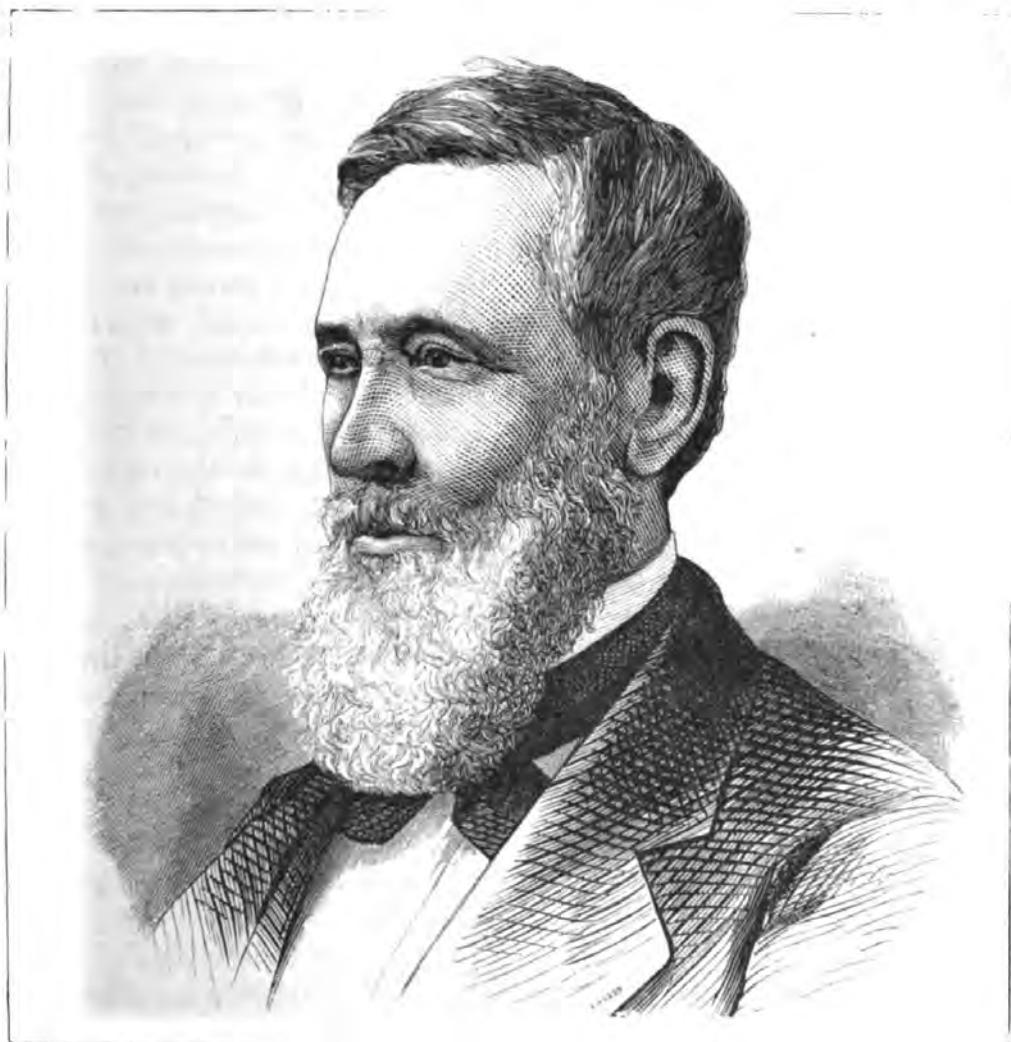
The first number of this new trade journal is promising—a large folio of sixteen pages. It is well filled with hints and suggestions of value to wheelwrights, blacksmiths, and other mechanics mentioned in its title. With so promising a beginning, this monthly should engage attention and find a liberal constituency. Published at No. 80 Beekman street, New York. Subscription, \$1 per annum.

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[WHOLE No. 496



DR. ASA GRAY,

THE EMINENT BOTANIST.

THE first impression made upon the observer by this head and face, may be expressed in two words: harmony and strength. We see in the face close attention, and in the forehead, criticism, memory, and the power to individualize.

In the whole make-up we see industry without haste, persistency well sustained by vigor, but never mastered by it. His emotions never run away with his judgment; he never gives so heavy a blow as to cripple the nail he seeks to drive; never puts in powder enough to burst the gun, nor fires before he gets an excellent aim. The reader, in analyzing this development will observe that the eyes and forehead resemble the feminine, through which inheritance he obtains intuition, and the ability to form correct judgments instantly. Truth seems to organize itself under the gaze of his perception, as metals fuse and unite under the action of the blow-pipe.

The middle section of the head, traversed by a line drawn from the opening of one ear over the top of the head to the opening of the other ear, indicates masculine determination and energy; and the face, from just below the eye to the corner of the mouth, also expresses the same masculine traits. We judge, therefore, that from the eye to the hair, the forehead is like the mother; that from the eye to the mouth, the face is like the father. Consequently he carries his mother's quick sense of truth and her intuitive judgment in conjunction with his father's sturdy steadfastness, prudence, positiveness, and so much of courage as is necessary to give efficiency to his work. Though the back-head is not fully in view, we judge it to be rather strongly developed, as the face expresses the signs of love and affection in a marked degree. People come to like him as they have more and more to do with him; they may not be able to tell why, but they feel drawn toward him. It is easy for him to make friends anywhere.

He has a sensitive desire to please and

be approved, and that, combined with his disposition to teach and communicate, and thereby to benefit others, makes him always welcome. He does not seem to be in other people's way. He works with them as a helper, rather than to drive them as a master. He has always been accustomed to lead rather than to drive; to persuade rather than to coerce.

The reader will notice that the distance from the opening of the ear to the root of the nose is very considerable, indicating long brain-fiber in the direction of intellect, and though the forehead seems retreating, the upper part of the forehead, where the reasoning organs are located, is really large, and the retreating appearance arises from extra development in the lower part of the forehead. The perceptive organs, then, take the lead, especially Individuality, which gives quick attention, and this, supplemented by Form, Size, Locality, and Comparison, makes him the wonderful analyst and critic that he is. His faculty of Color is well represented, but he will show in his expressions, and in the transaction of his professional work, more attention to, and skill in, the appreciation of form, size, and harmony of development, than he will in mere color. Hence he is interested in a plant irrespective of its blossoms. The stem and leaves to him glow with wisdom and adaptation in the organized whole; the blossom adds beauty and grace.

The organ of Order gives a squareness to the angle of the brow upward and outward from the eye, showing a tendency to method, arrangement, adjustment; and this, combined with Comparison, gives a tendency to classification.

His memory of events and of places is admirable. His judgment of character

being excellent, he adapts himself to people promptly. He has large Hope; looks on the brilliant and promising aspect of the future, and if he makes a failure, he rises from the disaster with undiminished vigor and expectation.

He has strong faith, and uncommonly strong devotional feeling. He has reverence for sacred things, for the great Creator, for men of renown and wisdom and worth.

He is cautious, perhaps more anxious than is desirable, relative to difficulties which may be in his pathway, and often meets and masters them, and wonders afterward that he should have been apprehensive of failure.

Among his friends he is frank; among strangers retiring and reticent. He appreciates value, and if he had been educated to take part in commercial affairs, would have been successful in acquiring money honorably. He is one who is inclined to put in a full day's work, to be faithful to the conditions under which he labors, and nothing comes to grief through his carelessness, inattention, or indolence.

His prominent eye, and the special fullness under it, indicate clearness and freedom of language, and this combined with the fullness of the brow and of the middle and upper sections of the forehead, give him wonderful power of description, and ability to teach and explain.

The temperament is a combination of the Vital, Motive, and Mental, and not one of these conditions seems to predominate so as to throw the system out of balance. He has brain and nerve which give sympathy and susceptibility, and power to acquire knowledge and communicate it; while the vital system gives nourishment and sustaining

power to the constitution, and the Motive or frame-work temperament, gives strength, persistency, endurance, and power.

We can fairly assume that every one of our readers is fond of flowers, and so far as he or she can, takes a practical interest in their cultivation. Therefore it will afford them all much pleasure to see on our opening page the earnest face of one who is probably the most eminent botanist in America, and one who has done more than any other man to educate our people in the matters relating to plant-life. His text-books and treatises, beginning with the unpretending "Elements of Botany," which appeared as long ago as 1836, and ending with "Structural Botany," which was lately published, have always commanded wide attention in the schools and out of them, among those inclined to study in the world of vegetation.

ASA GRAY was born in Paris, Oneida County, New York, November 18, 1810. He studied medicine and was graduated as an M.D. at Fairfield College in 1831, but finding more enjoyment in the observation of nature than in prosecuting the "healing art," gradually devoted himself to botanical work. His "Elements of Botany," and certain contributions to the periodical literature of botany, and a professorship in Michigan University, which he never filled, won for him the notice of scientific men. But in 1842 he was elected Fisher Professor of Natural History in Harvard University, and has occupied this chair ever since that time; until within about six years, teaching the classes in botany. Nearly all the leading Professors of Botany in the colleges of the United States have been students of Dr. Gray for a greater or shorter period.

Besides the volumes mentioned, Dr. Gray has published "How Plants Grow,"

"How Plants Behave," "Lessons in Botany," "Manual of Botany," and "Field, Forest, and Garden Botany." These constituted but a small part of his actual work, for he has described and named a vast number of flowering plants which have been collected in numerous exploring expeditions. These descriptions appear in Government and State Reports, and are very valuable contributions to science, but are almost lost sight of by the mass of the people. He has also given a great many papers and reviews to the American Academy of Arts and Sciences, to the *American Journal of Science and Arts*, *North American Review*, *Atlantic Monthly*, "Transactions of the American Pomological Society," and to numerous journals of agriculture and horticulture. One of his earliest contributions of this kind was a work on grasses, sedges, and the like, the former of which are of such great value to the farmer. One of his greatest works is "The Flora of North America," which was begun in 1838, and is not yet completed. The first two volumes were prepared in association with the late Dr. Torrey, of New York. These extended through the *Compositæ*. Dr. Gray has lately renewed the work and has printed part first of a third volume. In 1848 the first volume of his "Genera of the Plants of the United States" appeared. The object of this work is to describe a prominent species of each genus of plants in North America.

The drawings in this work are marvels of accuracy and beauty. The work passed through two volumes, and is now rare and costly.

In connection with his other work, Dr. Gray has done considerable toward maintaining the botanic garden, greenhouses, etc., at Cambridge. In the early part of his studies, he was an industrious collector of plants and thus laid the foundation for the great herbarium at Harvard. He received the degree of LL.D. from Hamilton College in 1861. For some years he was president of the American Academy of Arts and Sciences, and in 1872 president of the American Association for the Advancement of Science. He is honorary or corresponding member of many foreign scientific societies, and intimate with leading European savants whose studies lie in analogous channels.

Although much past middle age his life has been so well-ordered that, despite its great mental activity, he has enjoyed excellent health for the most part, and is still a vigorous worker.

A writer says of his habits, that he does "not find it necessary or best to study all night, or for half the night for a part of the time, and then rapidly break down and rest or recruit for a long time. He lives on plain food. His best hour for work is from nine to ten P.M., when he is not likely to be interrupted. He retires at ten or half-past ten o'clock, sleeps well and long."

UNITY OF THE HUMAN SPECIES.

No. I.

A CONSIDERATION OF THE PRINCIPLES OF EVOLUTION.

"THE question," says Mr. Darwin, "whether mankind consists of one or several species has, of late years, been much agitated by anthropologists, who are divided into two schools of monogenists and polygenists. Those who do not admit the principle of evolution must look at species either as separate creations or as in some manner distinct entities; and they must decide what

forms to rank as species by the analogy of other organic beings which are commonly thus received. It is a hopeless endeavor to decide this point on sound grounds until some definition of the term 'species' is generally accepted; and the definition must not include an element which can not possibly be ascertained, such as *an act of creation*."

It is evident from this that Mr. Darwin

knows himself to be unable to combat a definition of species which claims to have originated in an act of creation; and the reason is, if man was created he did not evolve; and that he was created is rendered a necessity by all the analogies of organic being, as we shall show. By this attempt at adroit intimidation we are to be prevented from defining what species means unless we adopt Darwin's decision that it does not mean an act of creation; while this is the very thing to be proved, and of course can only be done by producing facts and evidence that inorganic things caused organizations to exist, dead things living ones, and unintelligent things those of intelligence—the very mention of which demonstrates an impossibility. But this is one of those hard necessities upon which Darwinism is obliged to depend for its existence. It in effect says: Let me shut God out of creation and from the controversy, and my chances are as good as yours to show how things originated, while neither could show anything of the kind. Thus does he beg the whole question to begin with; and is it not marvelous that such men as Sir Charles Lyell, Tyndall, and Huxley should be found adopting his theories, and declaring, as Tyndall has done, "that the evidence in proof of the modification of species furnished by Mr. Darwin is overwhelming;" by which he means that one species becomes another by animal descent; hence that all came from a single primordial form.

The definition of the term "species" we are forced to give by the natural relation of things and the physiological laws of organic life is, that it signifies those animals and plants which will not reproduce by crossing with others; and by "race" the varieties of species which, without regard to these differences, will constantly reproduce their kind. So universally do the living organisms of the world vindicate the correctness of these definitions that it leaves not the least room for Darwin's insinuation of difficulty. Every one knows that the terms "species" and "race" have been used

interchangeably, designating the whole family of mankind as descended from Adam; but since the theory of evolution has been started, it has become necessary to define them both to mean "race," and discard that of species altogether; or that it signifies all the living plants and animals of the world.

That Mr. Darwin dreads the true definition of these terms is manifest by the assumption that sound definitions will and must be generally accepted; and if accepted, will prove them true.

How does such a supposition look in the historic light of scientific discovery, which shows that whenever a new truth has been brought out and defined, it has generally been rejected, and that, too, by the very men who were the foremost advocates of the science of which it claimed to be a part. No, Mr. Darwin; a *sound definition* depends solely on the question whether it is *true*, and not in the least whether any man or number of men will receive or reject it; and we shall show that the facts and laws of generated organic life render it an absolute necessity that the evolutionists must accept the definition herein maintained, though it prove fatal to their theory.

The difficulty under which the polygenists labor is seen by the following: "Sub-species" is a term some naturalists have lately employed to designate forms which possess many of the characteristics of species. Now, if we reflect on the weighty arguments above given for raising the races of man to the dignity of species (here is the idea that races become species) and the insuperable difficulties on the other side in defining them (there are not only no *insuperable* difficulties, but none at all in our definition), the term 'sub-species' might here be used with much propriety. But from long habit the term 'race' will perhaps always be employed."—*Descent of Man*, p. 216.

It is said again, as a conclusion: "Finally, the naturalists might argue that the natural fertility of all races has not yet been fully proved; and even if it had, it would not be an absolute proof of their

specific identity." Here it is evidently implied that if the natural fertility of all races, as he calls them, was a fact, it would all but amount to demonstration of the specific identity of all species, and therefore that each had a separate creation. Now, if this has not been positively proved, then Mr. Darwin's book would contain the exception; and the only thing in his labored effort it contains having the least show of evidence in proof of the infertility of species, is that there are individuals among all species which are "sterile." This fact, however, only proves that physical derangement exists in the generative organs of such individuals. Now, if fertility is a universal fact among all the races of the human family, which all efforts at crossing have demonstrated, what is Darwin's assertion to the contrary worth? We put it with his dictation as to what kind of a definition we must or must not give to these words.

In opposition to this arrogance we have not the least hesitation in affirming that there never was an abstract idea so well ascertained and enforced by philosophic necessity and the analogies of nature as that plants and animals required acts of creation to bring into existence, and that each species had its specific progenitor or progenitors at that creation. This position is vindicated by the failure of thousands of efforts to produce a new species by crossing which would persist; made, too, by the most celebrated naturalists, and who believed in its possibility.

As every branch of natural science is employed by the evolutionists to prove that organic existences originated without the aid of an intelligent being, so is that of the identity of species. Hence if we would successfully expose these efforts we must use the same to prove the existence and intervention of such a being; without whom the universal voice of nature is, there never would have been a beginning, or succession. Suppose no name had been given to this Creator, so certainly revealed in nature, and in man

especially as a part of nature, still the conception would have been as definite that such a living, personal, intelligent being existed, as abstract and before these works as the works of man prove his abstract, prior existence from his works, and that he is a living and intelligent being. We venture the remark that there never was a human being of ordinary intelligence, who had arrived at maturity, whether heathen or Christian, who had not, by his own intuition or reasoning, received this definite conception. It also follows from this that there never was a natural atheist, or evolutionist; the latter being still more unnatural and absurd. A condition of mind to become either of these requires a long process of mental training in which convictions are stifled, reason outraged, and self-indulgence gratified.

It is an undeniable fact that every sensible child learns very early, by witnessing the surrounding objects of nature, that human skill is inadequate to the task of producing them. Perhaps the first lesson has resulted from efforts to draw the pictures of flowers, birds, or animals. Here skill is brought into requisition; but the apparent rudeness between the drawings and the things forces the conviction that it required a vastly more skilled hand than they possessed even to make good resemblances; and how much greater to make the beautiful things themselves. If the parent undertakes the work, still the child discovers a marked difference in the result. Now, what would shock this child more, while laboring with this conception, than to be told that a thing far less skillful than himself or parent made the flower, bird, and animal, while these somewhat skillful creatures had failed even to make satisfactory pictures; and how much greater would the failure have been had they attempted to have made the things themselves?

Take another example. Here is a young farmer who has learned something about hen's eggs and chickens. He has found that the hen desires something of a start in a nest, as an inducement for

her to lay her eggs in it, and he makes a chalk egg for the purpose. Of course it is no more of an egg because it bears some resemblance to one than that it is anything else; but even this rude effort has exhausted his skill in organic construction. It is, however, of sufficient similarity to deceive the hen, simply because she is a hen, and has not the skill of the farmer. He has also learned that chickens are hatched from eggs simply by the hen sitting on them. He has also ascertained that even this is not essential to hatch chickens; but that the same result will follow if the eggs are otherwise exposed to the same temperature for the same length of time. With the knowledge of these facts what other conclusion could the farmer arrive at than that the hen is a natural machine, constructed by some being capable of the work for the manufacture of eggs, and the eggs for chickens; just as a saw-mill is for the manufacture of boards from logs, or a grist-mill flour from grain; and that it was just as necessary that the hen-machine should have been perfectly organized in order to turn out such work, as that the mills should have been before they were thus capable. He had also observed that this result was not owing to the quality of food fed to the hen; for the same fed to hogs—or hog-machines, if you please—would be turned into pigs. The hen had an instinctive feeling inclining her to sit on the eggs, not acquired by cultivation or imitation, but by a complication in her make-up; and for the gratification of which she patiently endured her confinement and the loss of her own flesh while sitting on the eggs for three weeks, and then to the task of bringing up a large brood of chickens. Thus, in obedience to this law of nature, the hen was impelled and induced while she lived to reproduce her kind.

The farmer's reflections upon these wonderful facts would lead him to the conclusion that nothing less than infinite intelligence was necessary to so mix the common material of which all animals are composed that this or a similar *feel-*

ing would be an inherent *function* without which perhaps no creature would submit to the hardship and deprivation necessary to raise up future generations; and without this compensatory gratification all races and species of animals would have become extinct at the death of the first progenitors, though each were perfect in every other respect.

Suppose, still further, that the farmer had often tried the experiment of so mixing different kinds of eggs—those of hens, turkeys, geese, etc.—setting them under each other, in order to produce a new species of fowl, a half-breed, one between a hen and a turkey, looking as much like the one as the other; and that the eggs this new creature laid—if it laid any—were as perfect a cross in form and size as itself; and also that the new fowl was just as fertile in laying eggs and hatching chickens as were any of the uncrossed hens and turkeys. With these facts before his mind he would have concluded that all kinds of fowls had a common progenitor; but that that progenitor had involved in its organization the embryos of all the varieties of fowls living upon earth, and that it required infinitely more skill to make it than any one of the kinds evolved from it; and instead of being taught the lesson of the evolutionists, that this first progenitor was the lowest and simplest in the scale of organic being, he would learn that it must necessarily have been the very highest of all, involving in its structure all the peculiarities of feature, size, and color of all the fowls that had ever existed; and if it was the egg that was first, it was such a marvel of mechanical skill that none but a being of infinite wisdom could have created it.

INCUBATION.

The following observations on the changes that occur from hour to hour during the incubation of the hen's egg, are from "Stearns' Reflections":

"The hen has scarcely sat on her eggs twelve hours before some lineaments of the head and body of the chicken appear.

The heart may be seen to beat at the end of the second day. It has at that time somewhat the form of a horse-shoe, but no blood yet appears. At the end of two days two vessels of blood are to be distinguished, the pulsation of which are visible; one of these is the left ventricle, and the other the root of the great artery. At the fiftieth hour one auricle of the heart appears, resembling a noose folded down upon itself. The beating of the heart is first discovered at the auricle, and afterward in the ventricle. At the end of seventy hours the wings are distinguishable, and on the head two bubbles for the brain: one for the fore and the other for the hind part of the head. Toward the end of the fourth day the two auricles already visible draw nearer to the heart. The liver appears the fifth day. At the end of seven days the lungs and stomach become visible; and four hours afterward the intestines, bones, and upper jaw. At the one hundred and forty-fourth hour the two ventricles are visible, and two drops of blood instead of the single one which was seen before. On the seventh day also the brain begins to have some consistency. At the two hundred and nineteenth hour of incubation the bill opens, and the flesh appears on the breast. In four hours more the ribs appear, forming from the back, and the gall-bladder becomes visible. The bill becomes green at the end of two hundred and thirty-six hours; and if the chicken be taken out of its covering, it evidently moves itself. At the two hundred and sixteenth hour the eyes appear. At the two hundred and eighty-eighth hour the ribs are perfect. At the three hundred and thirty-first hour the spleen draws near the stomach, and the lungs to the chest. At the end of three hundred and fifty-five hours the bill frequently opens and shuts, and at the end of the eighteenth day the first cry of the chicken is heard. It now gets more strength and grows continually, till at length it is able to set itself free from its confinement."

What a fine play of the imagination

must it be to see in an operation of blind unknowing matter the production of such a world of wonder as thus disclosed, and which was first involved in the organic egg, as well as in the hen that produced it; and how would this be increased if the hen or egg should give birth to creatures of more complicated organization, and superior to themselves—as, for instance, a man from a monkey. Let us suppose still further that the farmer had found by his experiments that certain eggs invariably produced certain kinds of fowl. He could have them modified in size by always setting the fowls upon the largest eggs, and so also in color; but whether large or small, white, black, or speckled, each were the same identical fowl as though none of these changes had resulted—just as dogs are dogs, whether large, small, white, black, or spotted. He would also have found that these changes were not by such slow and nice shades that those of a single generation would be imperceptible, as is claimed for evolution; but that they were palpable, and often in a single season the greatest extremes were reached, and in a few generations the largest fowl was produced, as well as that all this farmer's hens are white or all black, just as he desired to have them.

By further experimenting he would have found that a certain kind of seed would produce a certain kind of fruit-tree; but that it was necessary to plant the seed in soil, and where it was exposed to the light and the heat of the sun, and that the soil must be made moist. The man possessed some skill, but he knows there is none in the seed; for skill implies volition, and this self-motion, etc. Neither is there any in the sunlight; it shines by necessity; and the rain thus falls; and that these elements are the principal constituents of the law of vegetation. But even the combination has no skill, and knows nothing of the inherent power possessed or whence it was derived. The tree, however, grows to maturity, supposing the seed was perfect, as an imperfect seed will not

produce a perfect tree, or one that will reproduce its kind. From these facts of nature he concludes that the whole phenomena of producing the original plants or seeds were the work of a being infinitely above himself. He also learns the

important truth of natural science, to distinguish between creation and growth, or evolution. The first involved these laws in the elements thus related and combined, and the latter evolved the tree with its susceptibilities. THOS. MITCHELL.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER I.—*Continued.*

VERTICAL SECTION OF THE SKULL OF MAN AND OF QUADRUPEDS.

THE vertical section of the skull when studied in man, and the more important species of vertebrate animals, offers great advantages to the phrenologist, and enables him to appreciate—

1st. At a single glance, the extent and form of the cerebral cavity. To be sure, it discloses but half of the interior of that

important truth of natural science, to distinguish between creation and growth, or evolution. The first involved these laws in the elements thus related and combined, and the latter evolved the tree with its susceptibilities. THOS. MITCHELL.

3d. Its depth indicates to us the greater or less development of the cerebral parts.

The vertical section (Fig. 7) represents an oval having more extent behind than

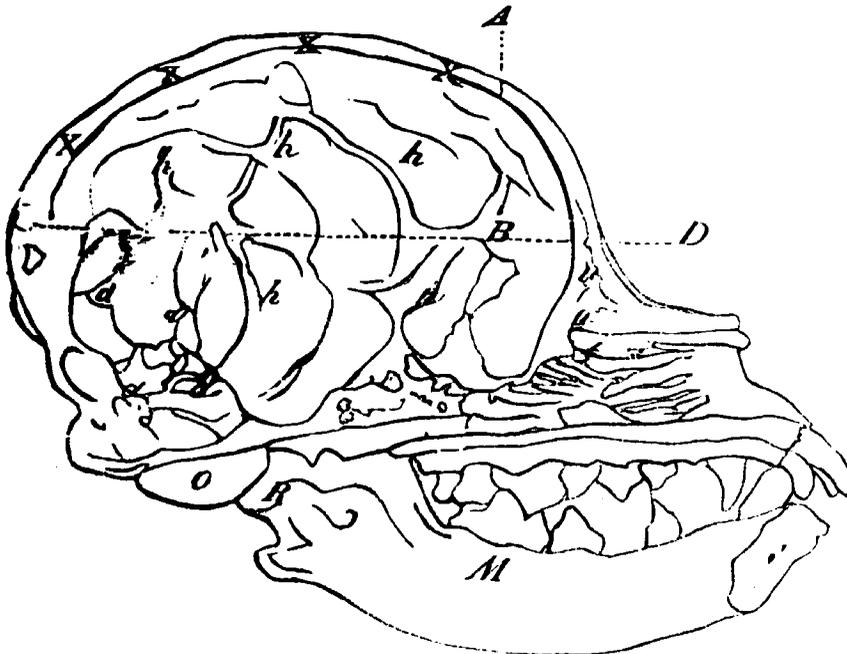


Fig. 32.—VERTICAL SECTION IN OUTLINE, SKULL OF INTELLIGENT DOG.

bony case, but it is easy to supply mentally the half which is wanting, because of its correspondence. (See Figs. 7, 10, 11, 22, 32, 33, 34, 35, 36, 37, etc.)

2d. We can thus estimate by examination the different degrees of thickness in parts of the skull from the root of the nose to the farthest extremity of the oc-

in front; the two tables or layers, which form the bones with their inclosing spongy substance, are about two lines in thickness. The part of the layers which corresponds to the lower portion of the frontal bone, and that where the occipital crest is seen, exhibit the greatest thickness. The region of least thickness

is that over which the cerebellum lies, and it is not more than half a line. Half of the cerebellum, and an entire hemi-veinous vessels. One of these furrows or tracks belongs to the principal artery of the dura-mater.

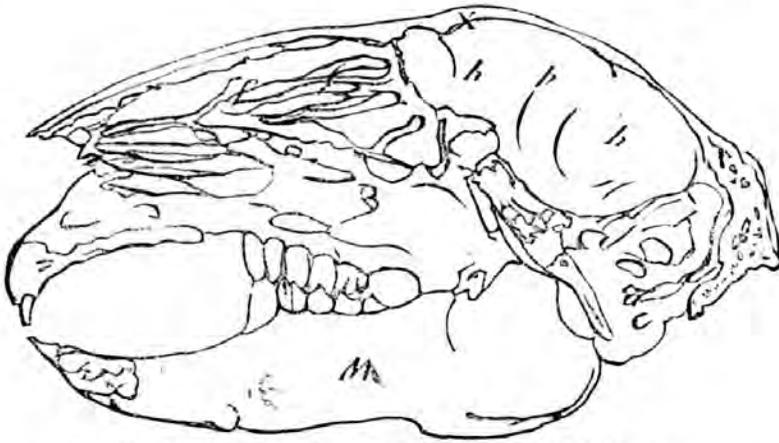


Fig. 33.—SKULL OF DOMESTIC RABBIT. VERTICAL SECTION.

sphere of the cerebrum, fill up the whole cavity. The internal surface is lined, in the living subject, with a fibrous membrane called dura-mater; one observes

In quadrupeds the vertical section of the skull presents an oval also, of which the anterior part is less developed than the posterior. We shall notice in this

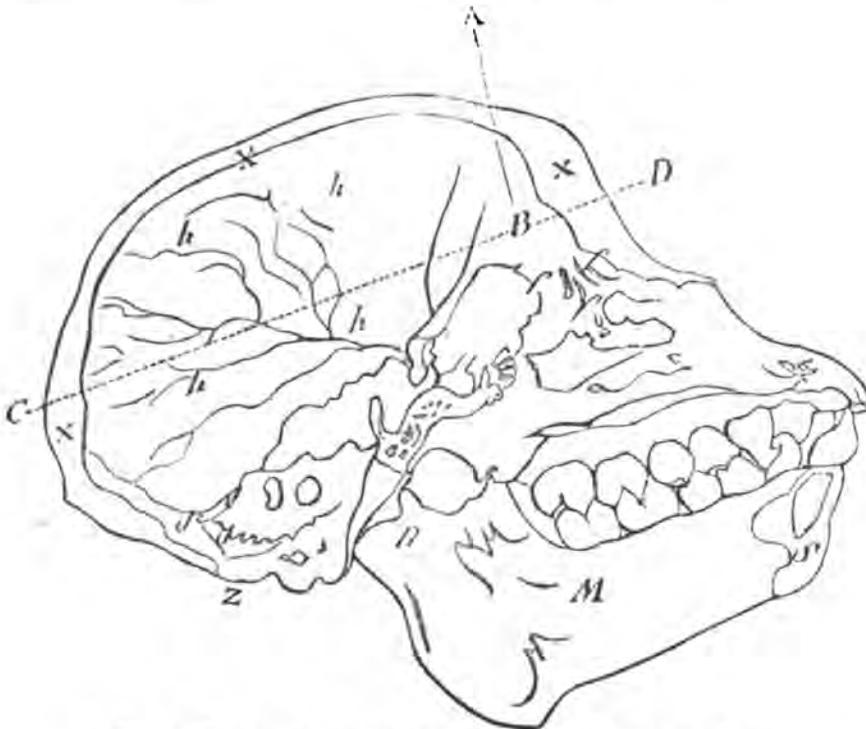


Fig. 34.—VERTICAL SECTION IN OUTLINE, SKULL OF SAJOU APE. MALE.

therein impressions corresponding to the convolutions of the brain and several furrows in which lie the arterial and

respect some remarkable differences in different animals; sometimes, between individuals of the same class, as the dog

and the fox, of which vertical sections are represented in Figs. 10 and 11, and also in individuals of the same family,

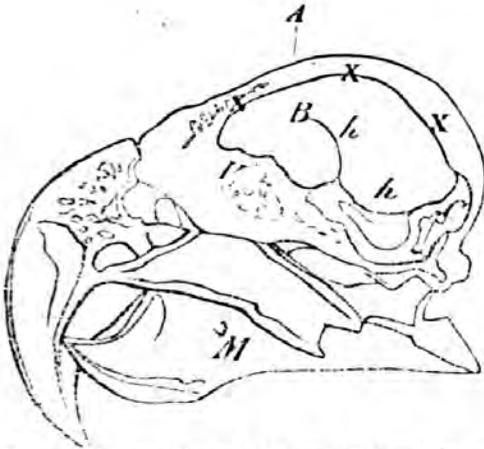


Fig. 35.—VERTICAL SECTION, OUTLINE, PARROT'S SKULL.

as one sees in the vertical sections of two dogs, represented by Figs. 38, 39. Fig. 34 represents the vertical section of the skull of the Sajou ape—the common

dinal diameter represented by the line drawn from the root of the nose to the occipital bone is very pronounced; but there exists between the male and female of these species a striking difference in this respect. Fig. 40 represents the vertical section of a female skull; Fig. 36 that of the male; Figs. 41, 42, 43 represent three skulls of carnivorous animals in vertical sections; 41, that of the domestic cat; 42, that of the marten; and 43 that of the pole-cat. In the case of the cat the skull shows an elevation in the region which we have described in the ape; that is to say, from the middle of the orbital plate, of three to four lines; in the marten it has not half of this, and it is still smaller in the pole-cat. In the fox (Fig. 11) the same region compared with that of the dog (Fig. 10) presents a striking difference, as in the latter this part of the frontal bone is much more extended than in the ape.

In some species of the dog, like that

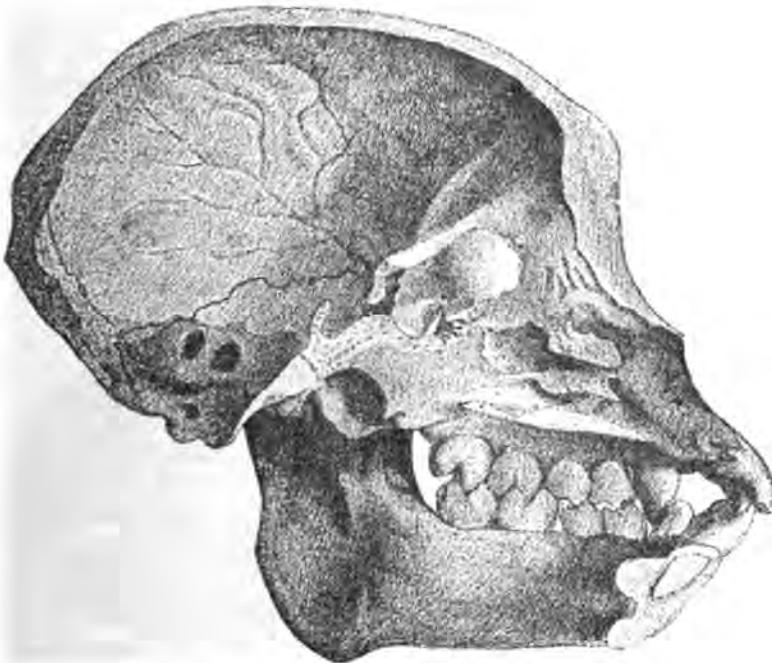


Fig. 36.—VERTICAL SECTION OF SAJOU APE. MALE.

species frequently exhibited on the streets. A perpendicular line drawn through the center of the orbital plate shows only five to six lines of depth. The longitu-

which is represented in vertical section by Fig. 38, one observes enormous frontal sinuses—parts of the brain being separated from the external table in such a

way as to prevent their being exactly estimated from the exterior surface. It should be said, that the original of this particular design was diseased in brain.

of the brain, and some slight furrows in which lie the vessels of the dura-mater. In that division which contains the cerebellum, are seen some recesses corre-

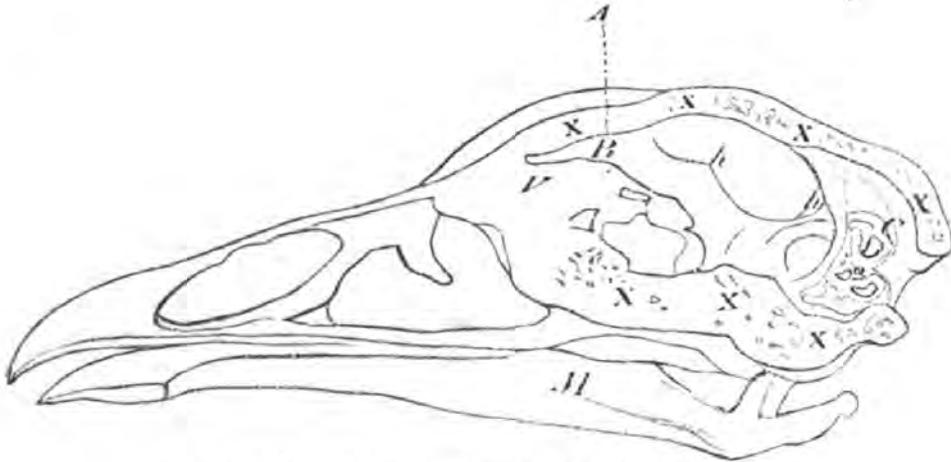


Fig. 37.—VERTICAL SECTION OF SKULL OF MALE TURKEY. OUTLINE.

The vertical section is divided into two distinct parts in certain species by the osseous plate, of which we have spoken when treating of the skull-cap or arch: one, the anterior, contains the cerebral hemispheres; the other, posterior, lodges the cerebellum. The first, as we see in the

corresponding to the principal divisions or lobes, of that part of the nervous system.

VERTICAL SECTION OF THE CRANIUM OF BIRDS.

When divided vertically, the skulls of birds (see Figs. 44, 45, 46, 47, 48) pre-

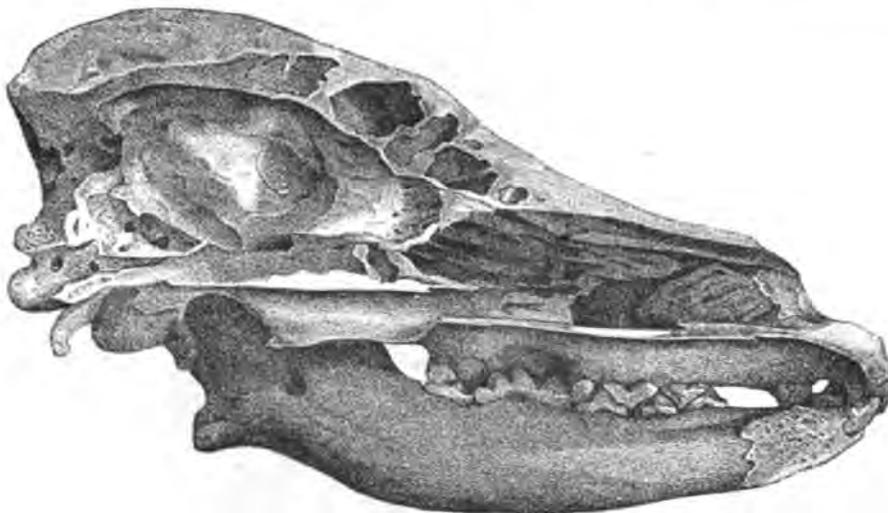


Fig. 38.—VERTICAL SECTION OF SKULL OF DOG—DISEASED.

three views of heads represented by Figs. 41, 42, 43, is more extended than the other, and shows in those three species impressions corresponding to the convolutions

sent more height behind than in the middle and forward regions. One can see at once, on looking at the vertical section of these heads, the marked differences in

brain area which they show. The goose (Fig. 46), the parrot (Fig. 44), the hooded-crow (Fig. 48), show a much larger cra-

This region, on the contrary, is of little extent in the turkey and chicken, which merit the reputation they have acquired

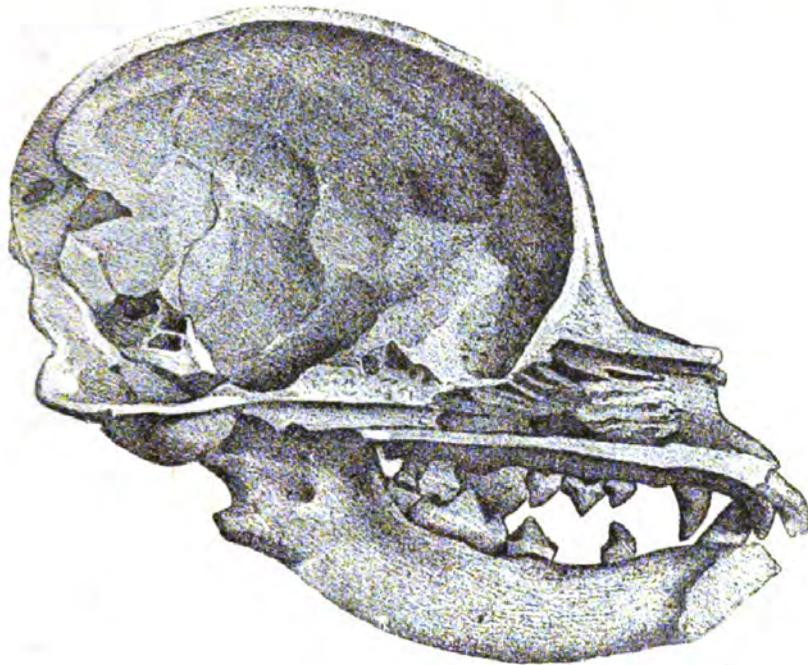


Fig. 39.—VERTICAL SECTION OF INTELLIGENT DOG'S SKULL.

nial cavity than the turkey (Fig. 37) and the chicken (Fig. 47). As to relative brain capacity, one sees that the parrot shows

as stupid birds. It is easy to see from these views, which are drawn with the greatest fidelity to nature, that the sepa-

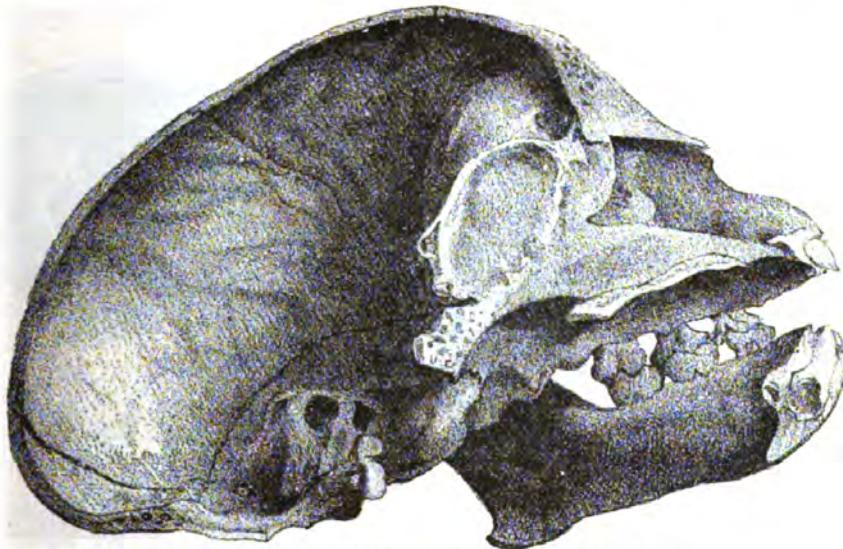


Fig. 40.—VERTICAL SECTION SAJOU APE. FEMALE.

the most development anteriorly, next comes the hooded-crow, then the goose.

ration existing between the two plates which compose the cranium in these

birds is far from being of similar extent in all. In the parrot and hooded-crow one notices the space of nearly a line between them, which is filled with cellular tissue of slight density. In the turkey

reader to examine with care the accompanying illustrations, which have been very carefully prepared, and will serve them better than the most elaborate descriptions in showing the differences

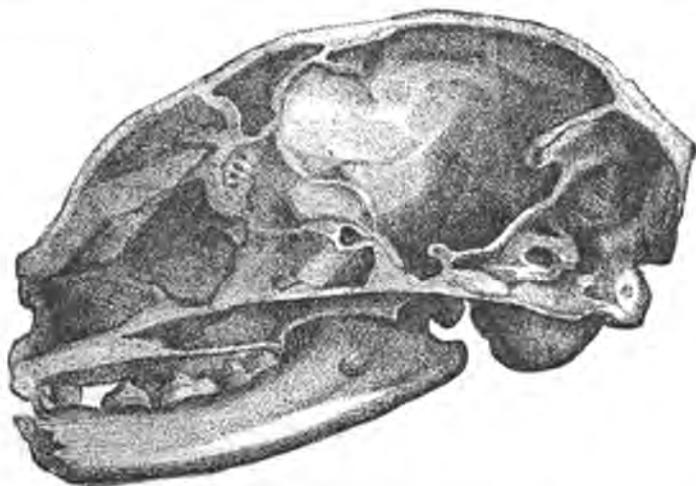


FIG. 41.—VERTICAL SECTION OF CAT'S SKULL.

and chicken the separation is more considerable, and the tissue or diploe is extremely dense. In the blue heron the cranial parts are but slightly separated. It is the same with the wild and domestic ducks. In the owl the cranial walls show interiorly a cellular tissue of considerable extent. On this account one would obtain a very false idea of the development of the brain of this creature by simply estimating it according to the external surface. This would be the case especially with respect to the forward part, where there exists a space of some three lines between the two tables of that region. With the exception of this bird's head, in all the others there exists an almost perfect parallelism between the line marked by the internal table, and that which designates the exterior surface of the skull. We can not too much urge the

which nature has marked upon her creatures.

CHAPTER II.

BONES WHICH ENTER INTO THE COMPOSITION OF THE HUMAN SKULL—QUADRUPEDS AND BIRDS COMPARED.

The preceding chapter has been devoted to a description of the skull of

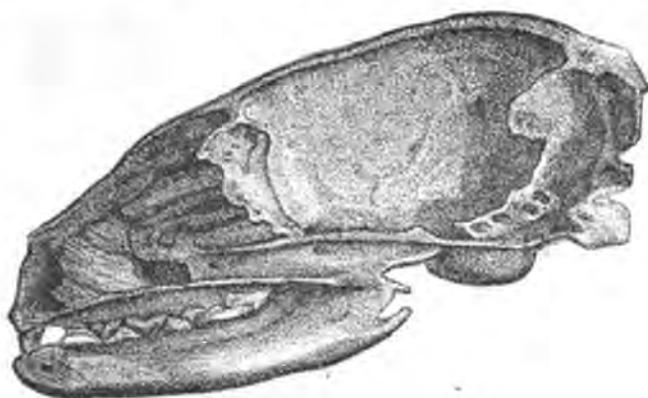


FIG. 42.—VERTICAL SECTION OF MARTEN'S SKULL.

man, of quadrupeds, and birds, considered in a general manner. We have endeavored to exhibit carefully the most remarkable points of the encephalic cavity, viewed according to the sections or di-

visions deemed most important. These divisions have been examined in man, also in quadrupeds and birds. It is to be deprecated that a subject so important in the physiology of the brain has been almost entirely neglected by others who

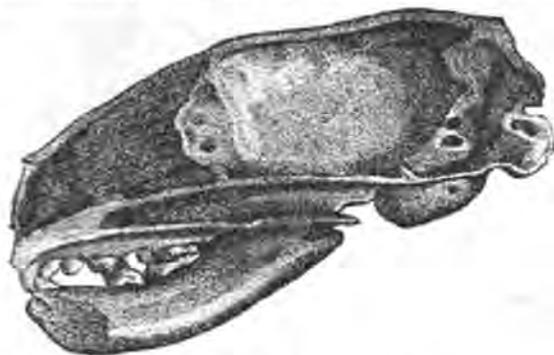


Fig. 43.—VERTICAL SECTION OF POLE-CAT'S SKULL.

have treated on Phrenology. Even Dr. Gall makes merely some incidental remarks in this respect. We take as the basis of our descriptions only nature herself, so that our positions shall be incontestable. Our illustrations have been made with a view to the faithful representation of each object indicated, and it must be apparent to the reader that without such aids it would be next to impossible for one to have a true idea of cranial anatomy.

BONES OF THE HUMAN SKULL.

The bones which enter into the composition of the human skull are eight, most of which are distinctly represented in figure 1, and, as we have seen, are the coronal or frontal, the occipital, the ethmoid, the two parietals, the sphenoid, and the two temporals. In almost all works on anatomy the writers commence their description of the bones of the skull with the coronal. Some, however, have preferred, and we think with reason, to begin with that which serves as a medium of support to all the others, that which has the most connection with them, viz, the *sphenoid*. Adopting that order, we proceed to say of the

SPHENOID

—it is so called from two Greek words, *sphen*, meaning wedge, and the parti-

cle, *eidos*, which carries with it the idea of similitude, or resemblance. The old anatomists had likened its form to that of a bat with wings extended; and one is at first struck with this comparison, but an attentive examination shows it to lack such application. The sphenoid occupies the center of the base of the skull, forming the larger part of the middle fossa (Fig. 49). The parts which have some interest to the phrenologist are those which relate to the cerebral surface of the brain. All this surface, as will be seen, is irregular, and covered by the dura-mater. Exactly in the middle we notice a fossa adapted to receive the pituitary body. (The uses of

this body are not precisely known. It is found in all the mammiferæ, the quadrupeds, and birds).

In front of this fossa, and extending laterally, are two apophyses (A A), called the wings of Ingrassias, at the base of which are seen two openings (C C), through which the optic nerves pass. In front of these is a smooth surface on which lie the olfactory nerves.

The lateral parts of the cerebral face



Fig. 44.—VERTICAL SECTION OF PARROT'S SKULL.

of the sphenoid are important. A large fissure and three openings are observed in the lateral fossas. The fissures (10 10) result from the separation between the large and small wings. The openings placed upon the same line are the

large circle or foramen Vesalii (7 7). Finally, a small opening, the spinosum (12 12), through which the artery passes designed for the passage of the supe-



Fig. 45.—VERTICAL SECTION OF TURREY'S SKULL.

rior maxillary nerve, or second branch of the trifacial; through the oval opening which is distributed in the dura-mater* and forms on the internal surface of the

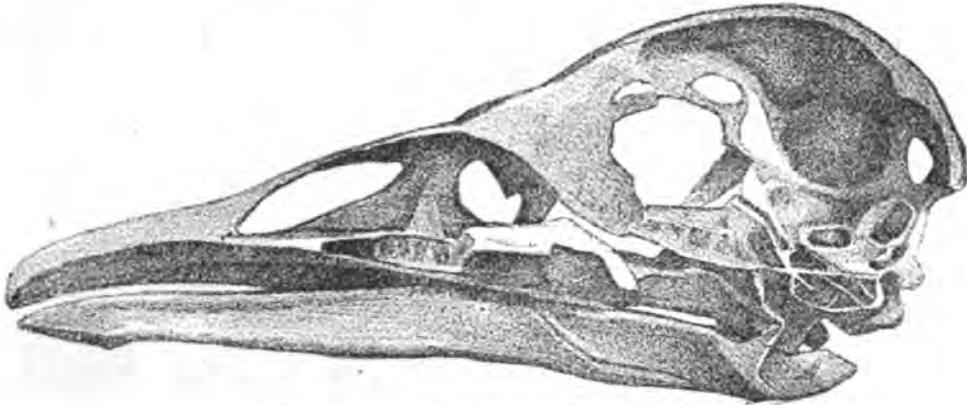


Fig. 46.—VERTICAL SECTION OF GOOSE'S SKULL.

(11 11) the inferior maxillary nerve or the third branch of the trifacial passes. skull, the branches indicated on Figure 4 (skull-cap).



Fig. 47.—VERTICAL SECTION OF SKULL OF CHICKEN (MALE).

We will divide the cerebral surface of the great wings into three parts. First, an antero-interior, 2, corresponding to the orbit and forming the external part, which

tion. The third region is that marked 3. It is impossible to estimate its development exteriorly, when the brain is surrounded by its soft parts. Its external

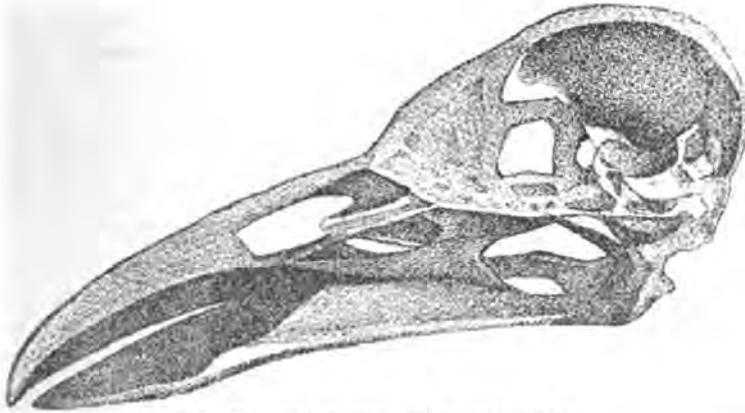


Fig. 48.—VERTICAL SECTION OF SKULL OF CROW.

is deepest. Second, a superior, 1, which corresponds on the outside to the inferior temporal region, and is covered by the spreading fibers of the temporal muscle. We shall see further on that the thickness of the fibers of this muscle may become an

surface corresponds to the zygomatic fossa.

The guttural fossa of the sphenoid (Fig. 50, which represents the lower side), offers but little interest to the phrenologist. It is extremely irregular, and pre-



Fig. 49.—SPHENOID IN OUTLINE. BRAIN SIDE.

obstacle to grasping precisely in the living subject the development of the cerebral organs occupying this region. We, however, shall indicate some signs which may serve for their approximate estima-

sents at the center a crest (8 8), which articulates with the bones known as the vomer. Outside of this crest are seen on each side two grooves for the articulation of these two bones. Farther out is an

osseous appendage known under the name, pterygoid. All this surface is very irregular and covered by the pituitary membrane. It affords attachment for

rate works on anatomy. The sphenoid articulates with the frontal bone by its large and small wings; with the vomer by the middle part of its inferior face;

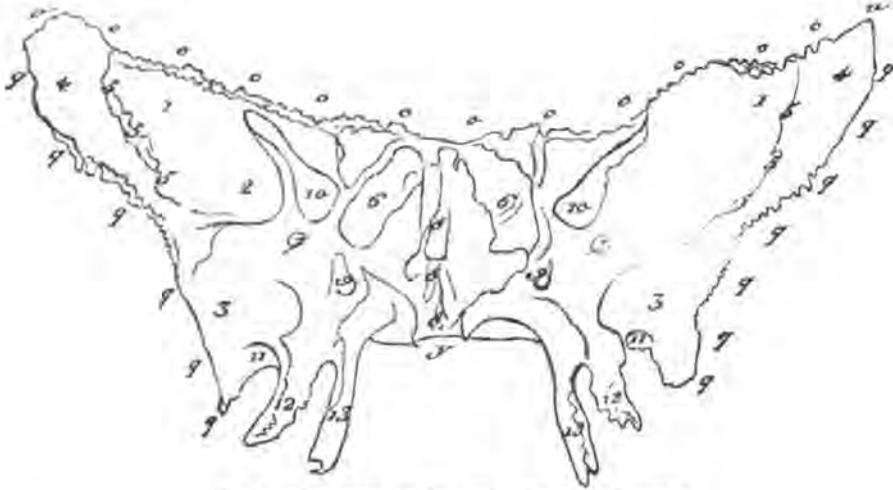


Fig. 50.—SPHENOID IN OUTLINE. INFERIOR SURFACE.

several muscles belonging to the velum of the palate.

We pass by many small details of no importance to the physiologist, and which can only find place in the elabo-

with the temporals by the lateral parts of its great wings; with the occipital, the ethmoid, palate-bone, and the cheek bones, and, finally, with the parietal.

TEMPERANCE IN HISTORY.

THE history of the human race opens with a temperance lesson. When man was placed in the Garden of Eden, and his food assigned him, he was warned against indulging his appetite with other things. If the account of the forbidden fruit and the transgression of the command is anything more than an allegory, it is plain that this forbidden fruit was something eatable, and the main lesson to be drawn from the whole account, is that the greatest temptations of the human race were to come through the indulgence of the appetites. The history of the race and its condition at the present day fully justify this conclusion. During the ages when the nations seem to us to have made little or no progress, the efforts of the people very generally seem to have been mostly expended in getting something to eat and to drink, and

then in feasting and carousing until that was all gone. There is no doubt besides, that the savage and selfish condition that this self-indulgence breeds often brings on wars and various other evils, especially among barbarous people. At the present time we have only to scan closely the ills of life to find the cause of by far the greater part due to indulgence in the use of alcoholic liquors alone. There is abundant testimony from doctors and ministers and magistrates and benevolent associations, to show that from three-fourths to nine-tenths of all the disease and crime and sorrow and poverty in our land are due to this one cause. Do we not still need the lesson that was so impressively given to our first parents in the Garden of Eden?

How early this self-indulgence secured for itself the poisons known as intoxi-

cants we can not tell. Neither do we consider it at all wonderful that people dwelling in different parts of the world should find out, as they have, that sweet liquids, when they stand and ferment, produce an intoxicating drink. It is an almost unavoidable result in warm countries where fruit juices were used as drinks. Neither is it strange that people using these drinks should not find out at once the injuries they were receiving. We, in this practical age, and having the matter prominently before us all our lives, are finding out new things of very serious importance in this line every day. It is, indeed, hardly to be supposed that they cared to know. They liked the stuff and its immediate effects; they wanted "a good time," and they were determined to have it, let the moralists (ever in the minority) say what they pleased—and we might almost say regardless of consequences, for this must have been really the case in drinking-bouts like those in Alexander's camp, and these were neither few nor far between. Add to all the rest the fact that alcohol is a deceiver, and you have the human race pretty well entangled in the meshes of their own appetites and desires.

Does it look like a hard case? Well, they doubtless had a chance for showing their choice between good and evil, and in the end probably that will be found true of all of us. We find, in the midst of all this ignorance and barbarism and selfish indulgence, that some preferred purity and a godly life, and for this end were willing to sacrifice the indulgence of their appetites. The leading characteristic of the first religious "order" on record was abstinence from all that could intoxicate. The whole-heartedness with which they did this is affecting. They evidently did not understand the origin of the intoxicating principle, and probably in the then conditions of science they could not understand it, but they knew that somewhere and somehow it came into the wine and strong drink, and they cut it all off; and in order to be surely on the safe side, they cut off even

the luscious grapes, and everything belonging to the vine. But this, be it noticed, was strictly a religious order, having in view principally the benefit of the members, not an association for the purpose of pushing and propagating an idea. It had not the aggressive element of our modern temperance societies. Still it had its adherents and members and its professors for a longer or shorter period, among whom were Samuel and Samson and John the Baptist, and probably even some of the disciples. Jeremiah gives an exquisite description of the effects of total abstinence upon these total abstainers, showing a discernment in which some of us moderns are lamentably lacking: "Her Nazarites were purer than snow; they were whiter than milk; they were more ruddy in body than rubies; their polishing was of sapphire." I wish the young men of this generation would train their eyes to discern the limnings of princely beauty that gradually show their outlines in families where the blood of successive generations is beginning to get rid of the taint of alcoholic poison.

We find Amos complaining that the Nazarites were tempted and led away; "Ye gave the Nazarites wine to drink," he says. All this goes to prove that the order was continued for many centuries; but we are also led to infer that it was only by individual and isolated acts. There appears to be no co-ordination of effort, or even association among them.

The Rechabites took one step in advance in this respect. They were all one family, and remained one tribe, and they sustained each other in the peculiarity of total abstinence. The illustration of their faithfulness is set forth in the thirty-fifth chapter of Jeremiah, and it winds up with the promise of God, through His servant, that "Jonadab, the son of Rechab, shall not want a man to stand before me forever." It is a startling fact, in striking contrast with the decay and disappearance of many other nations and tribes, that the Rechabites are still flourishing in Mesopotamia, 60,000 strong, and that they still retain and glory in this peculiarity of

total abstinence, "fine, healthy-looking men, of great simplicity, of kind manners, and very intelligent."

Much more is said about the sin of intemperance in the Prophets than in the Gospels, and it seems not unjust to infer that the warnings and instructions of the prophets may have had the effect of inducing a greater degree of temperance. This appears the more likely when we find in those Epistles addressed to the Gentiles an increasing number of references to this sin. Peter speaks very plainly: "For the time past your life may suffice us to have wrought the will of the Gentiles when we walked in lasciviousness, lusts, excess of wine, revelings, banquetings, and abominable idolatries."

We believe that the Jews to this day are not much given to drink. "The pagan Arabs abstained from wine long before the birth of Mohammed." "They, like certain of the Jews and early Christians, abstained totally from wine from a feeling of its injurious effects upon morals and upon health." Genuine temperance reasons, certainly. The Egyptian priesthood were total abstainers for centuries, "because wine was injurious to the nerves, oppressive to the head, an impediment to invention, and an incentive to lust."—*Schlegel*.

Homer makes his hero say :

"Far hence be Bacchus' gifts, Hector rejoined,
Inflaming wine, pernicious to mankind—
Unnerves the limbs, and dulls the noble mind !"

One of the laws of Solon was that an Archon, who was the chief-magistrate, if seen drunk in public, was punished with death. One of the Carthaginian laws was that no drink save water should be used in camp, and that every judge or magistrate should abstain from wine during the year of his magistracy. The severe Roman laws that forbade wine to women and young men under penalty of death are often quoted, but it is not so generally understood that "the ancient Romans so much hated drunkards that their censors turned them out of the senate and branded them with legal infamy, as unworthy to bear public honors and offices. They

thought it scandalous that men of drunken morals and (thereby) broken constitutions, and such as were noted for lewdness, should be admitted to any trust in the Government." There may be reasons why historians of the same sex should not like to repeat examples of such sterling virtue as would make the ears of many of *our* public statesmen (!) tingle in these later centuries.

Perhaps we have quoted enough to show that there is some temperance in history. We have a great deal more of the same sort we would quote but for the fear of making this article too long. We will, however, refer the earnest student to "Reid's Temperance Cyclopaedia,"* where he can find accounts of the temperance measures of other nations, of moderation societies in the sixteenth and seventeenth centuries, and much else in the same line.

But if he still wonders why we have no more records of temperance in history, let him reflect how little the historians of the *present* day put temperance into history. We have, at the present time, several histories of various kinds, covering the period during which we have made some very remarkable temperance history in these United States; but how many of them do any justice to the subject? How many of them mention it at all? I have a young friend who is studying modern history with such helps as can be brought to bear in this metropolis of America, and I solicited his aid in getting light upon the subject. After some time he reported that he was not able to get one ray, excepting by *reflection*. He heard a lecturer say that in the early settlement of the American colonies, there was a prohibitory law passed in a Southern colony, which fact was introduced for the purpose of saying that the Maine law was not the first of the kind after all! There was fair reason to suppose that this would be the extent of the information they would get upon temperance history from that lecturer.

THE TEMPERANCE CYCLOPEDIA, compiled by Rev. Wm. Reid. 8vo, 731 pages, price \$2.50.

The same is the case with regard to intemperance in history. What historians have taken pains to collect and use statements with regard to the immense amount of liquor drank in this country for the last fifty years or more? Although the financial results brought about by it are of the most serious importance, what history will tell us that while the troops of General Washington were lying in a distressed and starving condition, official orders were issued and executed for rum by the barrel, as an indispensable part of their supplies? And yet the orders themselves are still in existence.

I suppose that in the minds of the great majority of writers and literary men, the temperance movement appears as a sort of fanaticism—a very good thing, perhaps, in its way, but merely a question of morals, with which they have very little concern, over which some good, but enthusiastic, people are wasting their time. I was brought into contact with one of these *litterateurs* recently, when ordering the *Medical Temperance Journal*; and with a peculiar, but satisfied smile, he said: "Do you suppose you will ever make a success of temperance?" implying by his tone that he thought it about as feasible as digging through the world to China.

All this is sufficiently discouraging, but there is one fact of great importance which, if it can be proclaimed, will greatly help the solution of this problem. Alcohol is a deceiver; it is much worse than it seems. People do not love it for what it is, but for what they imagine it to be. This fiery serpent, this venom of the still has been saying in the ears of every one of its victims, just what its prototype said to Eve in the Garden: "Ye shall not surely die." Probably very few of all the myriads that have died from its effects, suspected when they took the first glass where it would end. And this is due to the very nature of the stuff itself. Our ordinary supposition with regard to everything eatable and drinkable is that we can judge its effects upon us by experiment. We will take a little and try for ourselves. "We can tell by our feelings." Now we

feel with our nerves, and almost the first thing done by the alcohol even in wines and beer and cider is to poison the nerves so that they do not feel correctly. And this is the way in which this is done. The nerves (like the brain) contain a large proportion of albumen, with much water, and, of course, they are in a moist or semi-fluid state, which is their natural condition and which is essential to their correct working. The alcohol, carried through the circulation by the blood, comes in contact with these delicate nerves, and absorbing a share of the moisture, hardens them, somewhat as it hardens the albumen in the white of an egg. The nerve is then slightly paralyzed, somewhat as it would be by a slight burn. The nice adjustment necessary to its working balance is destroyed. It can not report the condition of things correctly. This is one of the very first effects, but the partaker does not know it. On the contrary, he feels an ease and lightness; because his nerves do not report *anything* correctly, and if they did, the brain can not take correct note of it, for it is affected in a similar manner. If there was pain previously, that, too, is gone, and the subject is, for a brief space, in a pleasant, half-dreamy condition, in which nothing seems to him quite real, and it is because all his nerves are poisoned. Now let a sane man stand and look upon this man who has poisoned his nerves, and which of the two is the better able to judge of the condition of the latter? The non-drinker, of course; but the drinker refuses to believe that. The drink did him good, he knows it did; he can tell by his feelings. He does not even know that his feelings have been poisoned and deceived.

But what has this to do with our topic? Just this. The world is coming around to accept the observations and teachings of the sane man, and not of the insane. Poets may drink and bawl, and *litterateurs* may drink and scrawl, and all sorts of men may drink as much as they please, and say what they please about it afterward, the world is fast coming to the place where it will decide that these

drinking men are no more in a condition to judge of the drink and its effects upon themselves or upon the world, than so many lunatics. The fact that men thus deceived about the real effects of the drink have been writing history and poetry and philosophy, accounts for a great proportion of the historic leanings toward the drink, and the sober part of the world has not been sufficiently aware of the scientific facts of the case to expose its fallacies. Indeed, all the world has been under this delusion, and the true

awakening from it is known as the temperance movement of these latter days. It is true, we believe, that the world has never before seen a systematic movement, combined with sturdy religious determination to push the matter through at all hazards, that characterizes the Christian enterprises of the present day. These, we believe, are the main underlying elements of the temperance reformation, which will yet win for it a triumphant place in history. JULIA COLMAN.

REV. JOSEPH COOK ON THE STUDY OF HEADS.

IN one of his late Monday Lectures, Mr. Cook thus alludes to the importance of observing the head and face:

"It is singular how much instruction Carlyle gives us when he says that, until a man has studied the portrait of an author, he knows little of his system of thought. I have before me portraits of several of the renowned German professors—Kiepert, Lepsius, Curtius, Trendelenberg, Dorner, Schleiermacher, Kant—all possessed apparently of a full intellectual equipment. They are men of marvelous breadth of brain. There are five radii which ought to be studied in every man's cranial development, whether you believe in mental physiology or not. From the central point of the ear draw seven radii: one to the chin, one to the tip of the nose, one to the center of the lower forehead, one to the upper forehead, another to the top of the head, another to the back of the head, and another downward to the shoulder. I undertake to say that when you find a man with these seven radii all long, and fairly well balanced in comparative length, you will not often hear from him eccentric opinions. These seven radii are all of good length in Socrates, Plato, Æschylus, Cicero, Virgil, Seneca, Bismarck, Gladstone, Washington, Franklin, Edwards, Webster. Only wholeness and size, or quantity, quality, and *balance* of being, give what Bacon calls the large *round-about* sense, which in erratics, however

brilliant, is always more or less conspicuous by its absence. There are other radii, not shown in the profile view, which are of characteristically great length in the broad German brain. I turn the page and show you Schopenhauer. A withered, narrow, eccentric man I should judge him to be, were I to meet him on the street; a small brain, an angular cranial organization, a face apparently that of a soured student, with considerable literary capacity, any amount of audacity, a long chin and sharp nose, a good lower forehead, but shallow upper forehead, and very unbalanced radii in the profile view."

EVENING SONG.

(FROM THE GERMAN OF FALLERSLEBEN).

SOFTLY night comes again
Over wood and field,
Murmurs Peace gently down,
And the world is stilled.

Only the brook flows on
Springing from the ledge,
Rustling as it goes on
Through the wavy sedge.

Twilight shades never bring
Rest's tranquillity;
Never bells sweetly ring
For its lullaby.

So all the anxious day
Puleth thou, my heart;
Love Divine only may
Evening rest impart.

H. S. D.

THROUGH THE WOODS!

THROUGH the woods I have roamed, through the
dark-tangled brush,
From the waking of morn until eve's gentle
hush ;
But the night cometh on, when my wandering's
done,
I no longer shall roam through the dark woods
alone.

O thou self of myself!—thou created for me!
From Eternity launched into Time's darksome
sea !

Where, O where art thou now, that thou art not
revealed ?

Wilt thou never stand forth with thy features
unveiled ?

O thou heart of my heart! O thou soul of my
soul!

Still for thee I have sought, as the storms fiercely
rolled ;

For these woods are no place, Love, to wander
alone,
Where the fairest of paths are with foul weeds
o'ergrown !

Through these dim, dusky woods, O the pathway
is long !

And I shudder to think that I yet may be wrong !
By some false light misled—I have erred in my
way,

And have cried in despair for the clear light of
day.

O thou mate of my soul! though we never may
meet

Where the offerings of life are so frail and so
fleet ;

I have sought thee through life with an unflinch-
ing faith ;

Now, for thee will I seek through the portals of
Death !

GRACE H. HORB.

BACKS, FACES, AND SIDE-VIEWS.

THERE is something in backs as well
as faces, by which rogues may be
known. It is something hard to analyze
and put in words, but it is a fact. Many
a rogue has that control of his counte-
nance which makes it unreadable, when
he knows you are looking at him; but
let him turn, and over his back you get
the true view of what he is, and he will
never dream that you are getting it. You
get it contrary to any wish or thought
on your own part, and before you know
it. You are in the mists of wonderment,
and you can not tell why; but something
has crossed your good opinion or hitched
a dead-weight to it. He faces you again,
and you look him over and over as if a
personified enigma, but you make out
nothing but perfection every way; but
the next back view puts you again in a
quandary, and you wonder which impres-
sion is the right one. His eyes may
beam with a feigned sympathy, and his
voice soften in hypocrisy, and his whole
front view win and convince you to his
wishes; but you come to a stand-still,
and wonder at yourself and him, and
everybody, the moment you get the
back-view, and you can not tell why.

He may be an actor of the most consum-
mate art, but he can not throw the glam-
our of deceit over a failing of which he
does not know. You may look him
over at your pleasure, and finally accept
the front view with its falsehoods; but
some one before he dies will feel, and
many heretofore, perhaps may have felt,
the cruelty of his dishonesty, if not sure
of the individual as an actor. Generally
enough revelations open, and indisput-
ably come to us in every-day life to con-
vince us.

Did he know exactly how he appears
with his back to us, he could possibly do
something to counterfeit a further as-
sumption of honor, but he does not. He
can not look at himself and his carriage
from the rear. No one can do this;
but outspoken honesty shows itself in
all the making up of backs as well as
faces; of side-views as well as front-
views, of three-quarter views, of active
views, of passive as well as neuter views.

One may be born with the skill of an
actor, but nature is deeper than art.
One needs to be taken on every side to
be known. Especially does a rogue need
to be taken thus to be found out. Like

the trial-balance and balance-sheet of dishonest accounts, they will not come out even. One may put the figures in the wrong place and make it even, but an honest overlooking will detect the fraud. Not that honesty has not its several sides likewise; but honesty never shambles, never straggles, never prevaricates. Its wrath is the wrath of righteousness. Its hate is open and sincere. Its envy is the envy of justice. Its wrath may carry terror with it, and even an unreasoning fierceness, but there is right at the bottom of it for a foundation. Its hate may be filled with the bitterness of gall and wormwood, but it has grown from the provocation of a cause still more bitter. Its envy is the envy which would snatch from knavery its stolen glory and give it back to its rightful owners. It is straight up and down, and not all twisted and biased and zig-zagged. Back, front, and side-views will show this before a word is spoken. The quiet attitude will show it, or the character and expressiveness of gait will show it. It is in form and action both. Intuition grasps it readily, but logic needs more of skill and practice to reason it out with clearness. We feel it, and it is a part of ourselves, but not so easily divided with others. A thief is a thief to the detective from behind, before he has once looked into his face. A libertine carries the stamp of his villainy in a nameless something of expression, whether his face is seen or not. We know much of this by instinct, if we would heed it; but we must *see* everything proved, and barter away our trust for an evidence which is only the *bitterness* of knowledge after we have found it. There are whole dictionaries of character, both ancient and modern, revised, enlarged, abridged, and unabridged in the gait, according as we study it.

Experience helps the reason in the matter; but a child knows the same by instinct, if it would heed it. As the child is flattered from its consciousness of right, so are we. We mean most to do right and show most of charity, but lack

of decision is our overthrow. We trust the wrong persons against our own sense of right, because the sense is of that higher intangible nature not to be explained. We think while we know no evil of any one, we should think none; but that is never the way that *honesty* is judged. The less sinning of rogues with rogues' hearts, judge everything by their own false nature, which may not dare to do evil through fear. The honesty most vaunted is of this sort; it is honest through fear. It is honest, ordinarily, where it must be, and gets a reputation; but perjury, theft, and social villainy may underlie all this. The greatest of honesty makes no parade of itself. It always gets the enmity of this far-famed honest class. It is always belied if not misjudged, or misjudged if not belied, and usually both by it. They can afford to do this, for only under great provocation will the souls they wrong and torture cry out. They are above noticing their wrongs though they die of them.

A woman may be read quite as much from the back as a man. A handsome pair of eyes may be very deceitful. They may bewilder and enthrall only for purposes of treachery. A mouth may grow dewy with pretended feeling, and crocodile tears may flow when we least expect them. The back view lifts us out of the influence of magnetic shafts from bright eyes into a more independent atmosphere of judging. There may be too much parade of loftiness or humility; too little decision and ring; too light and sly a step, or a twist in the back, or a wriggle all over; and these are the signs of what she is, more than anything in her outward show of morality or justice. Propriety in man or woman, if aimed at for exhibition, may be overdone in the gait; if forgotten, we may read what nature has done toward it with little trouble.

There is nobility in culture or unculture alike. A polished hypocrite may do more harm than one unschooled in everything but falsity. Innocence may be entrapped by the graces of deceit more easily than by its coarseness. Padding

may fill out masks instead of form, and art may counterfeit nature with a wonder of perfectness, but it is not nature after all. It can not make the crooked straight; it can not invest itself with the life of living; it can not create a soul to put into and animate the most perfect evidences of all its genius. The art of deceit alike can not create the soul of good for its counterfeits, only a skeleton soul, to rattle as the dry bones of dead mortality, when tried upon its merits in the presence of the living, real soul. The cloven foot of deception must peep out in some way; and if faces are artful enough to deny its existence, backs will tell of its lurking presence, and gaits and side-views will reaffirm and help to con-

vince us of their statements. The serpent can not always hide in dark places; it likes to come out and sun itself. In this same way do deceit and villainy like to assert the character beneath them, and be themselves, in their own way, a part of the time. This is why backs, side-views, and gaits are sometimes off their guard when faces speak but lies, and make the best believe them.

Shall there ever come a time when people may be known for what they are, and rewarded or condemned according to their merit? Shall our instinct ever become so unmistakable that it can not be confounded with the folly of idiosyncrasies which should not rule us?

MADGE MAPLE.

LAMBETH PALACE.

THIS irregular group of buildings, on the south side of the Thames and nearly opposite the Houses of Parliament, is associated with many incidents in English history of the most interesting character. In fact, there is no other structure in London, besides the Tower, which has a more important record. It has served as the residence of the Archbishops of Canterbury for several hundred years, having come into the possession of that See as long ago as 1197. The property was then of minor importance; but in the middle of the following century great improvements were made to the palace by Boniface of Savoy. The double tower on the left in the engraving, forming a portion of the ancient gate-house, was built by Archbishop Merton in 1490, and very much improved by Bishop Chicheley a few years later. It was once used as a prison, but is now devoted to the storage of records, many of which possess the highest importance to history.

The same bishop founded the Lollards' Tower, which stands on the extreme left, and is so called because it was used as a prison for the early reformers of that name. One room still exists in which the

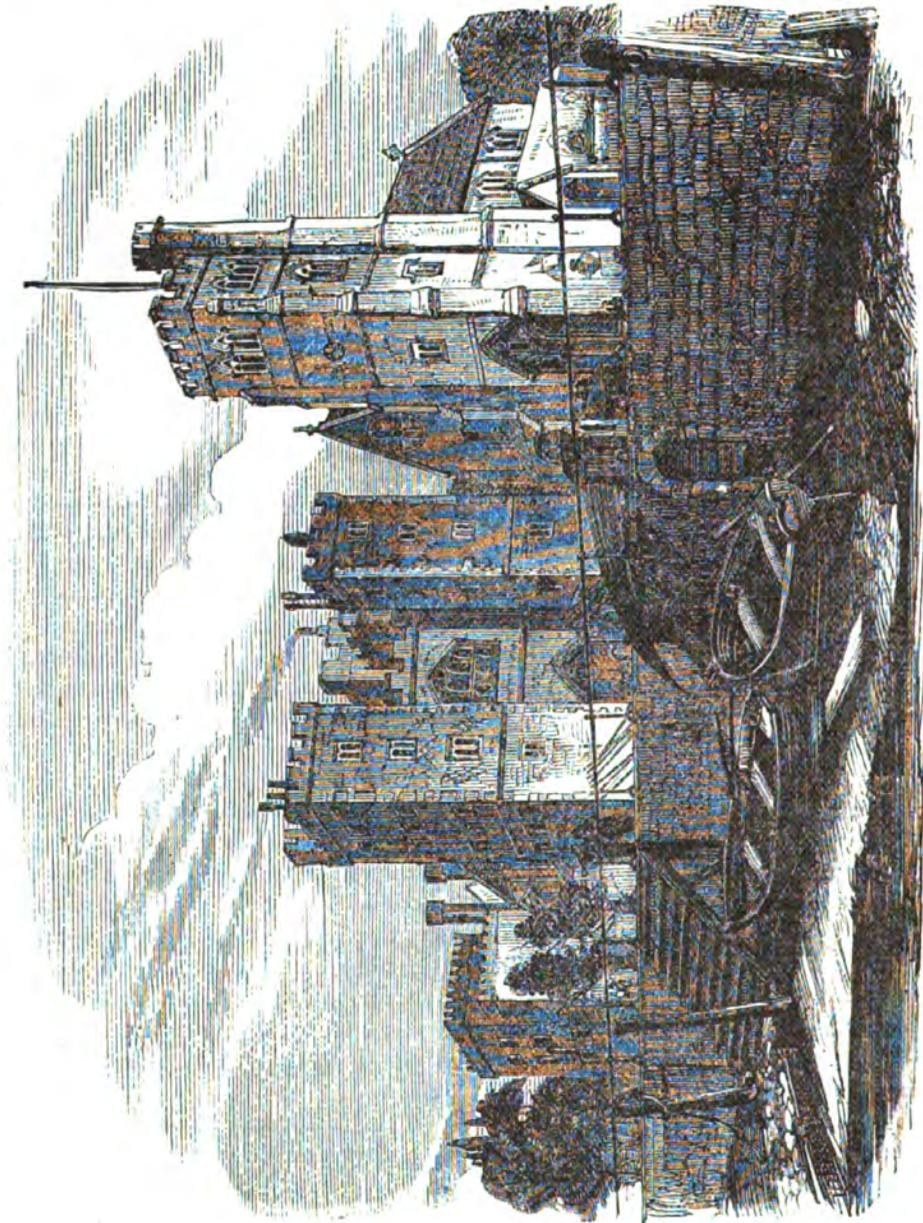
Lollards were confined; three iron rings to which they were chained are still fixed in the walls, and on the oaken wainscotings are numerous inscriptions which time has rendered undecipherable.

Ecclesiastics like Cranmer, Pole, Parker, Laud, and Juxon, whose names are very prominent in the religious and political events of England, lived at Lambeth, and contributed, more or less, to the renown of the venerable palace. During the civil wars in the time of Charles I. it suffered exceedingly from the violence of mobs; in Wat Tyler's rebellion the palace was plundered, and the archbishop beheaded; in 1642 the chapel and palace were devastated by the Parliament soldiers; and subsequently the former was made a dancing hall, and the latter a prison.

When Dr. Juxon was appointed to the See, after the Restoration, he found the buildings in a ruinous state and did much to restore them; adding the noble part now used as a library. The collection numbers upward of 25,000 volumes, and nearly 1,400 manuscripts. Many volumes bear the arms of the Archbishops to whom they once belonged. There are vast stores of parchment records relating to

the diocese; and forty folio volumes full of popes' bulls, and letters from popes, cardinals, princes, and kings. The gardens and grounds cover twelve acres, and are strictly private. Within the area of

Dr. Hawley to the Bishopric of London. He afterward became Archbishop of Canterbury, and in that capacity officiated at the coronation of three sovereigns. Below the chapel is a crypt—the



BUILDINGS OF LAMBETH PALACE, LONDON.

the buildings is the chapel (the roof of which is seen on the right); before the altar lies Archbishop Parker. In 1813 Queen Charlotte was present in this chapel and witnessed the consecration of

most ancient portion of the whole range of buildings.

Sovereigns of England have been frequent visitors here, and among others may be mentioned Henry VII., Henry

VIII., Queen Mary, Queen Elizabeth, James I., and Mary, Queen of William III. Peter the Great also visited at the palace and witnessed an ordination in the chapel. In olden times the Archbishop's barge rested on the Thames in front of the palace where now the river steam-boats land their passengers on the floating stage, and scores of little row-boats nestle under the wall where formerly

kings, queens, and archbishops used to land.

In the old banqueting-hall there is a fine specimen of wood-carving, the roof being entirely of oak, and the palace is paneled almost throughout with oaken work. The surroundings of Lambeth are not pleasant, that part of London having become the residence of the poorer classes, and thickly populated. D.

WHAT SEVEN WOMEN DID.

[THE following very interesting and suggestive letter was found in a late edition of the *Chicago Inter-Ocean*. If any excuse were needed for its introduction here, let it be our sympathy for women whose hands are so full of home duties and cares that their heads can scarcely find room for a bright out-of-door thought. We should be pleased to know more about these seven women; to have photographs, as it were, of each one's mental condition, before and after their experiment in self-improvement. The story is well told as it is, and worth pondering.—ED. P. J.]

IT was not planned, it happened. Seven women began it. The seven were housekeepers who, without servants, washed and ironed, baked and served, for families of from three to eight members. Not one of the seven had received an academic education, two had not attended school since they were twelve years old. All were over forty, two were nearly sixty years of age.

One of the seven was convalescent from a severe attack of inflammatory rheumatism, and on Thanksgiving Day, the other six made her a little surprise party, not a real party, but they came in together, intending to stay an hour. The talk turned, as it usually does at such times, on the tribulations of life, the winter, and the short days when the household machinery creaks a little more than it does in the long bright days of summer.

At last one of the seven proposed they meet at each other's house once in two weeks. "We'll have a little visit," she

said; "we'll fetch our knitting or mending, and we will never stay to tea. It will make the winter seem shorter."

"I sew enough at home; suppose we read some book together?" proposed another.

The sick woman who, once in her life, had seen a representation of Hamlet, suggested they read Shakespeare.

They laughed at themselves. They all said, "We can not do it;" but after talking and considering they determined to try. They were so afraid of failure they kept the matter a profound secret. Some of them did not own Shakespeare's plays. Before they bought anything they had always to say to themselves, "Can I not do without this?" So, to buy a book costing \$3 meant self-denial. One went without a winter bonnet. Another made a very shabby cloak do, and purchased a copy of Shakespeare.

For the sake of order they elected a president, and at each meeting a critic was appointed to watch for mispronounced words. One of the seven owned a pronouncing handbook, and the critic was armed with it at every meeting.

They began with the play of "Julius Cæsar." Each one studied "her lesson," as the sweet old President called the reading. Each one tried to learn all she could about the history of the time the play portrayed, and at the meeting, after each one of the seven had asked six questions, if any one had failed to tell all she had learned in her answers, she volunteered the information.

It was wonderful the joy the seven got out of their meetings. They grew so interested they did not care when an observant neighbor found out all their little secret; and when one or two women asked to be admitted, the seven said "Yes," very cordially.

From reading Shakespeare's plays, they wished to know something of Shakespeare himself; of the period in which he wrote, and of his contemporaries; so, in connection with the readings, they studied up these side interests. Where did they find the books? Let one live up to the full measure of his opportunities, and his opportunities will grow. A student who had read English literature with the Boston society for study at home, was told very confidentially of the seven and their doings. How glad she was to give advice, and lend her books, only a woman who loves to help women can know.

That club yet exists; it is now eighteen months old. One of the original seven has left the town, but she goes on as well as she can alone with her lesson, and once a month writes a report to the society.

One of the original seven I know well, and love tenderly. Her lot has been very hard, her cares many, her joys few. Her hair is very white, and she is fifty-two. "I really don't know what would have become of me, if the society had not happened when it did," she said to me, with tears in her eyes. "When I was fretted by our money troubles, and tired with my work, I would sit down in my big chair and read our next lesson, and try to think what it meant, and somehow the load would melt away. If I did not

read more than ten minutes I felt refreshed."

She read me an essay she had written on Shakespeare and his times. Her reading had been done in snatches of time found among many household duties. Of her essay she said, apologetically "I have so little time, I had to think it all out plain in my mind, and then form it sentence by sentence and jot it down when I could." But the essay was excellent, the facts were well told, and, in style, it was remarkably clear and simple. Her native grace of expression had been at school a year to Shakespeare, and with rich results.

Mary Putnam Jacobi says that women are much more dependent than men on the interest they feel in their work; they can not so well bear the strain of working at something they do not like. Household labor is hard and uninteresting, much of it downright toil and drudgery, but it falls to women. Not more than two in ten who are mothers of families can hope to shift this burden from their backs till they fall into the grave. But a little of the self-denial they practice so willingly for husband and children; a little wise self-consideration and self-appreciation; above all, a resolute determination to prefer always the higher to the lower good, will give them the time to get a glimpse of the world of literature and art, of thought and beauty. Given these conditions, there is scarcely a neighborhood in which the housewives can not secure for themselves the delight and refreshment found by the seven women whom I have described.

ELIZABETH CUMINGS.

ABOUT BOYS.

"I WONDER if she knows about boys?" I heard one of my little sons say to the other a few days since, after I had informed them of an expected visit from a lady friend.

"No; she'll think boys are no account. Most women do, only mamma," was the reply.

"Only mamma! Why, boys are the light of the world!" I exclaim, as the two pairs of sturdy little arms close around me, and essay to bear me bodily where they will.

The query, Do we fully appreciate and understand boys? occurs to me. There is, perhaps, an angelic sweetness in little

girls that renders them more lovable, at any rate nine out of every ten boys imagine this is the case.

Boys, though frequently the embodiment of activity and willfulness, are generous, affectionate, proud, and sensitive. Especially do they feel an impatience with their own boyhood, and long for the dawn of manhood and recognition. I never saw a boy yet that was thoroughly content and satisfied with the even ripples of childhood; who was never looking beyond them into the further depth where he imagined he could stir the waves at will, that made much of a man. Perhaps as I am not an antique fossil, you may wonder how I know anything of boys—simply because I have always been associated with them. Being the eldest of a family, my brother next me was a boy. The families of my two aunts, the only relations with whom we were closely thrown, consisted solely of boys; the one numbering nine, and the other five. When I married it was to a loving bunch of nobility who had just escaped boyhood, and our children came, of course, to be boys. I have often wished myself a boy, because it is rather uncomfortable to be an oddling, and because, in early life, I conceived an idea, which has never altogether left me, that man had a broader and more untrammelled sphere of usefulness than woman.

Boys require constant employment, scarcely constant labor, but continual occupation. Gymnastics and athletic sports induce muscular development; collecting birds' eggs, fishing, frogging, and trapping are engaging pastime, though the amusement is rather one-sided. Quiet fireside games for evenings are pleasant, but these diversions, unless varied and attended by well-directed labor and learning, fail to produce the results we need. There must be duties, incentives, training. It is for the parent to provide these.

There is no wealth we can leave a child at all to be compared with a well-set moral character. Attain it, if possible, by a thorough mental and physical de-

velopment, but remember first and continually, the morality.

We frequently make our manifold business engagements an apology for the neglect of the moral and spiritual culture of our offspring. It is not enough that we clothe, feed, and send them to school. In each little body there is a soul and a budding intellect. The body is but the house. It is of primary importance that the house be kept in order, but our chief care should ever be the inmate.

Boys meet more temptations than girls. They are shielded less tenderly from the rough edges of humanity, and need continually the protective armor of affection. The school hours are not always tranquillizing and improving; the amusements are not always elevating; even the healthful labor with which we supply them does not always tend to their highest good. They need a depth of social intercourse with expanding minds, an assurance in their ability to become pure and noble men.

There is mutual joy and benefit in the familiarity of parents and children. We can frequently descend with pleasure to a boyish level. I have seen mothers sledging, skating, racing, playing, and curiosity-hunting with their little boys, and I believe they were quite as intelligent and womanly as others who devoted their leisure to fine needlework, art, and novels. I know the boys were better off than those who are turned out early to gather company and grow manly for themselves.

Good principles and habits should be grafted on the young twig. Leave no room with your boy for the success of vice, of deceit, of rum, of tobacco, and profanity. If you wrap the graft with prayers, and light it with example, ten to one it will grow to the gladfulness of pure and noble manhood. In order that we may have grand and useful men we must be ever awake to the interests of our boys; giving them affection, sympathy, incentives to labor, leisure, and education with a wise and liberal hand. To us they are a varied and wondrous study, the illumination and music of daily life, the uprising images of a living God.

MRS. S. L. O.

THE YOUNG FOLKS OF CHERRY AVENUE.

CHAPTER III.

AT SCHOOL.

IT was about half-past eight the following morning when Edith, who was conning her lesson in the "First Book of History" by the sitting-room window, cried out: "There's Lizzie Payton going to school; I must get ready. Paulie, won't you run out and ask her to wait a moment for me?"

"Yessy," answered the little girl, dropping a small dust-pan and baby brush with which she was hard at work collecting the few bits of litter lying on the floor. Out she ran, and called to Lizzie, who stopped and asked:

"What is it, Paulie?"

"Edie wants you to please wait for her a minute."

"I will, Paulie; but tell her not to make the minute too many."

"Yes," and back the obliging little one ran to her work.

Edith meanwhile had rushed up-stairs to get ready. Evidently she had forgotten her hasty threat of the day before, for when she came down with her "seaside" in one hand and her satchel in the other, she addressed Lizzie in her off-hand way as if nothing had happened between them.

"Aren't you early, Lizzie?"

"Not very; it was nearly half-past eight by our clock when I left home."

"Got all your lessons?"

"All but one example."

"I've got all mine. Two were awful hard ones."

"Edie, Edie!" shouted Tal from the front door, "come right in, mamma wants you."

"There, I suppose I must go back, because I forgot to go to mamma before I came out. She always wants to see me before I go."

"Well, I'll walk on slowly, so you can catch up," said Lizzie.

"What *do* you want, mamma?" asked Edith, bustling into the kitchen where

Mrs. Manley was preparing the work of the day.

"Sit down there, my child, and be a little quiet," replied the lady.

"Oh, Lizzie is waiting for me, and it's late too."

"Not so late that Edith can not respect her mamma's wishes."

"Well, I know I forgot to come in and tell you that I was ready for school, because Lizzie was out there."

"You may go and tell Lizzie that she need not wait."

"Oh, she said she'd go on slowly till I caught up to her. I don't see why you must make me come in when I'm all ready."

"Will my little daughter be kind enough to go to the sitting-room and look in the glass, and see if she is quite ready?"

Edith's hands instinctively flew to her neck.

"There, I'm sure I didn't mean to forget my collar. It's a great nuisance anyway; it takes so long to put it on."

"And my girl's hands, too, are not as tidy as they should be. Did she forget to wash them?"

Edith looked at them and reddened with a sense of shame; for although inclined to neglect her face, she bestowed some care upon her hands, which were very well shaped.

"Now, run up and wash your hands quickly, and bring down your collar and I will pin it for you," continued Mrs. Manley.

Edith flew up-stairs, and three minutes after re-appeared in the kitchen with the collar.

"Now, my dear child," said her mother gently as she put on that article, "you see the result of haste. I'm sure you wish to look as neatly as other girls, and you can scarcely tell yourself how you look."

"I like to look nicely as well as other girls," half grumbled Edith; "but it takes so much time to comb and wash and dress. And then I haven't as nice clothes as most of them; so I can't look as well anyway."

"You certainly have as good clothing as most of those who attend Miss Clem's, Edith; but even if you did not, you would have no excuse for being careless and disorderly. Now, dear, it is time you were on the way. Good-bye."

With a kiss, Edith was released, and dashed out of the house, but on reaching the street Lizzie was not to be seen.

The distance was not great to the modest building in which the two Misses Clem conducted their school; but when Edith arrived at the door she found that the roll was just being called, and she barely had time to take her seat before her name was called.

The whole of the second floor of the house occupied by the Clem family was devoted to the school. This floor was divided by large sliding doors into two rooms, about eighteen feet square each. In one room the boys were arranged, in the other the girls, as the Misses Clem were not yet convinced of the utility of mixing them. There were times, however, when the large doors were rolled back and the two sections made into one. At the opening of school the roll was called from a general list by the elder of the sisters, a song was sung in which all joined, and then some remarks were usually made by one or the other on a matter of interest to the pupils. The spelling and reading exercises were a common feature, in which all could take part, although the younger children were not required to stumble through the big words. Friday in every other week was composition and review-day, and then the division doors were rolled back, and while the examination questions were put to the scholars according to their grades of study, all were expected to be attentive. These review-days were much enjoyed by the children, on account of the reading of the composi-

tions of the elder ones, and because they were usually dismissed an hour or so earlier than usual.

After the roll this morning, teachers and scholars joined in singing the lively verses which begin with—

"Let us gather up the sunbeams
Lying all around our path;
Let us keep the wheat and roses,
Casting out the thorns and chaff;
Let us find our sweetest comfort
In the blessings of to-day,
With a patient hand removing
All the briars from the way."

They rolled out the measures with a hearty force, and when the hymn had been finished, Miss Julia Clem, who presided in the front room over the girls, said, smilingly:

"Most of you sing as if you not only knew the words by heart, but felt them too in your heart. Some of the boys are a little noisy in their singing; perhaps they think that the more noise they make the more music there is. But I'm half inclined to believe that they are a little mischievous in roaring so loudly. A few of the girls think, perhaps, that the best music is very low and soft, because they sing so feebly that they are not heard at all. While the boys are roaring like lions, those girls are whining like very young kittens.

"To-morrow will be—what?"

"Friday—Reviews and Compositions," replied several voices.

"Yes. I hope all who have to read compositions will be ready, and every one will be prepared to give a good account of what has been studied during the past two weeks, so that we all can get out early. Sister Grace, have you anything you wish to say?"

"Nothing specially now," replied the mistress of the back room.

"Then the sections may come to order for the business of the day," said Miss Julia, in a tone of authority, taking her seat at the head of the room, while Miss Grace quietly walked to her own desk at the head of the other room. Then, at a stroke of Miss Julia's bell, two of the larger boys sprang to the sliding-doors,

and bringing them together, the two sections were prepared for work.

Miss Grace had but eighteen in her department, yet she thought they gave her work enough, and was disposed to look with pity upon teachers in those large schools where fifty, sixty, and even more children are given to the care of one brain and one pair of hands. Well she might pity such overburdened teachers, and the less than half-cared-for children should be pitied as much.

Time wore on; lessons in arithmetic, geography, history, and language had been recited, and all were now engaged upon their writing exercise, when suddenly a rather sharp whistle resounded through the room of the boys. Miss Grace turned quickly toward that quarter whence the sound proceeded, and the offender was easily detected by the glances of the boys near him and by his own blushing face. It was Johnny Drake.

"I didn't mean to; indeed I didn't, Miss Clem."

"How was it, John, that you did it?" asked his teacher kindly.

"I was just writin' along when my pen stuck into the paper and spurted the ink, so I whistled 'fore I thought."

"You whistled because you were surprised by the accident, then?"

"Yes, ma'am."

"Well, try not to let it occur again. Keep your lips closed while you are writing, and think of what you are doing. What is it, Talbot?" she asked, in response to the raised hand of that young scion of the Manleys.

"I was thinkin', Miss Clem, of what I've heard people say, that nothing is quicker than thought. Johnny whistled before he thought. So isn't whistling quicker than thought?"

The older boys laughed, and the lady herself smiled as she detected the sly humor of the pretended inquiry. Answering him, however, she said:

"Scarcely; for whistling is the result of a kind of training which the lips have received, and that training, you know, must be thought upon before it could be

put into practice. Johnny, I suppose, is accustomed to whistle a good deal. Is he not, boys?"

"Yes," replied two or three, who were his daily playmates.

"And I should not wonder if he is in the habit of expressing his feelings often by whistling. When he's pleased, he may make a long kind of a shrill note, and when he's surprised he may make a stronger one, running a little way down the scale, as he did to-day."

The boys laughed at this, and Johnny, who had recovered his composure, said:

"Please, ma'am, that's the way I often do, but I didn't mean to do it in school."

"Well, my boy," rejoined the teacher, "I believe that you did not, and I will not mark it against your deportment; but be careful not to repeat it, as such things disturb the whole school almost as much as conduct which is intentionally wrong. I will give you a fresh pen if you will step to my desk."

Twelve o'clock rang out from the large clock in the front section, and soon afterward the doors were rolled back, and at the signals of the teachers, each in her room, the boys and girls filed into the vestibule, where hats, caps, and bonnets were kept, and as one after another secured their head-gear, they hurried out of the building. The usual hour's intermission for lunch or dinner was given; and as nearly all the scholars lived in the neighborhood, it was the custom of those who wished to go home for the noon-time meal to do so.

"Hey, Tal," shouted Alfred Williams, a boy about a year older than Tal, "Jim says you came very near being bitten by that dog yesterday. How'd you feel when you dropped kerslosh upon him? Kind o' scarey, didn't you?"

"Yes, for a moment; but I fell so quick, and the dog raced out so soon, that I didn't have much time to think about being frightened."

"Hey, girls!" called Alfred to Sophie (Lizzie and Edith were walking together a little distance in advance of the two boys), don't you think Tal ought to get

up a composition about the fight he had with Mr. Beck's dog yesterday?"

"Yes, certainly," answered Milly. "It would be very interesting, and then it might be copied in the *Sentinel*, and everybody in town would know how smart a boy we have in the avenue."

"Suppose you write about it, Milly," said Tal, "you write such nice compositions?"

"If she did," said Alfred in an undertone to his companion, "she'd just make all the fun of you she could."

anything to do, begin it early, and then you'll be likely to finish in time and do it well."

"I just *hate* writing compositions," said Milly; "and I don't know why I must be made to write them. Miss Clem seems to think more of them than almost anything else, and she knows that I dislike them so much."

"Why," said Edith, "I think it's real fun to hear them; but I don't much like to write them myself because they take up so much time."



SOPHIE AND EDITH'S LITTLE RACE.

"What of it? I don't care; I could laugh with the rest."

"What are you going to write about anyhow, Tal?" asked Sophie.

"Oh, I've written my composition. Haven't you?"

"It isn't finished quite."

"Pshaw!" exclaimed Edith, "he commenced his two weeks ago, and every day he's been at it."

"Well, I'm sure that's the way to do," rejoined Sophie. "Papa says if you have

"You and Sophie have grown brothers or sisters who can help you out," complained Milly; "my father and mother are always too busy to give me any help. Papa is out so much at night, and mamma has so much company, that I have to do it all myself."

"Don't they give you any hints at all?" asked Sophie.

"Oh, yes; they'll talk about this or that subject sometimes when I ask them, but they won't write anything out for me."

"Why, that wouldn't be fair—would it, Alf?" cried Tal. "If I get a good subject, that's all I want; and Miss Grace and everybody is ready to give a fellow a hint on that."

"You ought to see him, girls, when he goes to work," laughed Edith. "He gets the Dictionary and the Cyclopaedia and goes up into the garret by himself, and then he lies right down on the floor with his slate and pencil, and stays there ever so long sometimes."

"Well, I'm sure he writes real good compositions for a boy," said Sophie.

"Gets a hundred every time, while I get only eighty or eighty-five for mine," remarked Alfred.

"I think that it's wrong for Miss Clem to mark us when she knows some can write so much better than others naturally," protested Milly.

"Why, Milly, you know that both Miss Julia and Miss Grace are very particular about that," rejoined Tal. "I heard them talking about it myself only a little while ago, and Miss Grace said that it was only fair to mark the scholars' cording to their—'bil—ability; and they knew that some of the larger girls and boys complained because they were marked low, but it was their own fault—they didn't try hard enough."

"Well, you needn't preach so much, Tal Manley," Milly responded. "I think I know as much as you about what is right."

"I don't say you do not, Milly. Heigho! Alf, now for a scrub-race."

Away the boys dashed down the short hill, at the foot of which the Manley home stood. Tal turned short and entered the court-yard, while Alfred continued his run toward his own home.

"Let's see who'll get down to the poplar-tree first," cried Sophie, jumping forward in emulation of the boys' activity.

"I'm willing," replied Edith, taking off her bonnet.

"Girls, I would not be so unladylike," protested Milly, with a disdainful toss of her head. "I think it's really shocking

for big girls to run races like rude boys."

"I don't care," returned Edith; "it's great fun, and I'm going to do it as long as ever I can. My papa says that it is good for our health to run and exercise in the open air, and he sometimes races with Tal and me in the garden."

"Well, if you want to grow up a great rough tom-boy, you may."

"I aint at all afraid of being a tom-boy. Come, Sophie, let's start."

Milly's scolding was lost on Sophie as well as on Edith, and the next moment the two girls were dashing along at their best pace, and soon reached the tree, Sophie being a little ahead.

"Go—down—to the mill—this—afternoon—Sophie?" asked Edith, as she turned toward her father's gate.

"Guess—so. Perhaps Milly'd like to go to."

"Oh, she'd be afraid of getting flour on her dress or falling over the logs," rejoined Edith, as she tripped up the graveled walk.

Milly came primly along humming the "Carrie Waltz" she was practicing on as a music-lesson, but the two racers were in their homes and at the table before she entered her father's elegant cottage, which stood on the left of the avenue, a hundred yards or so beyond Mr. Deane's.

When the children returned to school for the afternoon session, they found a stranger in conversation with their teachers. He was a tall, neatly-dressed gentleman, slightly gray, but his active manner, fresh complexion, and smooth skin, declared him by no means old. After the bell had summoned all to order, Miss Julia Clem said:

"I take pleasure in introducing to you Dr. Welling, who has come to our town for the purpose of giving some lectures, which I am quite sure will be as interesting to young people as to old. He will tell you what he talks about."

Bowing gracefully to the teacher, Dr. Welling then said:

"Yes, young ladies and young gentlemen, I have come to your pretty town to

give some lectures on a topic which should interest everybody, whether old or young, because it has to do with the life of everybody. The topic is Mind and Brain. You know that the brain lies up here in the head, and that it is by means of the brain we see and hear and think and speak. You all know that, don't you?"

"Yes, yes," responded from all parts of the room.

"Well, I am one of those who teach that one part of the brain has to do with one part of the mind, and another part of the brain has to do with another and different part of the mind, and so on. For instance, I believe that this part of the brain (touching a temple) has to do with making things—construction—and that a man could not be a good carpenter or blacksmith if this part were not well developed. If this part of the brain (touching the middle of his forehead) be large, there is a good memory; and if this part (touching the top of his head) be not well developed a man will be disrespectful to others and not care much about going to church. Now, let me illustrate the principles of the science which explains this wonderful structure of the brain by some of your heads. Don't be frightened (for on hearing this some of the younger children had drawn back a little), I don't mean to take off your heads, but only to make, if I can, my meaning clearer. That boy with the dark hair and blue necktie, sitting near the partition, is fond of horses and dogs. See how his head in the back part runs out to a point! When out of school, I'll venture to say, if his father keep a horse or a dog at home, he can scarcely be contented away from him."

The children generally smiled.

"Am I right?" asked the gentleman.

"Quite," replied Miss Grace. "Johnny has brought a dog to school two or three times, and it was difficult for me to convince him that he should not do so."

"That little girl with the pink cheeks and golden ringlets at the third desk from the front, is a very active and sensi-

tive child; she is easily frightened, but most affectionate and obedient."

"One of the sweetest children I ever knew," remarked Miss Julia Clem.

A murmur of approval went through the school-rooms, one voice being heard distinctly to say, "That's so."

"If the boy who said 'That's so' will stand up, I'll say something about him," went on Dr. Welling.

Tal Manley rose from his desk.

"That young gentleman is a great lover of fun, and can make it. He is a good scholar too, very ambitious to get up head, and likes praise very much. He ought to learn to draw, because he would make a fine artist."

"Certainly true to the life, sir," said Tal's teacher.

"Now, the great thing about this telling of character is the fact that it is a science, something that can be studied just as you study geography, arithmetic, and spelling; and you, young as you are, can learn it and make it of great use to yourselves and your friends. This science is usually called Phrenology. Some of you may have heard your parents speak of it. Now, I am going to give three or four lectures, in which I shall describe what this science is, and how it is applied, and how it may be learned. I have engaged Brown's Hall for these lectures, and shall give one on Saturday afternoon at four o'clock, and one on Tuesday afternoon at half-past four. Here are tickets and some circulars, which will be distributed by your teachers, so that all who wish to come to the lectures can do so."

Courteously thanking the teachers for permitting him to speak, Dr. Welling laid the package of tickets and circulars upon a chair, and then, with a polite bow to all, he departed. CLARE.

THE Indian School at Carlisle, Pa., is getting along finely. The total number of pupils is 158. Commissioner Hayt, who visited the institution lately, expressed great satisfaction with the pupils, with their cleanliness, food, behavior, and general appearance.



THE CARE OF THE TEETH.

A GREAT deal of the pain and suffering which we endure is self-inflicted, or, to say the least, avoidable. Not the least of our sufferings comes from decayed teeth and the pain which they cause; in other words, from toothache. A man suffering from the toothache does not get much sympathy either. Nor does he deserve sympathy, because this is a species of suffering which can be avoided. We do not pity such a man, except so far as we may pity his ignorance; and ignorance is always pitiable, especially when it results not so much from the neglect of the individual in failing to inform himself, as from the neglect of others who should have been his instructors. In our youth we suffered a great deal from toothache. And this was because those whose duty it was to teach us the proper care of the teeth, failed in the performance of that duty. And this is a species of information which it is not expected that a child can have, unless it has been imparted to him by others older than himself. As we grew in years, however, we, in time, found out for ourself how to take care of our teeth. Putting this knowledge into practice, the result is that we have not had the toothache for thirty years; and what is more to the purpose, we do not expect to ever have it again as long as we live. We do not mean by what we have just said that in the period men-

tioned we have not lost any of our teeth, for we have; the knowledge of how best to preserve them did not come to us quite soon enough to prevent that, for caries had already advanced too far in some of them to be permanently arrested. But we mean that during the last thirty years we have not suffered from toothache. Whenever a tooth has come to that condition where it is no longer useful, we and it part company. We do not long leave such a tooth where it is liable, at any time, to become a cause of offense. Our own experience in this matter, therefore, inclines us to say that no one need suffer from toothache if he or she will but take the proper measures to avoid it.

In order to a proper understanding of the subject, we might pause a little to consider what are the causes which lead to caries of the teeth, a disease which seems, in modern times, to have become well-nigh universal; and we might inquire in this connection, Why is it that of all animated creation man alone should have decayed teeth? Look at your pet spaniel lying on the rug at your feet. Open his mouth and examine his teeth, white and shining like ivory, and perfectly clean; not a particle of tartar nor of corrosion observable anywhere, and his gums firm and hard, and of a good, healthy color. He will never have the toothache, because his teeth will never

decay as long as he is a live dog. The answer to this question, we take it, is this: Animals of the brute creation live mostly in a state of nature, eating the food appropriate to them; while man, at least civilized man, has widely departed therefrom. Savage nations, who live nearer to nature than we do, have but little need of the services of the dentist. The structure of man's teeth, as well as that of his entire organism, as we are told by the most eminent naturalists, show him to be a frugivorous and graminivorous animal; and had man always lived upon fruits and grains, with other things of a vegetable nature, the probability is that he would have been but little troubled with decaying teeth, and the suffering attendant thereupon. But we can not enter at length upon this phase of the subject here, as to do so would open up the whole question of dietetics, which would be foreign to our purpose. We can only state in this place a few general facts and principles which seem to us so obvious as to need no proof.

But it is not alone that man has erred as between a vegetable diet and one of which flesh-meat forms a part. This is one of the least of his transgressions. The bread that we eat, made from fine flour, has a bad effect. The teeth, with the exception of the enamel, are composed chiefly of lime, phosphate of lime. The phosphates, naturally found in the grain of which our bread is usually made, are almost wholly removed in the process of bolting the meal into which the grain is ground. Hence the teeth, as also the entire bony system, suffer. Then again, the hot soda biscuits that we eat, the cakes and confectionery. Not that any harm results from eating things that are sweet, for sugar itself is not injurious to the teeth, but the crunching of hard candies is apt to break the enamel. On the other hand, too great a proportion of mushes, and other soft and sloppy food in our ordinary diet, is bad. These things, requiring no mastication, do not afford the teeth a sufficient amount of their proper exercise to keep them in a healthy condi-

tion. Dr. Franklin, in his time, thought that this was one frequent cause of decayed teeth. The drinking at our meals of tea and coffee as hot as they can be borne, to be followed, perhaps, within half an hour thereafter with a glass of ice-water, is a bad thing. The alternate sudden expansion and contraction under the influence of heat and cold which results from these practices can not but be hurtful. Many of the things that we ordinarily eat and drink are hurtful to the teeth not only by their direct action upon them, but they injure them indirectly by disordering the stomach, thereby producing acidity and eructations of acrid gases. Besides that, when the general health suffers from any cause, the teeth are affected more or less in common with the other organs of the body. The same causes, when applied, will produce the same effects on the lower animals; for, when milch cows are shut up in a stable, without exercise, and fed on swill, sometimes hot from the distillery, their teeth decay just the same as a man's.

Americans, too, are said to have worse teeth than the people of any other nation. That is simply because their dietetic, and some of their other, habits are worse than those of other nations. American dentists, however, are said to be the best in the world. This simply results from the fact that here gentlemen of that profession find the widest field for the practice of their art.

But after avoiding as much as possible the evil practices here alluded to, we still exist under conditions which are more or less artificial. This seems to be a necessity of the state of civilization in which we live. To preserve our teeth, therefore, from decay, will involve the adoption of certain measures which, in the case of the lower animals which lead more natural lives, are wholly unnecessary; but which become necessary, indeed absolutely so, to us whose lives are to a degree artificial. And unless the habits of the individual are outrageously bad, his teeth can be preserved as long as life itself, and all suffering from decay

avoided, if these measures be adopted sufficiently early, and their practice persistently adhered to afterward.

In order, then, to preserve the teeth from decay, tartar must not be allowed to accumulate on them. In other words, the teeth must be kept clean, *perfectly clean*. As long as this is done they will not be likely to decay; and this is the whole secret of the matter. In order to prevent accumulation of tartar, and to keep the teeth clean, you must have a good brush, and then you must use it properly. This is a prime necessity, a *sine qua non*, without which nothing can be done. We have used a tooth-brush from an early period of our life. The result is, that though past middle age, we still have most of our teeth. We might have had them all yet, but we did not begin to use a brush quite soon enough. Our two brothers never made use of a brush. The consequence is, that though younger men than ourself, they have both lost their teeth over a score of years ago; and they had the advantage of having had originally better teeth than ours were, and better health generally. Our mother-in-law was one of a family of four girls. She had a tooth-brush and used it; the others had not. At sixty-five years of age she has her teeth, and her sisters are toothless. But why multiply illustrations? These are but two out of the many instances of like nature that have fallen under our observation. In short, the difference between a tooth-brush and no tooth-brush is, in many cases, we believe in most, just the difference between teeth and no teeth.

The first thing, then, to be done is to provide yourself with a good brush. The best tooth-brushes are of English manufacture, though made of Russia bristles, and may be bought for fifty cents each. Select one with moderately stiff bristles. Having secured a brush to your satisfaction; how often, and in what way, must it be used? Some advise the use of the brush immediately after each meal, in order to remove any particles of food that may remain around or between the

teeth. Now if we have dined satisfactorily, the impression made upon the gustatory nerves by sapid substances is a pleasant one; and this pleasant impression remains for some time afterward. But to introduce such an instrument as a tooth-brush into the mouth upon rising from the table would destroy it at once. Hence we have a repugnance toward doing anything of the kind. Besides this, it is wholly unnecessary. Any particles of food remaining between or around the teeth after a meal should be removed with a quill toothpick. Once daily is often enough to clean the teeth, if the operation be properly performed. And the best time to do it is in the morning, soon after rising, when you wash your face and make your toilet for the day. This is at once the most convenient time and the time when the cleansing of the mouth is the most needful; because the accumulation of whatever is most destructive of the teeth takes place more rapidly while we are asleep than during our waking hours. We always feel most disposed to wash out our mouth in the morning upon rising; in fact, we can not properly enjoy our breakfast until we have done so.

Many persons, in brushing their teeth—we will not say cleaning them—close the jaws and open the lips, then proceed to carry the brush back and forth, from side to side of the mouth, across the teeth. In this way only the more prominent parts of the teeth come into contact with the brush, and these scarcely need brushing; for, on account of their more exposed situation, they are usually kept clean enough by the friction of the food in mastication; while the cracks and crevices, and the least prominent parts, where accumulations are the most likely to exist, and which, therefore, need the brush the most, escape it entirely. Many, too, brush only the outside of their teeth, whereas it is the inside that has the most need of brushing. The way we do is this: Taking the brush in hand, and standing with open lips before a looking-glass, we examine all the de-

pressions between the teeth, searching out all the cracks and crannies, and the more hidden localities, both inside and out; and where any evidence of deposit is discovered, "go for it," applying the brush right to the spot. The more exposed parts of the teeth receive no particular attention except what they get incidentally—these being usually kept pretty clean by the friction of mastication, as already stated. It is impossible, however, to avoid brushing them some, when the instrument is applied in the manner indicated, and in this way they get all the cleaning they need. For cleaning the inside of the upper and lower teeth we advise the use of a brush which consists of a rounded tuft of bristles on a short, straight handle, and costing twenty-five cents. This fits the locality exactly. When your best brush is taken for this particular purpose, only the point of it comes into use, and this will be worn out while the rest of it is yet good, and you have to throw it away half worn out, and get a new one. If, then, you can employ an instrument better adapted to the purpose, at one-half the cost of your best brush, meanwhile saving the latter to that extent, of course it is a matter of economy to do so.

This is the proper way to clean the teeth, and it does not take long either. Two minutes does the business. Our dentist, upon one occasion examining our teeth, and discovering nowhere any evidence of tartaric or other deposit, told us that we brushed our teeth too much! This simply shows how little time and trouble it takes to do a thing properly, as against the time that is lost, and the energy wasted, when done otherwise.

In detailing the method of cleaning the teeth as we have now done, the use of water is presupposed, and water alone. But some persons find that, with their best efforts, they can not keep their teeth perfectly clean by the use of brush and water alone. We, too, have experienced the same difficulty. While entering upon the subject of tooth-powders, washes, and dentifrices generally, it behooves us to

speak with caution, for we feel that we are treading upon dangerous ground. So many of these things sold in the shops under one or the other of these names, whiten the teeth only to destroy them in the end, owing to the presence of some free acid in their composition, that we almost feel that the best advice we can give our readers in relation to them is to avoid them altogether.

Some persons tell us that they get their teeth well cleaned once a year; that is, in strawberry-time. This, to our mind, demonstrates two things very conclusively. The one is, that if man lived upon the food nature intended he should eat, the same as the lower animals do, his teeth would be kept as clean, and would resist decay as well as theirs. The other is, that a little acid of the right kind is of advantage in cleaning the teeth; and strawberries and other acid and sub-acid fruits seem to contain the right kind of it, in just the right amount, to perfectly clean the teeth and beautify them without doing them injury. Where it is necessary, then, to use a tooth-powder or dentifrice of some kind, use only that of which the constituents are known to you; or, at least, one made by some dentist whom you have confidence in, and whom you know to be a reliable man. Some use charcoal as a dentifrice, and only this. We have sometimes used it ourselves. If from some circumstance, as in traveling or the like, the proper cleaning of our teeth has been for some days neglected, or imperfectly done, and the enemy has been allowed to get ahead of us, we have found nothing better to restore things to their pristine condition than charcoal. It is also, on account of its antiseptic properties, good to use where decay already exists, sweetening the breath where it has become foul from this cause. The charcoal should be ground to an impalpable powder, such as you buy in the drug-stores. But even then it is somewhat gritty, and if used often, has a tendency to cut the gums loose from the teeth. It should, therefore, be used very sparingly, and only at long intervals. Be-

ing a black, smutty substance as it is, we dislike to have it about our washstand or toilet-table. In applying powder of any kind to the teeth, a little should be taken on the point of the brush while it is dry, and the bristles stiff, and applied to the teeth in the manner indicated above for the application of the brush alone. If the brush be first wetted, and the bristles thus made soft, the application of the powder will not be so effective. The bristles will be softened all too soon by the action of the saliva, perhaps before the operation is concluded.

A little fine soap is a good thing to use on the teeth occasionally, say once a week. When a small portion of tartar taken from the teeth is put under a microscope, it is found to contain many of the bodies of a certain animalcule. The alkali of the soap will destroy these. A soda soap should be used, as a soap made with potash will be found to be much too caustic, and will be likely to take the skin off the inside of the mouth. There are numerous tooth-soaps in the market, sold at high prices for the quantity given. It is not expensive, however, for it takes so little to do. But the best soap to use on the teeth is pure white castile soap, made of olive oil and soda; uncolored and unperfumed. This you can buy for twenty-five cents a pound; and a pound, or even half a pound, of it will last you a lifetime, if used for this purpose alone. This soap is also the best that can be used for all other purposes of the toilet except for that of shaving.

There are some persons whose teeth, notwithstanding all the care and attention they are able to bestow upon them, will, in spite of their best efforts, still decay. Where this is the case, it must result from some congenital defect inherent in their structure. Where any such defect exists, caries is apt to set in at an early, sometimes at a very early period. Since we commenced the preparation of this paper, a gentleman of our acquaintance has told us that he had just been having the teeth of his little boy, four years old, filled with gold. These were

of course his first set, the deciduous or milk teeth. In such a case the only thing to be done is to employ a dentist.

Now, to those of you who have never given any care to the preservation of your teeth, and who have most likely a mouth full of unclean and decayed or decaying teeth, and who have suffered, perhaps still suffer, untold miseries from the toothache, we say, this state of things should not be allowed to continue. And it need not continue; you need never again have the toothache after to-day if you will but do as we tell you. If, then, by the reading of this article you may be induced to try the experiment, we will tell you how to proceed.

First and foremost, go to a good dentist and have him examine your teeth, and have all the aching and badly decayed ones, all that are too far gone to save by filling or any other means, extracted at once, right on the spot. This operation, tooth-pulling we mean, is one the severity of which sometimes more than meets the expectation of the individual. But, luckily, all surgical operations are now rendered painless by the use of anæsthetics. Chloroform has been used in extracting teeth, but its administration is not unattended with danger. We have, however, in nitrous oxide an anæsthetic which answers admirably the purpose, and one that is entirely safe. Take nitrous oxide, then, and have all these sources of pain and trouble removed, and be done with them. We would not have an old snag, liable to ache at any time, in our mouth for a small fortune. A man can not enjoy life with the toothache if he have a million of dollars. Return to your dentist after the lapse of a few days; that is, after all bleeding from the gums, and all soreness of the mouth has departed, and have the remaining teeth thoroughly cleaned, with a view to the filling of all those that are slightly decayed and still worth an effort to save. Until this is done, you can not tell how many of your teeth may want filling; covered over as they have been by tartar, it is only upon its removal that

all the cavities will be brought into view. Have now all cavities in turn well cleaned out, every particle of dead bone removed, and then filled with gold, where it is possible to use that metal, for it is a long ways superior to all others for this purpose, as it is superior to all other metals in exchangeable value. A gold filling, however, requires much pressure to pack it properly, hence none but a tooth tolerably sound will be able to resist this. Where a tooth is much decayed, perhaps, as is frequently the case, a mere shell remaining, some other kind of filling must be employed. The dentists have a granular metallic substance of which they make a kind of semi-fluid preparation, and fill into large cavities without pressure, merely laying it in, as it were. In about an hour's time it becomes very hard. The burnisher is then applied, polishing it off. When the operation is concluded, the filling presents a smooth, white, shining surface. This is called amalgam filling. In all back teeth too much decayed to be filled with gold, in all molars presenting a large grinding surface, this is the filling to use. It becomes in a short time as hard as adamant, and capable of resisting any amount of force applied to it in the trituration of the food; and it will never wear out. But if the tooth to be filled be a front tooth, an incisor, or an eye-tooth, and the filling, as is generally the case, is to be introduced at the side of the tooth, where it will not be required to sustain much

direct pressure in eating, cement should be used. It is nearly the color of the teeth, and will not produce discoloration, even where a large cavity has to be filled, as the amalgam filling might do.

Having now gotten all of your worst decayed teeth removed, and the rest of them put in such condition as will be most likely to prevent any further decay, and having gotten your teeth well cleaned, you ought certainly to be able to keep them clean, especially if the directions given in this paper are carefully followed. But if at any time signs of caries should manifest themselves, go at once to your dentist and have the matter attended to. It is a good plan to visit your dentist once in a while at any rate, and present your mouth for his examination. With his instruments, and his little mirrors, exposing to view the inside as well as the outside of the teeth, and the back as well as the front, he may oftentimes be able to detect incipient caries, and even to discover cavities, where, without these aids, they would escape your own scrutiny.

In conclusion, then, we say to you and to all: Live as close to nature as you can in the matter of food and diet. This will be better for your teeth not only, but also for your general health. Do not take your tea and coffee scalding hot; better not any; and do not make of your jaws a crusher for rock-candy, nor a nut-cracker for shell-barks.

JAMES COULTER LAYARD.

COLD FEET IN BED.

WHILE winter is at hand, and with it the many attendant discomforts and annoyances of a chilly, frosty atmosphere, it is becoming to fortify ourselves against the influences and effects of cold. It is better to be so clothed as to feel a little too warm, rather than not warm enough. One of the common obstacles to personal comfort is cold feet, particularly cold feet at night. When abed one feels that he ought to be com-

fortable. We may succeed, perhaps, during the day in maintaining a passable degree of caloric in our extremities, but at night we may groan in sleepless torture until the small hours with icy feet. A contributor to the *British Medical Journal* gives a few simple suggestions on this seasonable topic, which we copy here for the benefit of our cold-footed readers:

"The association betwixt cold feet and sleeplessness is much closer than is com-

monly imagined. Persons with cold feet rarely sleep well, especially women. Yet, the number of persons so troubled is very considerable. We now know that, if the blood-supply of the brain be kept up, sleep is impossible. An old theologian, when weary and sleepy with much writing, found that he could keep his brain active by immersing his feet in cold water: the cold drove the blood from the feet to the head. Now, what this old gentleman accomplished by design, is secured for many persons much against their will. Cold feet are the bane of many women. Light boots keep up a bloodless condition of the feet in the day, and in many women there is no subsequent dilatation of the blood-vessels when the boots are taken off. These women come in from a walk, and put their feet to the fire to warm—the most effective plan of cultivating chilblains. At night, they put their feet to the fire, and have a hot bottle in bed. But it is all of no use; their feet still remain cold. How to get their feet warm is the great question of life with them—in cold weather. The effective plan is not very attractive at first sight to many minds. It consists in first driving the blood-vessels into firm contraction, after which secondary dilatation follows. See the snow-

baller's hands! The first contact with the snow makes the hands terribly cold; for the small arteries are driven thereby into firm contraction, and the nerve-endings of the finger tips feel the low temperature very keenly. But, as the snow-baller perseveres, his hands commence to glow; the blood-vessels have become secondarily dilated, and the rush of warm arterial blood is felt agreeably by the peripheral nerve-endings. This is the plan to adopt with cold feet. They should be dipped in cold water for a brief period; often just to immerse them, and no more, is sufficient; and then they should be rubbed with a pair of hair flesh-gloves, or a rough Turkish towel, till they glow, immediately before getting into bed. After this a hot-water bottle will be successful enough in maintaining the temperature of the feet, though without this preliminary it is impotent to do so. Disagreeable as the plan at first sight may appear, it is efficient; and those who have once fairly tried it continue it, and find that they have put an end to their bad nights and cold feet. Pills, potions, lozenges, "night-caps," all narcotics, fail to enable the sufferer to woo sleep successfully; get rid of the cold feet, and then sleep will come of itself.

A MISTAKING CRITIC.

EDITOR PHRENOLOGICAL JOURNAL: My attention has just been called to an article in your December number under the heading "Unwarrantable Positions," in which an evident attempt is made to place both myself and journal in an incorrect light. I say the attempt has been made, though I do not wish to question the motives of the writer, but it must be quite evident to discerning minds that the writer involves himself in a much greater difficulty than us. I have no desire to enter into a controversy with any one, but deem it wise to make my true position known since it has been so incorrectly stated. I would not think it

worth while to do this simply to refute the statements of my critic; but as the article has appeared in your columns, and so has, in a certain sense, the indorsement of your JOURNAL, it is but fair that your readers should hear a word on the other side.

In an article in the *Health Reformer*, now *Good Health*, for April, 1878, I called attention to some of the ultra views held by certain persons, and cited two or three instances which had come under my immediate observation, and which had been the occasion of no little reproach to the cause of hygienic reform. The positions which I referred to and characterized as

fanatical were: 1. That it would be better to let a patient die rather than allow him to take a drop of medicine, even if it were known that the medicine would save the patient's life; and, 2, That the use of palliatives for the relief of pain is never justifiable.

These "very positions," my critic affirms—in order to prove that I am guilty of inconsistency—I have formerly "advocated," having "recently embraced" doctrines which are the reverse. For his information, as well as that of the readers of the PHRENOLOGICAL JOURNAL, I wish to say, (1), I never held the positions referred to, and never advocated them; (2), I have made no change in my medical views since I first had a right to hold views on any medical subject based on an investigation of the same. Longer than my friend has been entitled to append a medical title to his name, I have believed, "advocated," and practiced the very opposite of the positions referred to. I am not a little surprised that any man of intelligence should attempt to stand up in defense of positions so obviously unreasonable and absurd; yet if I understand my critic correctly, this is what he wished to be understood as doing. If my supposition as to his intention is not correct, then there is no occasion for his strictures.

My reason for publishing the article which so aroused the ire of my critic was to correct an evil with the exact nature and extent of which I was quite familiar. I knew, personally, a man who declared that his wife should die rather than be allowed to take a drop of medicine *even if he knew it would cure her*. As the man resided in a section where my journal has many readers, I believed it my duty to warn as many as possible against his influence. The circumstances were very similar in the case of the patient who was starved to death by a man who has since bitterly repented of his folly.

I can scarcely conceive of any reason why the writer of "Unwarrantable Positions" should appear as the champion of ignorant fanatics who have themselves

grown wiser and abandoned the folly of their ways, unless it be to gratify some personal pique. Seemingly tired of beating a bag of wind, my critic attempts to erect a giant of straw to fight against by making me say that stimulants and anti-periodics are necessary in malarial fever. I said nothing of the kind. I merely intimated that a stimulus is sometimes needed—without saying anything respecting the nature of the stimulus—and that an anti-periodic may sometimes be useful, without saying when or how. I would use a palliative to relieve pain in an individual suffering from disease in the same way and for essentially the same reason that I would use an anæsthetic in surgery, only when absolutely required—when less harm would be done by it than without it.

Your contributor charges me with calumniating some one, when I did not so much as mention any individual's name, much less charge any person with anything in any degree disreputable. I stated facts with which I was acquainted and which I am prepared to substantiate. It certainly looks very much as though your correspondent was "spoiling" for an opportunity to make a thrust at my journal, and chose the article to which he called attention, as the most promising, as affording a pretense of an apology for so doing. When your contributor charges me with attempting to make the public believe that a starvation diet is a part of the hygienic system of treating disease he certainly does me the grossest injustice. He can have no more interest than I in the promulgation of hygienic truth. I do not believe the true system of treating the sick to be responsible for any of the ultra views of fanatics or extremists, or any of their wild notions, and have never intimated such a thing. The real animus of so unjust an attack, I am utterly at a loss to understand.

I have rightfully definite views respecting the nature of disease and its treatment. In some points I should undoubtedly agree with my critic, probably in most points; but I am not fossilized as

yet, and by daily contact with disease in numerous phases, I hope I am learning something. True science has no affiliation with bigotry, and demands unbiased investigation. If all who call themselves hygienists would cultivate the spirit of

true scientific inquiry, we should have far less of hypercritical criticism, and should realize more rapid progress in winning others to the acceptance of true principles.

J. H. KELLOGG.

BATTLE CREEK, MICH.

A RECIPE OR TWO.

WE find this in an exchange:

"BOSTON BROWN BREAD.

"One heaping coffee-cupful each of Graham flour, rye flour, and Indian meal. Sift all together, and mix thoroughly with two coffee-cupfuls of molasses, two of sweet milk and one of sour, a teaspoonful of salt, and a dessertspoonful of soda."

Three cupfuls of meal to five of fluid, with glucose, caseine, and lactic-acid adulterants thrown in! What a fine, pulpy, sticky mess, and called bread! Shades of bile, colic, and dyspepsia, how you must rejoice in view of such a concoction!

But how would you make *good* brown bread? may be asked, and as the question is very frequently asked by correspondents of the PHRENOLOGICAL JOURNAL, let me say that I have good success in following this rule for Brown and Indian bread. The ingredients necessary may be used in these proportions: Twelve teacups of Graham flour; four teacups of Indian meal; two tablespoonfuls of molasses; half tablespoonful of salt; one-third of a National Yeast Cake. Dissolve the yeast cake, which should be fresh, in tepid water; then stir flour in it until the mixture is about as stiff as paste; let it stand to rise from say five P.M. to eight P.M. Then take all the ingredients and mix them with tepid water until the composition becomes as stiff as can be stirred

with a spoon. Put the dough in a suitable pan, cover lightly, and bake it the following morning as soon as the mixture is light. In a hot oven the baking, if only one loaf be made, will require about two hours. If small loaves are kneaded up, the time of baking will be reduced, of course. This rule will suffice for two medium-sized loaves. The best brown bread, however, is that which is made in the form of

GEMS

and I find that the proper proportions are about as near the following as any when we consider the differences in the quality of Graham flour furnished by grocers: One quart of cold water; three pints of Graham flour. Pour the water into a pan, and sift the flour slowly in the water with the left hand, and stir at the same time with the right hand, using a wooden spoon. Stir and beat up the mixture about ten minutes to aerate it thoroughly and render it uniform. Meanwhile the Gem pans should be on the stove heating, a very thin coating of good olive oil, or butter being spread upon them to prevent the dough from adhering to the iron. When the mixture is ready fill the pans, allowing for expansion in baking, and place them in the oven, which should be very hot. The baking will occupy from thirty to forty minutes, and the secret of success in the production of beautiful, light loaves is quick baking.

MRS. H. S. D.

PREVENTION OF BOILS.—A St. Petersburg physician, Dr. Sieven, commends a very simple treatment for the prevention of this painful form of abscess. He claims that if the skin be superficially scraped with a small knife, so that a

drop or two of blood may be pressed through the epidermis as soon as the peculiar stabbing or pricking sensation and slight induration announce the commencement of the boil, it will not be further developed.

NOTES IN SCIENCE AND AGRICULTURE.

The Scottish Railway Disaster.

—The civilized world was shocked on hearing of the terrible disaster which occurred at the Tay Bridge in Scotland in December last, and where many lives were lost. During a very heavy gale or hurricane, a train, while crossing, was precipitated for eighty-eight feet into the river. Whether the central portion of the bridge had fallen before the train arrived, or whether the super-added weight of the train caused the breakage of the bridge, is a matter of conjecture. No one was saved to tell the details.

The Tay Bridge is the largest iron bridge in the world, and has been considered one of the most important engineering works in Great Britain. It crossed the Frith of Tay, and was 10,320 feet long. The bridge comprised 89 spans, 14 of the spans, over the navigable portion of the river, being 200 feet each and giving a clear headway of 88 feet above high water. It was at this point that the bridge gave way.

The magnitude of the bridge, and the novelty and ingenuity of the means employed in its erection, gave it rank with the most interesting civil-engineering works ever carried to completion. The disaster, however, will call more direct attention to the details of its construction, the defects of which will now have to be carefully studied. Another large bridge of the same general character is now in course of construction, but it is highly probable work on this will be discontinued, pending investigation of the defects of the other.

To Raise Cranberries in the GARDEN.—F. Trowbridge, of Milford, Conn., says: "Every family can have their garden patch. A moist but not clayey soil should be selected, and the ground prepared by plowing or spading, as for strawberries; the entire surface should be covered one or two inches with fine peat or muck, or one or two inches of sand can be substituted. They can be planted one foot to eighteen inches apart, four to six inches in depth. They are highly ornamental in pots, the fruit hanging on the vines until the blossoms appear for the next crop. In some places experiments have been made successful in raising the cranberry in ordinary garden soil, and Mr. Downing has stated that a plat of the size of twenty feet square, planted properly, will yield three or four bushels annually; quite sufficient for a family. Experiments in New England indicate that the cranberry can be cultivated on upland, though generally with moderate success. On Long Island, however, there are cranberry patches of five or six acres, on high upland soil, that produce fifty to one hundred bushels per acre, which is considered a satisfactory result, as manure is unnecessary, and the trouble of cultivating, gathering and marketing the cranberry is less than

that required by the strawberry or any small fruits."

Increase of Lunacy in England.

—Dr. Lush, the President of the British Medico-Psychological Association, in the course of an address, drew attention to a marked increase of late years in lunacy. In the first report of the Commissioners on Lunacy they state that in June, 1846, there were in England and Wales 23,000 persons of unsound mind. The population was then about 17,000,000, now it is 25,000,000, and it is estimated that on the first of January, 1879, there were 70,823 persons in England and Wales who needed the protection of the lunacy laws. It appears, therefore, that while the population has increased at the rate of forty-five per cent., the number of lunatics in detention has risen at the rate of 250 per cent. Assuming that another thirty-three years will yield similar results, accommodation will have to be provided in 1912 for nearly a quarter of a million of insane or imbecile persons in England and Wales. The true solution of the difficulty, he thought, is to be sought—1st. In increased family responsibility; 2d. In educating the popular belief in the gravity of the disease itself; 3d. In further State interference if possible; 4th. In increased efforts to make the lot of insane persons under detention as little irksome as is consistent with safety and the conditions of their malady. Beyond these he feared not much can be done or hoped for; less ought not to be required; and if, instead, a callous indifference continues to prevail as to the extent of insanity, grave and calamitous results, to be discovered only when too late to be repaired, must follow a neglect of the accepted teachings of medical science and experience. These reflections may be applied to our people's mental condition in America.

Keeping the Soil Rich.—General Grant says that when in China he was shown a piece of land which had been under cultivation every year for 5,000 years without deterioration of the fertility of the soil. The result is effected by returning to the soil everything taken from it. Fish constitutes a large proportion of the food of the people, and offal not consumed for human food is carefully applied to the soil, and fish is a great fertilizer. Even the roots of the wheat—wheat is grown to a very limited extent—are taken and rotted in a compost heap and returned to the soil. All the leaves and garbage are utilized in the same manner.

The Reward of Intelligent Industry.—The *Recorder* of Americus, Georgia, reports the case of a farmer near that place whose experience shows very clearly what there is in the common Southern complaint

that farming can not be made to pay in the South. Of this man the *Recorder* says :

"He began life since the war, a poor young man, as a farm hand, working for wages. He has inherited nothing, and has been engaged in no business except farming. He, this year, will make ninety bales of cotton, has not brought a single bale to market, does not propose to sell a bale before spring, and he is able to hold it. He owns one of the best plantations in Southwest Georgia, and it is his boast that he buys nothing upon which to feed man or beast, except sugar and coffee, but, on the contrary, has something to sell of almost any product of Southern soil. Last year he made 4,600 gallons of syrup, and this year has sold over 200 pounds of butter."

On this the *Scientific American* comments : "If such examples are rare in the South—as they probably are in too many parts of our country—the fault lies more in the men than in their surroundings. There is no part of the settled portions of the United States so poor in natural advantages and opportunities that men of intelligence, pluck, and energy can not win therein, if they will, a fortune which, in comparison with that of their less enterprising neighbors, may seem phenomenal."

Marking Patented Articles.—The Patent law says : "All patented articles must be marked with the word 'patented,' together with the day and year the patent was granted. If the article itself can not be so marked, a label containing the notice must be affixed to the package containing one or more of the articles. The marking is intended as a notice to the public that the thing is patented, and, in any infringement-suit by the party failing so to mark, no damages shall be recovered by the plaintiff, unless it is proved that the defendant had due notice of the infringement. Any person who falsely marks an article patented that is not patented, or marks anything for which he has not obtained a patent with the name of another who has obtained a patent, or who marks an unpatented article with the word 'patent,' or any word importing that the thing is patented, for the purpose of deceiving the public, is liable to a penalty of \$100 for every such violation of the law, one-half to go to the informer."

What will Become of the Last Man.—The *Scientific American* has lately arranged in contrast the guesses of science on the final scene of human existence, and one finds therein food for reflection concerning that much-talked-of conflict between Science and Revelation :

"1. The surface of the earth is steadily diminishing, elevated regions are being lowered, and the seas are filling up. The land will at last be all submerged, and the last man will be starved or drowned.

"2. The ice is gradually accumulating at the North Pole and melting away at the

South Pole ; the consequence of which will be an awful catastrophe when the earth's center of gravity suddenly changes. The last man will then be drowned by the rush of waters.

"3. The earth can not always escape a collision with a comet, and, when the disaster comes, there will be a mingling of air and cometary gas, causing an explosion. If the last man is not suffocated, he will be blown up.

"4. There is a retarding medium in space, causing a gradual loss in velocity in the planets, and the earth, obeying the law of gravitation, will get closer and closer to the sun. The last man will be sun-struck.

"5. The amount of water on the earth is slowly diminishing, and, simultaneously, the air is losing in quantity and quality. Finally, the earth will be an arid waste like the moon. The last man will be suffocated.

"6. Other suns have disappeared, and ours must sooner or later blaze up and then disappear. The intense heat of the conflagration will kill every living thing on earth. The last man will be burned up.

"7. The sun's fire will gradually burn out and the temperature will cool. The earth's glacial zones will enlarge, driving our race toward the equator, until the habitable space will lessen to nothing. The last man will be frozen to death."

Effect of Large Cities upon Agriculture.—Mr. Mechi, the agriculturist, deplores the agricultural loss involved in river-pollution, and recalls the words of Liebig : "The sewers of Rome engulfed in the course of centuries the prosperity of the Roman farmer ; and, when the fields of the latter would no longer yield the means of feeding her population, the same sewer devoured the wealth of Sicily, Sardinia, and the fertile lands on the coast of Africa." He adds : "Large towns, like bottomless pits, gradually swallow up the conditions of fertility of the greatest countries." Mr. Mechi estimates that it takes the annual produce of 20,000 acres to feed London one day.

Vase Culture of Ivy.—In a late number of the *Garden*, Mr. J. McNab, of the Royal Botanic Gardens, Edinburgh, recommends the vase culture of ivy in moss and water for drawing-room purposes. The directions he gives for its management are as follows :

"The ivy should be grown in long opaque glass jars and vases, and it is essential that such vessels should be wide at the top, so that the plants, after being properly rooted, can be taken out, and the jars cleansed when necessary. In the selection of ivy for vase culture, long pieces with small leaves are to be recommended ; those taken from the stems of the trees, where the points are inclined to be pendant, will be found to answer best, such ivy having generally stout stalks covered with aerial roots. Each vase, according to its size, should contain three, four, or five pieces, each piece being rolled up separately

in a small portion of hypnum or sphagnum moss, the latter being preferable.

"After this, tie all the pieces loosely together in a clump to suit the width of the vase, and place them in it so that the ball of moss does not reach within five or six inches of the bottom. It will be necessary to keep the water in the vase about half-way up the moss till the cuttings are properly rooted. From the moss the roots will extend into the water below, and it will be found that these roots produced in the moss and water will be quite sufficient to nourish the plants. Cutting

plants whose roots have been produced in soil, if lifted and placed in vases, will ultimately do well, but the probability is that the roots will die and the plants for a time sicken until new fibers are formed capable of enduring moss and water culture. After the ivy is properly rooted the glass jars may be kept full of water, and sprigs of flowers may also be inserted in them. The water and flowers may be changed when necessary, and even the ivy, whose roots ought now to be a solid mass, may also be taken and replaced at pleasure, without injury."



MRS. C. FOWLER WELLS, *Proprietor.*
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LIBERALISM AND PESSIMISM.

ONE feature of the "advanced thinking" of which we hear so much to-day, is its sadness. The advocates of liberal religion or skepticism, and of evolution according to Darwin, Herbert Spencer, etc., in their stalwart attacks upon the old beliefs, have scarcely a cheerful word to say. With stoical calmness they seek to remove the underpinnings of Christian faith, and at the same time point an icy finger to a method of growth from primordial forms, which includes the world of matter and mind. A rigid, arbitrary system, divested of all warmth of sentiment, of faith in the past, and of hope in the future, is upreared by these gentlemen, and we are asked to admire it!

How pleasant it is to be informed that we have been entertaining a chimera; that all the teachings of prophets, apostles, and divines, about life, death, immortality, heaven, and God, are vain and delusive! How soothing to an earnest ambition is the "scientific" assurance that we are living in a mere period or stage in the grand order of development—an advance, to be sure, upon what has past; but after all, notwithstanding our seeming elevation, culture, and capability, we shall pass away into nothingness, and other periods succeed which shall be vastly superior to ours!

Certain of these "advanced thinkers," indeed, admonish us that it is comforting to think that we live in a late stage of evolution, and that we possess so many advantages over the half-fledged human beings who preceded us. They reason that it is better to have lived and died than never to have lived at all—some-what after Tennyson's

"'Tis better to have loved and lost,
Than never to have loved at all."

Cold comfort this. All the yearnings, ambitions, feelings, inspirations, and convictions of the human soul go for nothing in the view of such men. There are great "sun-crowned souls" among us who "live above the fogs," and with more than mortal prescience depict the glories of a life beyond this. In their presence we

catch a glimpse of the perennial day beyond the horizon, and the conviction that there is something within us besides "potent matter" thrills our whole being. Can this be nothing but delusion?

Very recently we have had a singular exhibition on the part of certain prominent teachers of science. The New York *Independent* published an article in which it was stated that the doctrines of evolution were accepted and taught by the professors of science in our leading colleges, even as far as that doctrine enunciated the proposition that "man is descended from irrational animals." The New York *Observer*, taking up the matter with indignant earnestness, corresponded with eight or nine of the most eminent American teachers of physical science, among them those holding chairs in Harvard, Yale, Princeton, Union, Cornell, and Brown Universities. The outcome of the matter appears to be that nearly all who were asked to state whether the *Independent* was warranted in its declaration, express an unwillingness to be classed among the disciples of Darwin; and whatever their personal opinion, do not *teach* evolution in their classes. We opine that these gentlemen, when brought to reflect upon the moral drift of such a philosophy, are disturbed, perhaps pained, by its grim pessimism.

Evolution and infidelity are joyless; their motives are earth-bound, physical, selfish. How bitter was the cry of Byron, that passion-tossed, faithless man, who sought to exhaust life of its sources of merely physical enjoyment:

"Count o'er the joys thine eyes have seen,
Count o'er thy days from anguish free;
But know whatever thou hast been,
'Tis something better not to be."

Contrast it with the cheerful, warm,

and happy outbursts of men like Keble, Robertson, Young, or with the trumpet-challenge of our Longfellow:

"Life is real, life is earnest,
And the grave is not its goal;
'Dust thou art, to dust returnest'
Was not spoken of the soul."

We wonder not that men who have, indeed, given their votes to the new philosophy, are inclined to abandon themselves to scientific investigations, that their minds may be employed, and the protest of the spirit drowned or obscured in the maze of controversy.

IGNORANCE OR INTEMPERANCE?

THE strife which is kept up in society between classes, between capital and labor, between rich and poor, the educated and the ignorant, is sustained mainly by the vicious habits of people. Selfishness and greed enter largely into it, we must admit, but habits which unbalance the mind and pervert the judgment excite to excessive and permanent activity the selfishness displayed by employer and capitalist, and engender the brutishness of the laborer. Not long since we were wont to hear that ignorance was the chief cause of the ills suffered by society, and on this account economists have been loud in demanding more schools for the instruction of the masses. A glance at recent criminal statistics reveals the startling fact that ignorance is not necessarily or normally a factor of crime. Ignorance, in a man, implies a lack of purpose in life, inability to employ the forces of mind and body with certain effect, and some degree of moral weakness, but not of necessity a vicious or criminal disposition. The ignorant man craves recreation as much or more

than the educated, and his amusement must be of a low mental grade; hence his liability to yield to vicious influences, and especially to temptations which have the sanction of law.

Of 478 convicts that were admitted to the Eastern Penitentiary of Pennsylvania in 1878, 79 only were pronounced thoroughly illiterate; 371 had attended the schools, their average age on leaving them being *over seventeen years*. Of 962 prisoners in this same penitentiary, 745 were drunkards, 192 moderate drinkers, and only 20 abstainers. We are told, moreover, that 589 of these prisoners were under the influence of liquor when their crimes were committed, and that 367 were born of habitually-drinking parents.

Take the criminal statistics of any other State and their verdict will be much the same. Some years ago, an examination was made of the jails in New York, with the result that fully seven-eighths of the prisoners were known as drunkards at the time of their admission. From across the sea comes some very powerful testimony in the same line. When the Commune was suppressed in Paris, among the prisoners were 500 boys, from nine to fifteen years old. They were sent to the Reformatory at Rouen, and there an examination showed that 337, the most mischievous of the lot, were the children of drunken parents.

In the working of political machinery, liquor has usually been considered an indispensable lubricant; but we have lately had, even from politicians, an expression of opinion which should command the respect of every one. A resolution was offered at the Democratic State Convention of Maine last year condemning prohibition and approving li-

cense; but a large majority voted it down. What was that but a political confession of the great moral and physical harm of drinking practices? Just now the same State has given us a strange spectacle of two parties contesting for the honors and emoluments of office, and each claiming title by election. Yet, amid all the excitement, we hear of no brutal affrays, no bloodshed. Would the men of Maine have urged their rights thus dispassionately were the dram-shops open, and the poisoning, maddening beverages called whisky, wine, and brandy at command, as in the days before prohibition? Could there be such factious bitterness and belligerency in any other State where liquor is free without violence to person and property? We think not.

SNOW-EATING.

MEEETING some children at play with their sleds lately, we observed that two or three of them were eating the snow, which, newly fallen, lay in crisp whiteness all around. We had done such a thing ourself in the days of careless boyhood, and no one had instructed us with respect to its harmfulness. Perhaps a word now, late as it is, may be in season. During the winter many "colds," sore throats, croups, and other disturbances of the mucous surface of the passages to the lungs and stomach among children are entirely due to eating snow. A child has been out with his sled, having a glorious time, and enters the house at nightfall in all the glow of health and spirits. His mother regards him with pride, and hastens to respond liberally to his wish for supper. Two or three hours later the boy complains of "things sticking in his throat;"

he "can't swallow without its hurting." An examination shows a red and swollen throat, and sudden fears of croup or diphtheria possess the parental mind. "I wonder how it could happen? What have you been doing?" is anxiously asked.

"Haven't been doing anything, mamma," is the urchin's reply.

"Were your feet wet when you came in?"

"No, mamma, 'cause I had my arctics on," the boy returns with thickened utterance.

Of course he does not understand how his chewing up two or three hard-packed snow-balls that afternoon, as if they had been so much candy, could make him ill. His playmates set the example, and he thinks it right.

Well, mamma deems it a singular attack, and sets to work, as best she knows how, to treat it.

The practice of snow-eating has much to do with the head-colds and "running noses" of many girls and boys, because the chilling effect of snow upon the hard palate or thin partition between the mouth and nostrils is productive of congestion in the fine membrane which lines its upper surface. As this membrane is almost entirely constituted of delicate nerves and blood-vessels, inflammation is likely to follow the congestion, and that may prove very troublesome, perhaps degenerating into nasal catarrh, an affection so common with us of the North that it needs no description.

We know only too well the annoyances of catarrh, having suffered more or less with it from boyhood. How much it was occasioned by snow-eating we can not tell, but we would urge those of our readers who have families to warn their children against the practice.

CONSISTENCY'S A JEWEL.

OUR near neighbor, the *Christian Advocate*, had a brief item among its editorials lately, which ran like this:

"THE NEW YORK LEDGER.—In our Christmas number there appeared an advertisement of the *New York Ledger*, which made its way into the business department of the paper without the knowledge of the publishers. The clerk having the advertisements in charge, knowing that Dr. John Hall is a contributor to the *Ledger*, did not regard it as doubtful, and so inserted the advertisement without consultation or authority. It is not the policy of the *Christian Advocate* to fight on both sides of so important a question as the one involved."

Good! we exclaimed, the veteran representative of Methodism in this country is on the side of healthy literature, and is not afraid to give strong expression to its convictions.

We like the Methodists as a class, and, of course, the positive tone of the above item added a degree or two to the temperature of our regard. With rather generous emotions, therefore, we turned over the leaves of the edition and glanced carelessly down its advertising columns. Hallo! what's this?

"—'s Best Liver and Kidney Regulator. . . . Best Brain and Nerve Tonic in the World," etc.

Another:

"—'s Digester cures Dyspepsia," etc.

And another:

"Cancer cured by —; . . . Doctors, ministers, and the poor Cured Free! . . . Send for Dr. —'s Asthma Specific and other remedies," etc.

And another:

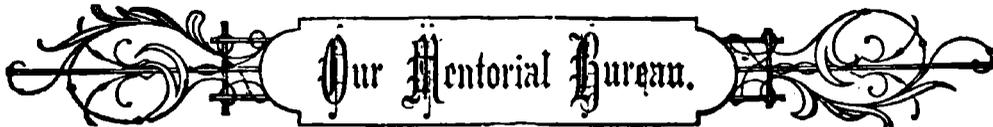
"Catarrh is a Terrible Disease! Its fearful effects—corruption running down the throat, weak eyes, deafness, loss of voice, loss of smell, disgusting odors, nasal deformities, and finally consumption! . . . Dr. —'s Inhalant . . . the most

healing remedial agent known to science," etc., etc.

And still others, which we have not space to notice.

Well! ha! ha! ha! We see now that paragraph about the *Ledger* was only meant for a joke. That's all. Why don't the *Observer*, *Independent*, *Churchman*,

Baptist Weekly, *Christian Union*, *Methodist*, and other leading religious weeklies print similar edifying matter in their business departments? And this is one great reason why the thousand-and-one manufacturers and dealers in quack nostrums flourish at the expense and sorrow of the people.



"He that questioneth much shall learn much."—Bacon.

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. But one question at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of an early consideration.

IF AN INQUIRY FAIL TO RECEIVE ATTENTION within two months, the correspondent should repeat it; if not then published, the inquirer may conclude that an answer is withheld, for good reasons, by the editor.

WE CAN NOT UNDERTAKE TO RETURN UNAVAILABLE contributions unless the necessary postage is provided by the writers. IN ALL CASES, persons who communicate with us through the post-office should, if they expect a reply, inclose the return postage, or what is better, a prepaid envelope, with their full address. Anonymous letters will not be considered.

LOCATION OF ORGANS.—Question:

In the anatomy of the human brain we find it to be divided into two hemispheres, right and left, with a vacancy intervening. Why do you locate organs in this vacancy, the material not intervening and not entering into the constitution of the brain? H. W. S.

Answer: If you have had the numbers of the *PHRENOLOGICAL* containing the series of articles entitled "Brain and Mind," by reference to the "description of the organs and their location" upon the hemispheres, you will find that we do not locate organs upon vacancy. The most important organs of the brain are centrally situated, so far as the skull is concerned, but they actually occupy the superior margins of the hemispheres. As the organs are double, these central pairs exercising the same functions being neighbors—as, for instance, Comparison, Human Nature, Benevolence, Veneration, Firmness, Self-esteem—they are indicated upon the mapped bust by a single name. Perhaps it would be better to divide the space allotted them through the center, for the sake of correctness.

BRILLIANT PEOPLE.—Question: Why are people with large perceptive organs brilliant, off-hand, able to tell what they know, appear to know all they really know, and can speak without hesitation? I do not understand how these perceptive organs give quickness. G. H. C.

Answer: People who have large perceptive organs are naturally brought into closer relations with the facts of average life, than those whose reflective organs predominate in the intellect. They appreciate the relations, qualities, conditions, and characteristics of things, and accumulate facts and data. In the discussion of subjects, particularly those of a practical sort, or what otherwise might be termed the objective, such persons can readily draw upon their memory's stock. Reflective people, not having so much data at command, must think out what they shall say; must reason, theorize, discuss, and, to a large extent, their brains act, as it were, creatively; they must make up the subject-matter of their talk as they go along, while the man of observation has the material ready-made.

TROUBLESOME TEETH.—W. M. S.—

Read the article in this number on the care of the teeth. It will probably give you some hints which will clear up the mystery. We are of opinion that there is an accumulation of tartar at the roots.

DIGESTION.—F. J. D.—Your system has become somewhat weakened, run down, we think, and there is associated with the condition a sluggishness of the digestion and assimilative functions. You must rigidly adhere to the line of diet which you have selected; eating food that is nutritious and not abnormally stimulating. An occasional enema with warm water would be healthful. Don't, however, make it a daily practice, otherwise the organism will grow to it, and you can scarcely get along after a while

without the practice. Eat liberally of fruit; not of that which is too tart. At this season of the year it would be best to have it stewed. Prunes, apples, dried peaches, canned fruits, etc., are suitable. Take a morning bath with a sponge, using tepid water, and end with a brisk rub with a Turkish towel; this will tone up your nervous system and help to inspire the bodily functions with renewed activity.

SIGNS OF DISEASE.—*Question:* Will you please tell us the signs of an abnormal or diseased condition of the stomach, lungs, liver, heart, and circulation of the blood as manifested in the face; also their healthful or normal conditions?

Answer: We have not space to indicate the signs; so numerous and complicated are they that many volumes are filled with their description. Permit me to refer you to the new excellent and very extended medical work entitled "Zöschgen's Cyclopedia of Medicine." You will find in that book nearly all known diseases carefully described and their symptoms elaborately indicated.

THE TEACHER.—A. S.—When a man has to train the young idea he should have a well-balanced temperament. In other words, the vital, motive, and mental elements should be of nearly equal strength. A slight predominance of the mental would work no damage, to be sure; but unfortunately the rank and file of our teachers possess that in excessive predominance, while their vitality is deficient, and for that reason their teaching is not characterized by harmony and efficiency. Invalidated persons are unfit for the duties of a teacher. A child has a right to strong, robust instruction, and not mere puny text-book service.

RIGHT-HANDED—THE USE OF THE RIGHT HAND.—The superior training of the right hand in the affairs of life is the heritage of ages. There are many operations which require the use of but one hand; and it seems but natural that in process of time that one should have taken the lead in their performance, and the tendency has been transmitted. Children generally show a disposition to use the right hand more than the left. We agree with you that we should be able to use both hands with equal facility. Some men do appear to be ambidexterous. There are anatomists who claim that the left hemisphere of the brain has a controlling influence in mental life, and for that reason the right side of the body is more exercised than the left. It is true that one hemisphere is more exercised than the other, and it is usually the left which dominates, but both are essential to completeness and harmony of mental operations.

J. S. W.—Could I learn Phrenology by procuring the "Student's Set," and studying the works carefully, so that I might succeed as a practical phrenologist, without taking a course of instruction at the AMERICAN INSTITUTE OF PHRENOLOGY?

Answer: Yes. We learned the science from books, but we worked fifteen years, experimenting, making mistakes and correcting them the next time, before we mastered as much theoretical knowledge as students are able to acquire in a course of instruction in the Institute. Besides, now, the people in general know more of the subject than they did when we were beginners, and lecturers and examiners are required to know more than was necessary forty years ago. You could study boot-making from books, but your first practical work would show a great difference when compared with boots made by one who had been taught and drilled. N. S.

Several ANSWERS must be deferred to the next number.



Communications are invited on any topic of interest; the writer's personal views and facts from his experience bearing on our subjects, being preferred.

ALASKA—WHAT IT MAY BE.—It has been suggested that the American Government appropriate Alaska as a place of banishment for criminals. To many minds there is an impressiveness in this suggestion which renders them intensely earnest to have it receive the consideration it deserves.

England, one of the greatest and wisest nations, long since adopted a mode of punishment which might have been a pattern to others. Russia, cruel in her Siberian banishments, has lacked the Christianity which should have made her Siberian deserts abodes of mercy. It remains for the American Government to form and carry out a plan which shall be just, yet merciful, full of the life and spirit of Christianity. We have broad lands in Alaska, with riches in every foot of the soil, containing resources sufficient to sustain a great population. We have men who can be spared to oversee those lands and to guard and defend all who are placed there. Why should lives and property and peace be endangered and sacrificed every hour, by the presence of creatures to whom our beneficent laws have no terror, when Divine law is utterly unheeded, and human law is hourly trampled underfoot? What can be done but to cause both to take hold of evil with a force which shall overcome?

Banishment and confinement from which there shall be no escape will probably effect this. Send the criminal of high grade to find a dwelling-place in far-off Alaska. Here, at home, the masses of the vicious huddle together in guilty companionship, contaminating and being contaminated in unhealthy and often the filthiest localities, engendering each day new forms of sin, and multiplying vices every hour. The sweet word home is unknown to them, much less the sweetness and purity of its realities. Take them to Alaska—in its wide domains and purifying airs, let them find health for souls and bodies. Would it cost more to send them and station such guards as they would require, than it does now to employ detectives and an expensive police? more to build abodes for the solitary criminal or for families, than to keep up costly prisons and places of confinement in the numerous wards of large cities?

The benevolence of the churches would certainly aid the Government by sending teachers and missionaries to help the work of reform. And a noble work it would be! Let the seething crowds which infest the outskirts and heathenish localities of cities and towns, be moved in masses to this land of hope, and the war against intemperance would have almost no cause for existence, and women would not struggle to save their country at the peril of their lives.

Another and most important thought in connection with the benefits of this emigration to Alaska, is the fact of those sent there being compelled to find materials for building their homes, and also compelled to build for themselves, would give employment, interest to their minds, and divert and destroy the wickedness which idleness produces. And all these would in time "pay" the care and trouble required to accomplish this great enterprise. REFORM.

A SCHOLAR'S EXPERIENCE.—I have an impression that a statement of my student experience on the study of mental and moral science might profit our College and University undergraduates, if it could be laid before them.

Forty-seven years ago, the first Junior Class of Wesleyan University ever formed, studied "Upham's Mental Philosophy," under that best and ablest of teachers, Dr. Wilbur Flak, the then President. In that class I studied one week after week in hope of learning how to read and handle human nature—accomplishments that seemed important for everybody, but specially so for the pastor, teacher, and legislator. This view, held in my teens, has been strengthened and enlarged by the subsequent experience of nearly a half century. Every undergraduate who hopes, in due time, to win the heart and hand of some noble, patient maiden, will easily comprehend one point of the enlarged experience referred to.

Well, Upham was studied, finished, shut; but we had made no advance toward practical knowledge of human nature. Man had intellect, sensibilities, will; but *cul bono*?

Hope then suggested that other authors on mental science might be found more practical and valuable; so, long weeks of vacation were given to plodding through the great works of Locke, Reid, Brown, Stuart, etc., etc.; but all in vain! Not to be foiled thus in what seemed the most important of all scientific studies, a notebook and pencil were devoted to this study, all accessible specimens of humanity were observed and the results noted down. To a mere student of books this was tedious work, but it was continued for months. Relief came at last. One day, while looking over the magazines in the University Reading-room, a brief article on Gall, Spurzheim, and Phrenology, was discovered—my first hint of the birth of the infant science. It was so promising an infant that I ordered at once the works of both authors, and these works were a feast to a soul long starved on metaphysical fogs. The claims of Phrenology were at once verified by observations on some of the larger organs, such as Causality, Benevolence, Firmness, etc. Experts have since been found who would describe the characters of my very intimate friends with marvelous accuracy, and do this even when so blindfolded as to be wholly unable to read a feature of the face.

Many men of culture, warped by tradition and perchance by a little pride, tenaciously hold that thought, affection, and will, are purely products of an immaterial, unit-soul. These shrink from Phrenology as tending toward materialism and fatalism. Yet on every side lie proofs that brain is a most important factor in the production of thought. The infant brain is small and feeble, its mind corresponds. Every hard student has experienced a weary, aching brain, caused by unwise overwork, medical stimulants, sedatives, brain-lesion, compression, concussion, diet, digestion, and even the weather, affect thought. Mental and moral qualities are inherited through material organism. Monomania and partial insanity, require a complex brain, partly diseased, partly well. Our wild, incoherent dreams prove a brain partly asleep, partly awake. These few hints may awaken attention.

A Southern student, a perfect stranger to me, once applied for admission into my boarding-school. Noticing an unusual development of Destructiveness and Secretiveness, I feared to admit him, and declined to do so. He entered another, not remote institution, and in about three months was expelled therefrom for assault, with apparent intent to kill!

Undergraduates, students everywhere! You can not afford to neglect the study of Phrenology.

D. H. CHASE.

PERSONAL.

JULES FAVRE, eminent as a Republican statesman in France for more than thirty years, died in January last. He occupied a high place in the Provisional Government of 1871-72, and afterward retired to private life.

MR. EDWARD MCPHERSON is quoted as saying that there are hardly five per cent. of the graduates of the colleges of this country who are good spellers. We don't know the weight of Mr. McPherson as an authority, but we are inclined to believe his statement from our own experience.

JOHN B. GOUGH is 62 years old, has traveled 420,000 miles, delivered 8,000 lectures, and, during twenty-five years, it is said, has not spent a day in bed from illness.

MR. T. J. WYSCARVER, of Columbus, Ohio, has sold his interest in the *New Era* on account of professional engagements, which demand all his time.

STEWART BROWN, of the old banking house of Brown Brothers & Co., New York, died January 30th, in the seventy-ninth year of his age. In his private relations he was highly esteemed for his kindness, courtesy, and strict integrity. He took an active interest in benevolent enterprises, and was very liberal toward charitable work, though exceedingly unostentatious in his manner of giving. During the last ten years he had devoted his time chiefly to many philanthropic institutions with which he was connected.

WISDOM.

"Think truly, and thy thought
Shall be a fruitful seed."

THE misfortune of happiness is satiety, and the happiness of misfortune is hope.—*Champfort*.

CAN there be no sympathy without the gabble of words?—*Charles Lamb*.

A FRIENDSHIP will be young after the lapse of a century. A passion is old at the end of three months.—*Nigu*.

TAKE all sorrow out of life, and you take away all richness and depth and tenderness. Sorrow is the furnace that melts selfish hearts together in love.

LIFE is a slate where all our faults are written. Occasionally we rub over it the sponge of repentance, that we may commence writing our faults anew.—*Lemisle*.

UPHOLD truth when thou canst, and for her sake be hated; but know thy individual cause is not the cause of truth, and beware that they are not confounded.

"To the sunny soul that is full of hope,
And whose beautiful trust ne'er falleth,
The grass is green and the flowers are bright,
Though the winter storm prevaleth."

GOOD books are to the young mind what the warming sun and the refreshing rain of spring are to the seeds which have lain dormant in the frosts of winter.—*Horace Mann*.

AT whatsoever moment you catch yourself trying to persuade yourself that you are particularly humble, be assured that then you are farthest from humility.

"YOUNG man," says a quaint writer, "if you are to be married, your future wife is now living; therefore, pray for her. And while you are about it, don't forget to pray for her future husband; he needs praying for as much as she does."

IT is easy to advise a person, but how difficult to receive, under similar circumstances, that same advice from another, because we are so prone to believe that what we accept is truth, and that those who can not see with our eyes are all wrong.

MIRTH.

"A little nonsense now and then
Is relished by the wisest men."

IT is pretty tough to be poor, but being ashamed of it is putting salt on a sore.

IN Extremis—Pat: "Do you buy rags and bones here?" Merchant: "We do, sure." Pat: "Thin, be Jabers! put me on the schkales."—*Punch*.

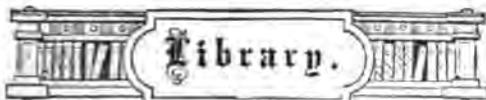
"You never saw my hands as dirty as that," said a petulant mother to her little girl. "No, but your ma did," was the sharp, if not respectful reply.

AN APOLOGY.—"But, Freddy, how could you ever think of calling aunty stupid? Immediately go to her and tell her that you are sorry." Freddy goes to aunty and says: "Aunty, I am sorry that you are stupid."

THE Western lady who read in a newspaper that baking powder was a good thing, thought she'd bake some, and her old man, on arriving at where the cabin had stood, said he wouldn't mind the affair so much, if she'd let the dog out.

An Irishman who stood near the third base, watching a game of base-ball, was knocked down by a foul ball, as he heard the empire call it. "A fowl, waz ut? Faith, I thought it was a mule!"

The poetess sat in her easy-chair,
Ink-smear'd was her face and unkempt her hair,
And untrimmed were the nails on her fingers.
Her round, red heel it peeped out through
A hole in her father's cast-off shoe,
As she sang, "Ah! the soul still lingers!"



In this department we give short reviews of such New Books as publishers see fit to send us. In these reviews we seek to treat author and publisher satisfactorily and justly, and also to furnish our readers with such information as shall enable them to form an opinion of the desirability of any particular volume for personal use. It is our wish to notice the better class of books issuing from the press, and we invite publishers to favor us with their recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

IN PRISON AND OUT. BY HESBA STRETTON, author of "Max Kromer," "Alone in London," etc. 12mo. pp. 269. New York: Dodd, Mead & Company. \$1.25.

Scarcely any exception may be taken to the books of this author. They breathe a pure morality; they teach, with almost too much directness for novels, principles of Christian virtue. The true novelist appears to the reading public as a delineator of human life in certain of its recognized phases, and his method is to illustrate virtue and vice, by the conduct of his characters rather than by making Miss Jones or Mr. Blue deliver long essays on the proprieties and preach up the merits of truth and consistency. There is a good deal of earnest preaching in our author's books, but it is through the talk and action of her characters. Yet the talk rarely takes in the tone of the platform or pulpit.

"In Prison and Out" is a story of English life in its phase of bitter poverty and sorrow, as exhibited by many a member of the working class. Purity and truth are strongly contrasted with crime and vice, and incidents exemplifying judicial severity toward young offenders are woven in for the purpose of showing how law and justice may conduce to wreck a life. There is no exaggeration, no romantic yearning, no effusion of empty sentiment, but a vivid portrayal of the too true of life. The reader points the moral as he reads, and closes the book with the deep-drawn wish that our vaunted civilization would busy itself more about the reform and education of the masses than with overestimated feats of art and literary culture.

BRANT AND RED JACKET. Including an account of the Early Wars of the Six Nations, and the Border Warfare of the Revolution. By Edward Eggleston and Lillie Eggleston Seelye. 12mo. pp. 370. Price, \$1.25. New York: Dodd, Mead & Co.

Still another volume in the series of "Famous American Indians." The authors have undertaken a worthy purpose; viz, to supply our youth with reading adapted to the craving of young minds for the marvelous, but such reading as will stimulate their ambition healthfully, and at the same time give them historical information of a useful sort. The present volume covers a wide range in the early days of New York, and the graphic portrayal of incidents in those wars which were sustained by the famous Five Nations, forms a chain of interest very entertaining. Brant and Red Jacket are, of course, the principal characters, but sketches of the part played in the stirring life of the early settlements on the Mohawk, the Seneca, and the lakes, by such men as De Champlain, Sir Wm. Johnson, King Hendrick, the Mohawk chief, Montcalm, and General Herkimer, are given. The ferocious as well as chivalrous phases of war are depicted, and in the space of a single moderate-sized volume a comprehensive survey is furnished of the times of Brant and Red Jacket.

THE PHRENOLOGICAL MAGAZINE: A Scientific and Educational Journal. No. 1, January, 1880. L. N. Fowler, Publisher, London.

We are pleased to know that our friends on the other side of the Atlantic have deemed the time favorable for the publication of a magazine in the interest of Phrenological science. This first number is unambitious in style, but interesting and attractive in matter. A portrait and delineation of Mr. Gladstone, "Phrenology in England," "Phrenology and Education," and "The Colour Sense," are the *pieces de resistance* of the number, while a pretty story, a sonnet, and several sketches, furnish an agreeable variety. The price, 6d. per number, or 6s. 6d. (about \$1.50) a year, is moderate enough, and that, coupled with the excellence of the magazine, should draw a large subscription list.

LESSONS IN LETTERING. By T. R. Gardner, author of "How to Paint," "Carriage-Painter's Manual," etc. 32 pp. Size, 12 x 14, paper covers. Price, 50 cents. New York: S. R. Wells & Co., Publishers, 737 Broadway.

This is a new work by the author of our well-known manuals on the subject of painting, and will be found useful, and probably become very popular among those for whom it is designed. It opens with an introductory, and then proceeds to give technical descriptions of the styles known as Roman, Full-Block, Half-Block, Outlines, Italian Block, and Italian and Back-Slope. He

then addresses specially wagon-painters, and gives full instructions regarding Full Balancing Letters, Methods of Shading, and making "The Cast Shadow," "Outlines," and hints for Gilding, Gold-Size, Lettering on Glass, etc. There are besides several pages of well-selected sample alphabets, including eighty varieties of lettering, with more than two thousand letters and numerals.

The book will be sent to any address, post-paid, on receipt of price.

THE PLEDGE AND THE CROSS. A History of our Pledge-Roll. By Mrs. S. M. I. Henry, author of "Victoria," "After the Truth Series," etc. 16mo. pp. 256. Price, in cloth, \$1. New York: The National Temperance Society.

A series of sketches drawn from life by the pen of a lady who has been personally active in reformatory effort in a Western city. They illustrate in a pointed manner what may be accomplished by earnestness and perseverance in redeeming poor slaves of drink, and making men who were deemed absolute nuisances and not worth notice, useful and respected citizens. Mrs. Henry's experience should encourage all the women and men who are engaged in the fight with alcohol.

PUBLICATIONS RECEIVED.

THE RELATIONS OF RAILROADS TO THE PUBLIC: A statement prepared by T. B. Thurber, of New York, with reference to discrimination in rates of transportation, whereby New York City is commercially injured. The railroad problem of the country is also discussed, and how the influence of capital bears upon the relations generally of commerce.

SIXTY-SECOND ANNUAL REPORT of the Society for Promoting the Gospel among Seamen in the Port of the City of New York, known as the New York Port Society. As our last number contained a sketch of the pastor of the New York Port Society, this document will be found interesting as an exhibit of his year's labor.

TEMPERANCE AND LEGISLATION. By Canon Farrar, D.D., F.R.S. An address delivered at a Conference in Sheldonian Theater, Oxford, England. A powerful discussion of the needed restriction by Legislation of the liquor traffic. Price, 10 cents, or \$1.00 per dozen. Published by the National Temperance Society, New York.

PROCEEDINGS OF THE AMERICAN NUMISMATIC and Archæological Society of New York, at its twenty-first annual meeting, March 18, 1879. Interesting to those who have that peculiar fondness for accumulating coins and antiques. The report is in some respects instructive.

PROTECTION FOR THE WORKING-WOMEN. Report of the Sixteenth Anniversary of the New York Women's Protective Union, at Chickering Hall, December 8, 1879. This is one of our worthiest charitable organizations; its chief object is to protect working-women of all nationalities, colors, and creeds, against oppression and wrong. It has thus far answered 216,783 applications of various kinds; supplied 38,320 with employment; prosecuted 6,757 cases of complaint, and recovered and paid to its beneficiaries \$22,066, which they would otherwise, doubtless, have lost entirely, through cruel or careless employers.

HARPER'S BAZAR. This representative of fashion, pleasure, and instruction, in its special line, continues to be the leading fashion weekly. It contains agreeable reading for an idle hour on many other topics than those of mere fashion.

REPORT OF THE COMMISSIONERS OF PUBLIC HEALTH RELATIVE TO LUNATIC ASYLUMS, transmitted to the Legislature May 12, 1879. This report embodies the details of the efforts made by certain medical gentlemen to secure the dismissal of certain officers connected with the administration of the lunatic asylums in this State. The testimony obtained by the committee certainly indicates that most of those who inaugurated the investigation, were actuated by feelings little above enmity and jealousy. The committee is evidently of the opinion that the attempt was a very foolish affair. We are pleased, especially with the honorable deportment of Dr. Ordronaux, the State Commissioner, and heartily agree with the opinion of the committee concerning his sterling integrity as an executive in that specially difficult branch of scientific oversight.

PETER HENDERSON'S CATALOGUE OF EVERYTHING IN THE GARDEN. 1880. A neatly arranged and well illustrated pamphlet of 120 pages.

HARPER'S YOUNG PEOPLE. An illustrated weekly publication by Harper Brothers, of New York, at \$1.50 per year. It is certainly cheap enough as regards price, and entertaining, so far as its elements of juvenile fun are considered, but from such a source we should expect a publication which would compete somewhat with other juveniles in print.

THE MUSICAL HERALD. Published by the Musical Herald Company, of Boston, is a recent enterprise; and in style of typography and matter is very attractive.

MIND AND MATTER. A new candidate for the consideration of the reading public, devoted to the discussion of psychological and spiritualistic topics. Published in Philadelphia.

THE UNITED STATES GREENBACK LABOR SONG-BOOK. By Mary Dana Schindler, of Texas. Price, 15 cents.

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WILLIAM ELLERY CHANNING.

THE physiological qualities which made up the organization of Dr. Channing, resulted in refinement and intensity. He had strength, but a great tendency to exhaust it rapidly, as he never undertook anything in a slack, careless manner. He became thoroughly committed to do and suffer whatever the

truth and the exigencies of the case might require; hence he was a painfully thoughtful student from the beginning to the end of his intellectual life.

He brought to the aid of his intellect an exceedingly sensitive and earnest conscience. Truth to him was the alpha and omega, regardless of where it might be found, or how difficult it might be to reach it.

His perceptive organs were large, which made all facts and phenomena interesting to him. The upper part of his forehead gave him a logical and synthetical cast of mind, while the region of Constructiveness and Ideality was uncommonly developed, giving him a constructive and imaginative talent.

His head was broad above and around the ears, which gave him force of character, and induced labors beyond the strength of his constitution to sustain; hence he always worked a little more than he could afford to, and was always in a condition needing recuperation and upbuilding.

His Cautiousness being large, rendered him exceedingly solicitous relative to the results of his work, while his conscience kept him keenly alive to the ethical side of life. He was a philanthropist; sympathized with the afflicted, was ready to relieve and soothe, and sought to mitigate the sorrows of the suffering. He was also tender in his affections, steady and strong in his friendships.

He had Secretiveness enough to make him judicious in his utterances and actions, and he possessed the qualities requisite to attract the intellect of the thoughtful and intelligent, and he had enough of the poetic to satisfy the taste of the refined.

He had strong religious elements, which

were influential in lifting him to the realm of sympathy, reverence, faith, and ethics. He had also that kind of interior honesty which prevented him from accepting what he did not cordially believe; and while he was brave in what seemed to him to be true, and ready to consider what seemed to be the just claims of the poor and oppressed, he was exceedingly tender of the feelings of the people with whom he was obliged to differ; so in controversy he was not one of the sledge-hammer school. He would throw light upon subjects as it were through a microscope, and accept the results of the sharpest investigation regardless of popularity; and though he felt the need of social and public sympathy, he had too much conscience to seek ease and popularity at the expense of his sentiment of duty. He was as brave and enduring as a martyr, and as tender and loving as a woman.

WILLIAM ELLERY CHANNING was born at Newport, R. I., on the 7th day of April, 1780. As a child he was not inclined to spend much of his time in play, preferring rather to read books of a serious, reflective nature. This disposition was largely due to his mother, a lady of good education, and deeply religious, who impressed his very susceptible mind with high moral aims. At that early day discussions on religion were common in the New England home-circle, and young Channing was found an attentive listener, and it was but a natural outgrowth of his associations—the design of studying theology and adopting the ministry as a vocation. At twelve years of age he was sent to New London, Conn., where he entered upon a course of training for college. At fourteen he entered Harvard, and although so young, at once took prominent rank for versatility of talent as a student; in rhetoric and philosophy he exhibited special excellence. His

readings appear to have been extensive and mature in the field of moral philosophy. Such works as the "Beauty and Virtue" of Hutchinson, and Ferguson's "Civilized Society," appear to have given his mind a particular bent, which may be described as that of the sacrifice of personal inclinations and advantages in behalf of the good of others and of general social progress. A short time after being graduated, he accepted an engagement as tutor in a private family at Richmond, Va., where he remained eighteen months. His leisure was occupied with reading works on speculative philosophy, and his health is said to have suffered in consequence of close application in this respect.

In 1800 he returned to Newport and there continued his studies. The following year he was elected a regent to Harvard University, and thither he went, and there devoted himself to theological studies and self-examination. In 1801 he was licensed to preach, and on account of his ascetic disposition it was thought by many that he would come out strongly on the orthodox side; but his readings in speculative philosophy had given his opinions a liberal turn, so that he was more Unitarian than Trinitarian. He accepted a call to a small pastorate in Federal Street, Boston, in 1803, where his preaching at once attracted wide attention on account of its fervor and the intense devotionism which characterized his manner. This small society increased rapidly in numbers, until it was found necessary to pull down the old building in which its services were conducted and build a much larger edifice.

As a pastor he was unremitting in his attention to the duties and wants of his connection, the sick and sorrowing particularly receiving his ministrations. Besides, his labors in preparation for the pulpit were extraordinary. Often it happened that the close of a sermon found him thoroughly exhausted.

When disagreement in doctrine between the liberal and orthodox wings of Congregationalism became so marked

that they could no longer hold together as one body, and the controversy arose, which has the name of the Arian schism, Dr. Channing was looked upon as the leader of the liberal or Unitarian side. He was then a comparatively young man, certainly very young to sustain so prominent a part against the giants of Calvinism. Although he opposed the doctrine of the Trinity, he did not by any means support the views of the Priestley school. In fact, as it is clearly indicated in his public sermons and papers in defense of his position, he sought to blend many principles of philosophy, and those that are fundamental in religion, into one complex form of theology. The charms of rhetoric and sentiment with which he invested his discussions, won a vast number to his side, and commanded the admiration of the stoutest of his opponents. The great German philosophers, like Kant, Schelling, and Fichte, contributed to his scheme of doctrine, while his readings in English poetry, particularly Shakespeare and Wordsworth, appeared to illuminate his mind with rays of ethereal light. Mr. Channing felt that it was not inconsistent for the minister at the altar to interest himself in politics and philanthropy; hence he was found actively engaged in many movements having reform in civil affairs and the welfare of the public for their object.

His attitude with regard to war may be inferred from a discourse delivered in June, 1814—"The Overthrow of Napoleon, and the Goodness of God in delivering them from Military Despotism." He arrayed himself on the side of peace during our second war with the mother country. Everything which he believed would tend toward improving the condition of society—temperance reform, missionary and charitable institutions, improvement in prison discipline, and so on—received his encouragement.

At forty-two years of age he crossed the Atlantic, and was received with the respect due to high moral and intellectual worth. Returning to his old pastorate, he resumed his labors with his usual earnestness.

Of his publications, two papers on the "Life and Character of Bonaparte," and one on "Fenelon," attained a very wide celebrity, and brought him into correspondence with many of the most eminent minds of England and America. His views on the sphere of education are seen to advantage in one of his lectures—that on "Self-culture," delivered in 1839, and a series on "The Elevation of the Laboring Classes," which was delivered in 1840.

As might be assumed, he was a strong opponent of slavery, having been especially impressed by a winter residence on the island of Santa Cruz in 1830, that, as a system, it is fraught with great evil to American civilization. In 1837 he addressed a public meeting at Faneuil Hall on the subject, and so became associated before the public with the abolition movement. His conduct in this relation, as in every other, was pervaded with great earnestness, yet with calmness. He pub-

lished a work on slavery in 1841, which was widely circulated.

During the latter part of his life, Mr. Channing resided either in Boston or at Newport, according to the season. He, however, died at Bennington, Vt., from an attack of typhus fever, while on an excursion in the mountains. This sad event occurred in October, 1842. The last public act of his life was an address at Lenox, Mass., on the 1st of August, 1842, it being the anniversary of the West Indies Emancipation.

Few men who have adorned the fields of literature and theology in this country have, at their death, awakened so strong a feeling of sorrow; and with the lapse of time Mr. Channing's high intellectual abilities and great moral worth have obtained increasing respect.

He was buried at Mount Auburn, where a monument indicates the resting-place of his ashes, the design of which was made by Washington Allston, the eminent painter.

THE NEW EDUCATION—A CHAPTER FOR TEACHERS.

HOW shall education begin? How best be carried on? When shall or does it end? These are pertinent questions at this hour of interest in the best ways of unfolding mind, acquiring culture, and ennobling humanity. First, every human being should be educated symmetrically; body, mind, and spirit should be unfolded together. Physical exercises should always accompany mental training, so that the student may learn to walk and move erectly and gracefully. Ease and grace of manner add a wonderful power to mental culture; they seem to make a scholar twice a scholar, and elevate the man to the highest rank in the nobility of nature. Every student in the land should daily practice those light, simple movements of arm, hand, and foot which give flexibility and readiness. The graces of the spirit—kindness, love, truth, charity, purity, sweetness of temper, patience and fortitude—should be as carefully and constantly taught as the sci-

ences, and if either must give way for lack of time, let it be the mental knowledge that is neglected, rather than the moral.

Where shall education begin? With the perceptive faculties, of course; that is the order of nature. The child can not reflect or judge until its mind has gained material to work upon. Consider how much a child during early years must learn wholly through the medium of the five senses, the perceptive faculties; it must acquire language and ideas of the size, shape, color, texture, distance, and weight of objects of every sort—if these faculties were rightly trained, or even partially trained, this mass of easily-gained knowledge might be wonderfully increased. After the first five or six years of life, children acquire the art of seeing, yet not seeing; hearing, yet hearing not, nor understanding the daily knowledge that drifts over and past them, leaving no impress.

The curiosity of children is so often re-

pressed by orders "to keep still," "stop asking questions," and the like, that it almost dies out in many minds, is only awakened by the sight of something remarkable. This natural desire to know should be carefully trained to observation and research concerning all natural or artificial objects or phenomena; to the study of worms, insects, and fishes; to notice the many varieties of plants, shrubs, flowers, grapes, trees; to observe the differences and likenesses of leaves in shape, size, color; to note the peculiarities of structure in animals; to see the difference in styles of buildings, use, form, advantages, and disadvantages; to observe the stars, their position, brightness, and number. These are the beginnings, the germs of scientific knowledge, and they may be planted in the child of five or six years. All scientific knowledge was first gathered by observation of natural objects. It was in the minds of men before it was written in books. And there is no labor or strain of mind in learning this day by day from the parents' or teacher's talk.

This fact must constantly be remembered: that through the body knowledge comes into the mind; mind can be developed only through the action of the five senses, by the sensations produced, and the thoughts excited by external objects, their uses, powers, and properties. Any person whose senses are alive and acute, if taught to observe thoroughly what passes around him and to study out the reasons and connections of events, may attain thorough command of reasoning and reflective powers, and become an educated person with but little aid from books and schools. Education begins with the first lisped word, the first recognition of an object by its appearance and its name. Any child that can learn the names of objects and the construction of sentences in one language, can, of course, learn them in another, if the same time and effort is given. A child who can learn the names of his companions, can learn the names of the stars. Any mind above idiocy can be improved almost indefinitely. Yet minds are not alike; they

differ as much as bodies differ, in strength, symmetry, completeness. One man has mental gifts in one direction, another man in an entirely different direction; what folly to attempt training them entirely alike. As well attempt to stretch all men to the same bodily height, as to attempt making them the same in mental proportions.

Every life, in a certain sense, begins and ends for itself; whilst in many ways it seems created only to aid, strengthen, and guide other lives. The directing one's own life, the unfolding one's own intellect, the development of one's own soul-powers is the great purpose for which each human being was brought into life. For, and toward this one purpose, every acquaintance, every journey, every friend, every event, however trivial-seeming, was intended to contribute. Whilst we do and must influence the growth of other souls, whatever we may do for others, in its reflex influence may do more for us than for the party to whom we give our efforts. We must free ourselves from the idea that the schools alone educate; that the schools are the only educational agencies. Every one's work, visits, church-going, newspaper, magazine, book, are, or may be, educational advantages. All depends upon whether the mind is open, receptive; the feelings, the heart, interested; the spirit teachable. One will gather wise lessons from dead leaves and withered grass; while another gains nothing from the "vasty deep," the procession of the stars, or the sky-touching mountain-peak. The grandest scenes in nature bear no message to some souls; the whole world and the universe of worlds are to them as naught. They are bound up in pursuit of money or fame or position, and the pursuit of knowledge seems too absurd to such souls.

We have seen that to the infant all knowledge seems to come through the medium of the senses. Memory at once takes up and records this knowledge, else there would be no advancement; then comparison of one object with another follows, and the child is soon saying,

"this is larger or better or whiter than that;" this is the first step toward reasoning; and persons who do not readily perceive likeness, difference, deficiency, peculiarities, and inconsistencies by comparison of objects and thoughts, will not become ready or skillful reasoners. Hence we see that the faculty of comparison should be carefully and thoroughly trained from earliest youth. A person who wishes to educate his powers, and who has little time to study books, can find no method so thorough and efficient as close, accurate observation of surrounding objects and constant comparison of this and that object, event, or person with some other. Such study of surroundings can not fail in time to improve the reflective powers indefinitely, and the quantity and quality of one's reflections prove the intellect and determine the character, the life.

It can not be too frequently repeated, that it is not the amount of facts one acquires by observation or reading that is of any particular importance to the person or the world, but it is the use one makes of facts through working them into his mind by reflection, and evolving them again in his character, in his work, in himself.

One of the great faults of our primary teaching is that it is theoretical where it ought to be practical. How many schools are there where actual measurements of objects and distances are made in order to assist the scholar in learning arithmetical tables? How many schools are there where daily exercises in composition are required? How many schools are there where spelling is made a written as well as oral exercise? How many schools are there where any attention is paid to learning the separate sounds of the letters, correct articulation, and the acquisition of a free, conversational style of reading? In how many schools are fine manners, correct principles, and true manliness and womanliness taught? In how many schools are children taught to think, to observe for themselves in their studies?

The next great fault which we notice in the instruction of youth, is that no attempt is made to furnish them any clew to the operation of their own minds; they are utterly ignorant of how their mental operations are carried on. Memory is generally the only mental power of which they have any knowledge or conception. They do not know in what direction they are gifted, or wherein they are deficient; hence, they can neither use their gifts properly nor improve those faculties which are not well developed. In truth, the most of teachers have not any definite and correct idea of the science of mind. And it is not considered of any importance by school committees that teachers should understand mental philosophy or mental physiology. Indeed, many school committees do not even know that any such branches of knowledge exist.

At this point we see the great value of the classification of mental faculties as given by Phrenology. It is so plain, simple, and direct that any one can master the list in an hour, and lay the foundation for self-knowledge of the most thorough and far-reaching sort. No one can estimate the advantage it is to a person to be able to run over the faculties, and by careful study learn in what degree he has, or has not, those powers of mind. Any intellect that can thus analyze and know itself, has gained an incalculable advantage over itself and its fate.

And now, summing up the whole matter as far as we have searched, we find that Mind receives its first impetus to development through the five senses; hence the utmost care must be taken to educate them thoroughly; then Memory takes up the knowledge gained and records it; comparison of objects, giving ideas of size, shape, color, weight, form, order, number, locality, and methods of construction, with a constantly-increasing use of Language, follows; the instinctive qualities of Combativeness, Destructiveness, etc., gradually unfold; Imitation, Mirthfulness, and Causality come in to swell the number of the child's growing powers; and finally the higher faculties

come into prominence—Spirituality, Veneration, Ideality, Sublimity.

Most young persons would be delighted with the pursuit of knowledge, could they be led along by competent teachers in these easy, natural methods, with the manner and matter of their instruction

suitable to their faculties and the proper order of their development. Alas! that ignorance, which fancies itself wisdom, occupies so many teachers' minds that they will not turn to the natural methods of thought, study, and instruction.

AMELIE VERONICA PETIT, PH.B.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER II.—Continued.

OF THE ETHMOID.

THIS bone is of singular shape and composed almost entirely of compact tissue. The ancients compared it



Fig. 52.—ETHMOID, INNER SURFACE.

with a sponge, probably on account of the large number of openings and cells which render its structure peculiar. It is situated in the anterior and middle region



Fig. 53.—DIAGRAM OF INNER SIDE.

of the base of the cranium. Its name is derived from the Greek terms, *ethmos*, a

sieve, and *eidos*, resemblance. Its form is nearly that of a cube; and it is composed in great part of thin layers evidently intended to increase its extent, and, as a consequence, that of the fine membrane which lines it.

Having a cubical form the ethmoid necessarily presents six faces, of which we shall examine two only—that which corresponds to the cerebral surface (Fig. 53), and that which lies adjacent to the

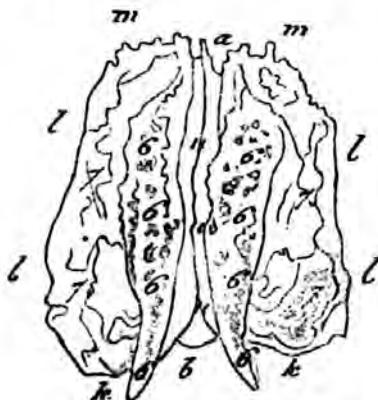


Fig. 54.—DIAGRAM OF OUTER SURFACE.

nasal fossæ, or the inferior surface (Fig. 54). In the center of the superior surface is seen a crest, *a*, having a triangular form, slightly flattened at the edges. It is described in the works on anatomy under the name of ethmoidal crest, or *crista galli*. Its base is fixed and is part of the ethmoid; its summit affords a place of attachment for the anterior part of the fold of the dura-mater, which part is known by the name of *falx cerebri*. (See Fig. 53). Upon the edges of this ethmoidal crest are seen a multitude of apertures

designed for the passage of the olfactory nerves; the extent and form of these apertures vary in man, and still more in animals. The shallow depression of considerable width which one notices at the sides of the ethmoidal crest are those in which the olfactory nerves lie. Farther outward and upon the lateral parts are seen the ethmoidal cellules, 2, 2, 2, 2, 2, 2. The inferior or nasal surface (Fig. 54) is very irregular. There is in its center an appendix designated as the perpendicular plate of the ethmoid, a, b. Its points, n, n, n, articulate with the

the sphenoidal cornets, the superior maxillary, the palate, the inferior cornets, the vomer, and the lachrymal bones.

OF THE FRONTAL BONE.

The frontal bone (Fig. 55) is ordinarily composed of a single piece in adults; it is not rare, however, as we have already seen, to find it to be double. The study of the frontal bone in man, in comparison with that in the principal vertebrate animals, warrants the special attention of the phrenologist. Man is the being who presents it in the highest degree of

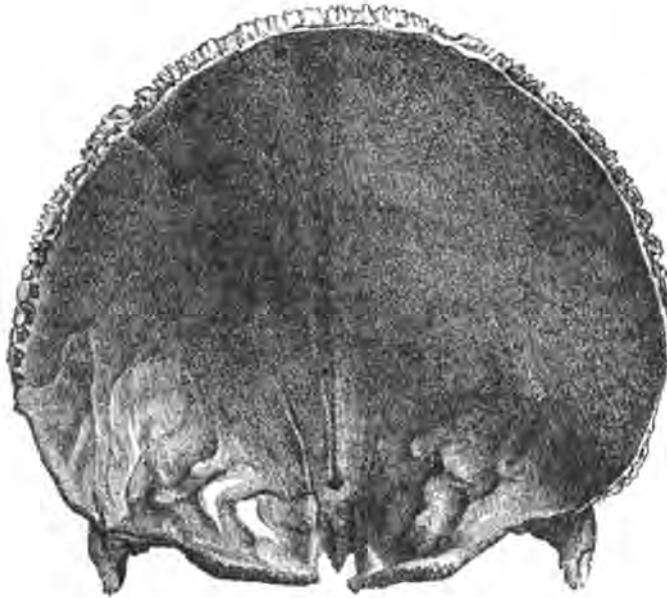


Fig. 55.—FRONTAL BONE, INNER SURFACE.

vomer. On the sides of the perpendicular plate are seen two grooves, in the bottom of which are the openings for the olfactory filaments which we have already noticed. Further outward are seen two curved plates, 6, 6, 6, 6. These are the ethmoidal cornets or turbinated bones.

The inferior surface of the ethmoid is lined with the pituitary membrane. The posterior surfaces, k, k, and lateral, l, l, l, and the anterior, m, m, offer no particular interest to the phrenologist. The ethmoid, owing to its position, articulates with the nasal, the coronal,

development. It has two faces, one external, the other internal. In the lower and central portion, one perceives a hollow or indentation where the bone we have just described is joined to it. At the sides of this indentation, two concave surfaces form the orbitary arches. The middle portion of the external surface is commonly rounded, but sometimes shows a depression; in the latter case, the organs situated at the central part of the frontal do not touch; they are placed more toward the outside than ordinarily. The lower part of this region, marked q, q, (Fig. 56) is sometimes quite

salient; it bears the name of Nasal Prominence, as it contributes very much to the form of the nose. This prominence must not be confounded with an organ located higher, to which Dr. Spurzheim once attributed, without doubt by inadvertence, the Grecian form of nose. At the sides of the nasal protuberance two reliefs are seen, called the superciliary arches or ridges, 5, 5. They give attachment to two muscles, designed to separate the eyelids. These arches present, often enough, two crests, which people not familiar with the application of Phrenology confound with the organs placed

women is generally less in height and breadth than that of man. For the study of this part of the skull in detail, it will be well to divide it into several regions not arbitrarily, but in accordance with that natural division which would result from observation of the cerebral organs which the frontal covers. These regions we may indicate by numbers. First, we have the two superior, 1, 1; the two middle, 2, 2; two lower, 5, 5; and the two lowermost, 8, 8; then two antero-inferior lateral, 6, 6; two middle lateral, 3, 3; and two external lateral, 4, 4. The utility of this division consists in its

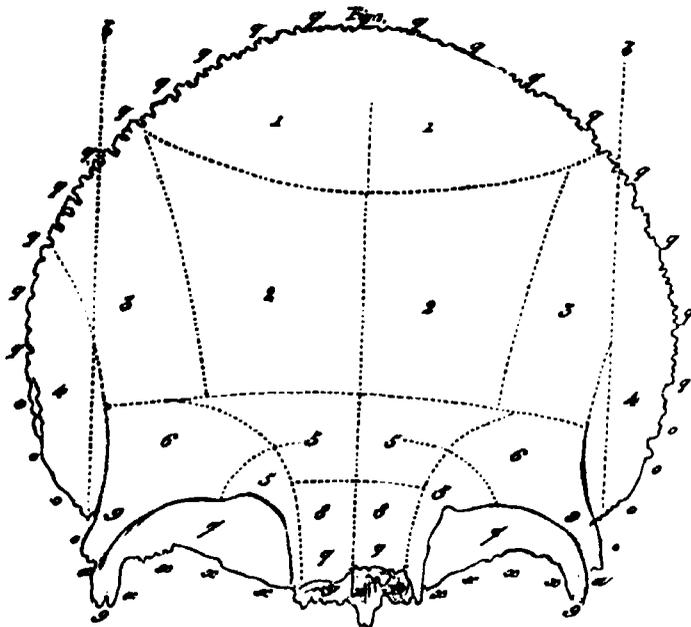


Fig. 56.—DIAGRAM OF FRONTAL-OUTER SURFACE.

beneath. Further outward are noticeable two processes called the external orbital apophyses, 9, 9. Sometimes one meets with these processes of so great thickness that it prevents a perfect estimate of the cerebral organs bordering upon them.

In general, the frontal bone varies much in form and extent according to the race, and also in individuals of the same race. Among five hundred human skulls which Dr. Vimont examined with great care, he did not find two whose frontal bones were formed rigorously in the same manner. The frontal bone in

showing with some degree of clearness the relations and anatomical conditions of the bones of the human head as compared with those of vertebrate animals.

We can appreciate by the exterior of the frontal bone upon a head deprived of its hair, the development of all the cerebral parts corresponding to it, the orbitary regions excepted, in which are located some parts which Gall and others believe can be estimated by the way in which the eyeball is presented. These parts relate to the organs of Language and Form chiefly. One may think, indeed,

that if there existed frontal sinuses of considerable extent (and these are met with sometimes), it is absolutely impossible to estimate closely the development of what is situated behind the external table which contributes to form the sinuses. But this is not so, and it should be impressed upon those who are studying Phrenology, that they should take occasion to compare many skulls carefully with one another, for the proper understanding of the variety of shapes indicated by the frontal bone.

nowhere are they more pronounced than in the orbital plate, of which one may obtain an idea from Fig. 55 and the diagram, Fig. 57 (6, 7, 8, 10, 11). The frontal bone articulates with seven bones of the skull. First, with the two parietals by its superior border, q, q, q, q, q, q; second, with the ethmoid by its great hollow; third, with the bones of the nose, in front and below; with the bones of the tongue, by its inferior face; and finally with the bones of the cheek by the external orbital apophyses, 9, 9.

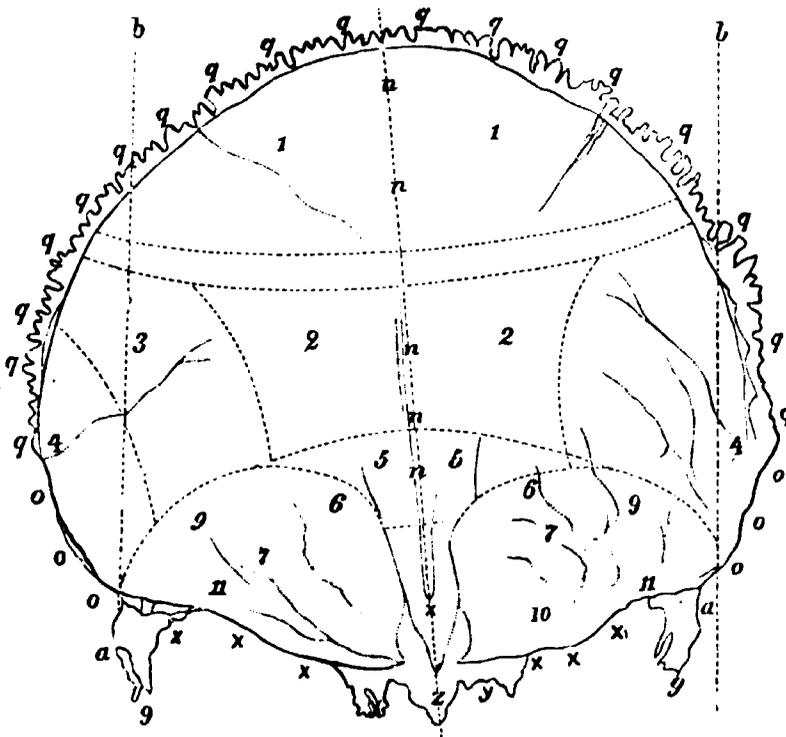


Fig. 57.—DIAGRAM OF FRONTAL BONE, INNER SURFACE.

The internal or cerebral face of the frontal bone (Fig. 57) is concave, and is only separated from the brain by the dura-mater. One notices at its middle part, a depression in which lies the superior longitudinal sinus, n, n, n, n, n. There exists a suture called the coronal, when this bone is found in two pieces: below the depression just mentioned is a species of crest, z, z, in which the falx cerebri is inserted. The whole internal surface of the frontal bone shows cerebral impressions which are well marked, but

THE PARIETAL BONE.

The *parietal* bone is thus named because it contributes to form a great part of the skull cap, or its surroundings. It is double, irregular, with a quadrilateral form (Fig. 58). Like the frontal the parietal has two surfaces. The two parietal bones are complementary, so that a description of one is applicable perfectly to that of the other which corresponds to the opposite side of the cranium. The external surface of the parietal is convex, especially

at its middle part, which corresponds to the point of ossification (see Fig. 59, which represents the skull of a new-born

Toward the anterior angle of this bone a furrow is to be seen, which receives the middle meningeal artery (Fig. 60)



Fig. 58.—PARIETAL BONE.

infant, covered by a hairy scalp). The internal surface is lined, of course, by the dura-mater; in it are hollows and de-

Throughout the whole length of the superior border, a depression exists which is the provision of nature for the

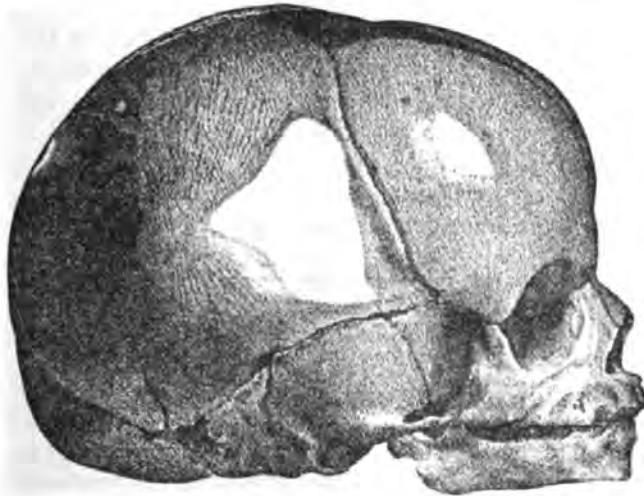


Fig. 59.—SKULL OF NEWLY-BORN INFANT.

pressions in correspondence with the cerebral convolutions. That at the center shows the most depth.

superior sinus of the dura-mater. We have divided the parietal into nine regions so that the differences between its

general or partial development as compared with the same in other vertebrates may appear when we come to discuss this bone in the lower animals (Fig. 60).

The parietal articulates first with its mate on the other side of the head by

whole length, that Wormian or accidental bones are remarked; lastly, the parietal articulates with the temporals by its inferior margin, p, p, p. This bone presents as many varieties of development as the frontal, in the different races of men; its middle portion is ordinarily but

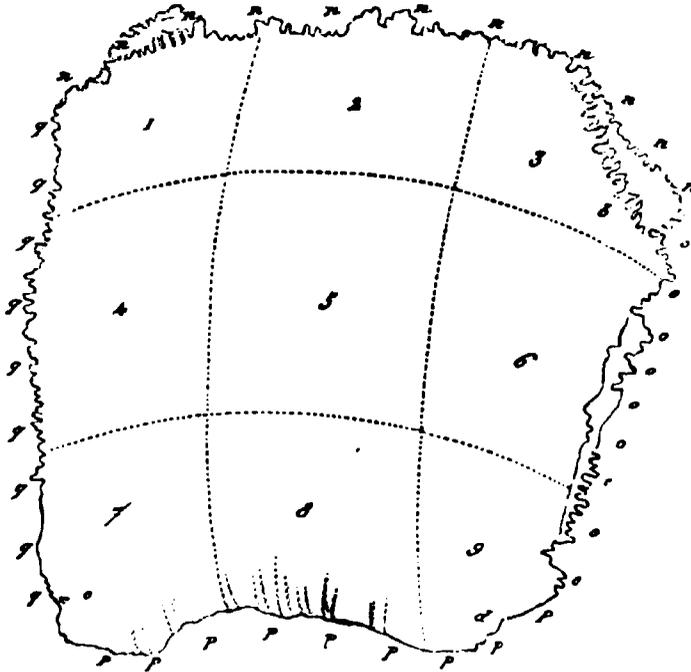


Fig. 60.—DIAGRAM OF PARIETAL.

the superior margin, marked n, n, n, n; this union forms the sagittal suture. Second, with the frontal bone by the anterior border, o, o, o, o; and with the occipital by its posterior border, q, q, q, q. It is ordinarily at the superior angle of this border, b, and sometimes even in its

slightly salient in the French, while it is very pronounced in the Germans. It shows more of the diploic substance than any other parts of the cranium. We shall return to this subject when we shall come to apply the principles of Phrenology to the organization.

UNITY OF THE HUMAN SPECIES.

PART II.

IT is unquestionably good for the cause of truth, that Messrs. Darwin, Tyn-dall, and Huxley have assumed the extreme ground in this controversy, which attempts to account for the coming into existence of the original "primordial form" by the simple play of material atoms independent of a creator. For

some years naturalists have been diverging in this direction; some claiming more and some less representative species.

This attitude has induced a close and profound investigation into the natural history and peculiarities of man, and has brought us to the Mosaic account as the scientific solution of the problem, which

gives a single pair as the progenitors of each animal species. Here we have science, fact, and philosophy, harmoniously blending in a conclusion, not only at variance with the theory of evolution, but absolutely repugnant to it. Now, suppose it was impossible, with our present light (which we do not admit), to show that all the apparent facts of localized shells and fossils could be harmonized with a simultaneous, sudden, and perfect creation, would not this overwhelming evidence forever establish the fact that such was the necessity? These supposed facts, or their environments, depend upon so many contingencies of localization having no scientific principle of deposit, such as that of the growth of plants or animals, admitting of extremely different interpretations, as increased light in discovery has done in thousands of similar instances in the past.

Hence it is folly to suppose that these shells and fossils teach a chronology of the organic world at all, much less one which is in conflict with that given by God to Moses. If, therefore, the human species are a unit, having sprung from a single pair, and yet manifesting such great variety in its races, does it not establish the other fact that all the lower animal and vegetable species are also units?

In further illustration of species and races we here introduce some interesting examples from a French lecturer, A De Quatrefages. The first is that of the coffee plant. He says: "The use of coffee spread early and with great rapidity in the East; but it penetrated Europe much slower, being first introduced in Marseilles and first drank in Paris in 1667. The seeds furnished on the occasion were brought in a small quantity by a French traveler named Thevenot. Two years afterward, Soliman Ago, ambassador of the Sublime Porte in the time of Louis XIV., induced the courtesans of that king to taste it. It was not, however, until the eighteenth century that it began to be generally used in France."

So we see that coffee has not been very

long in use as a beverage; and it is scarcely a century and a half since it became an article of general consumption by the people of Europe.

"During many of these years Europe remained tributary to Arabia for this commodity. Indeed, all the coffee consumed in Europe came from Arabia, particularly from Mocha. Toward the commencement of the eighteenth century the Dutch began to import the plant into Batavia, one of their colonies in the Indian Archipelago. From Batavia some stalks of it were taken to Holland and put in a hot-house, where they grew and thrived successfully. One of these stalks was brought to France about the year 1710, and was placed in the Jardin des Plantes. It also prospered, giving birth to a certain number of stalks. In 1725 an officer of the French navy, Captain Desclieux, thought that since Holland had cultivated coffee at Batavia, he might also acclimate it in our colonies of the Gulf of Mexico.

"When embarking for Martinique, he took from the *Jardin des Plantes*, three stalks of coffee, and carried them with him. By reason of contrary winds the voyage was long and difficult, and the supply of water being insufficient, it was necessary to put the crew on rations. Captain Desclieux had with the others but a small quantity of water to drink each day; but this he divided with his coffee plants. Notwithstanding all this care two of them died on the passage. On his arrival this one was put at once into the earth, and prospered so well that from it have descended all the coffee trees spread over the Antilles and tropical America. Twenty years after this, our western colonies exported millions of pounds of coffee.

"Here we see the coffee-tree starting from Africa, reaching the extremity of Asia on the east and America on the west. Hence it has nearly traveled round the world. In this long voyage coffee has become modified; but no one would confound Mocha with Bourbon, or Rio Janeiro with Martinique. Each of these

seeds possesses peculiar forms, properties, and aroma, giving the certificate of its birth. Now whence came these changes? these peculiar phenomena? The answer is, they came from differences of temperature, climate, culture, and soil. This shows that if we transport plants to considerable distances where they encounter these differences, we obtain different races. But this is the limit of the change. Coffee, in all its modifications, remains substantially identical; none of these races have ever approximated beans or Indian corn, or any other vegetable."

And we may add, Neither would any of these countries to which the coffee had been transported have ever produced it but for this fact, and this proves that all the plants and coffee seeds of all the world and of all time originated from a single seed or plant, whichever was first; and the same laws applying to all other seeds and plants demonstrate each species to have started from a single plant, and also from a single territorial center of the globe, and equally that organic productions do not move in a circle, but that each species had a beginning.

Let us introduce another example—one of animal kind, and from the same authority—that of the turkey.

"This fowl is wild in America, and presents many characteristics which distinguish it from the domesticated turkeys of other countries. The wild turkey is very beautiful and of a deep brown color, iridescent, presenting reflections of blue, copper, and gold, which make it truly ornamental. It was because of its fine plumage that it was first introduced into France. In the beginning no one thought of the turkey as food; and the first turkey served at table was in 1570, at the wedding of Charles IX. As soon, however, as it was tasted, it was found too good to be merely looked upon, and it passed from the park to the poultry yard; from thence to the farm; and from farm to farm, east, west, north, and south, till at present on almost every farm turkeys are raised and have become an object of considerable commerce. But in going

from farm to farm, this bird has encountered different conditions of existence, of temperature and nourishment, and never the primitive conditions it had in America. As a consequence, the turkey, like the coffee, has varied; so that to-day not a turkey in France closely resembles the wild stock. Generally it has become much smaller. Some have become fawn-colored, others more or less white, others spotted with gray or fawn-color. In a word, almost all the localities to which the turkeys have been taken have given birth to new varieties, which from the species have been transformed into races."

Now, in spite of all these marked changes between each other and their first parents in America, are the French turkeys less the children of the wild turkey of America? or are they less brothers and sisters? or have they ceased to be part of the same species?

The wild turkeys and their domestic offspring must, then, be considered as equally the offspring of a single primitive pair. Nor does it in the least complicate the question if we do not know the history and introduction of the wild stock into any country where their descendants exist. These well-known examples admit of no other conclusion than that all the plants and all the animals of the world wherever distributed have followed the same course, and that all originated in a single geographical center, and we say that that center was the garden eastward in Eden.

Now let us inquire how these questions relate to the unity of the human species? The peculiar features they manifest are very marked, and we do not know how or when they or their parents became the inhabitants of their several localities; but as man is an organized being, he obeys the general laws governing all organized beings, and therefore the law of crossing.

As the basis of our argument, let us take the types which seem most separated, exhibiting the most prominent extremes—the white man and the negro.

If these types really constitute distinct species, then their union must bear the stamp we have found to characterize the marriage relations between animals of different species; in the great majority of cases that of infertility; and in the remainder, slight fertility, and this soon disappearing, and no intermediate groups formed. But if these extremes were only races of the same species, their marriages would be fertile, and the fertility would continue from generation to generation indefinitely, and intermediate groups would be everywhere formed, so modifying the peculiarities that if all were placed side by side, it would be impossible to distinguish between any two standing nearest each other.

Now, what are the facts in the case? It is about three centuries since the white man made the conquest of the world, and wherever he has gone he has found local races, groups of human beings which very much differ from himself; and everywhere he has married with them, and the unions have not only proved fertile, but sometimes more so than the indigenous people themselves. To show the rapidity with which these mixed races multiply, we have the fact that it is only about twelve generations since the European overspread the world, and it is already estimated that one-seventeenth of the population of the globe are mixtures. In some states of South America, where the emigration of the whites was earlier, one-fourth of the population is cross-breeds; and in some sections they are more than one-half. It is evident from these facts of universal observation and experience, as well as the logical conclusion of science, that there exists but one species of man. These races now exist at the antipodes in America, Polynesia, and everywhere.

The changes which do not affect offspring, and which may therefore be transmitted, are those we have mentioned; and also extend to such features as the size of the feet, length of legs, arms, etc., which in a greater or less degree are common to different nations; indeed the

greatest extremes of which traces may be found in every nation, and even in a single family. These have their explanation in temperature, exposure, habit, diet, soil, etc.

The flat nose of the African and his large nostrils, result from the necessity of inhaling larger drafts of tropical air to produce the same degree of vitality, because of its greater expansion, the increased exercise giving the nostrils increased expansion, or a larger nose. The curling of the African's hair, though universal on his continent, is common in every country of the globe. Perhaps this has its scientific solution in the fact that the curls deflect the rays of the tropical sun, thus preventing their more severe penetration into the brain. In the transmission of light, it is a law that every intervening object with which a ray comes in contact bends and diverts it in another direction.

Heat curls every kind of hair, and that which is provided in nature for the protection of the brain from injury by the rays of a tropical sun is a created endowment, and which by degrees in time becomes naturally transmissible and inherited. The skull of the African, with its peculiar thickness, affords another feature of protection to the brain.

In a tropical climate the people would naturally cease to wear coverings on their head, and which is their general practice; the continual exposure would increase the thickness of the skull by giving it more work to do in warding off the atmospheric elements, just as the soles of the feet become covered with thicker skin, if shoes are not worn; or that of the hands by handling hard substances, and which also increase in size by hard labor.

In considering the color of the African's skin, we introduce the following from Dr. Livingstone: "When the English people think about Africa, they imagine that all the Africans are like the specimens we have in front of the tobacconist shops. This is not the case at all. *That* is the real negro, and is

only to be found in the lowest of the population. The people generally are not altogether black. Many of them are of olive color, or of the color of coffee and milk; and usually, those in the higher grades of society are of the lighter color. The type we see on the ancient Egyptian monuments is nearer the type of the central population."

It is evident from this that it is the outdoor exposure of the working classes that makes the skin blacker. It must also be remembered that it is not the skin alone of the *men* of Africa which manifests deep color; but is as true of the birds, beasts, fish, and reptiles, and also of plants. Another fact in relation to this phenomenon is, that everything grows less deeply colored as we approach the polar regions. There the white bear is found, and nowhere else; while the black bear lives and is now native to almost every other climate.

We are aware that the shade of the skin of the Esquimaux is of a copper color; but before this fact can be made an objection to our argument, it must be shown that the first inhabitants of these cold countries, who had emigrated from some other, were not blacker, or at least as dark as the present generation. It must also be borne in mind, that it is not required that the colder climate shall change the black skin to white, in order to adapt persons wearing it to live there, any more than that the use of the large nostrils is detrimental in the inhalation of cold air. That they will admit *more air* does not make it necessary that the lungs should inhale more; nor because the curly hair wards off the rays of the tropical sun, that it does any harm to produce the same effect in an Arctic region.

Upon this subject we quote the following from *Colton's General Atlas*: "In the animal as well as in the vegetable kingdom, the largest number of species is met within the warmer regions of the globe; and a gradual decrease in the number both of genera and species takes place as we recede from the equator.

It is in intertropical regions also that mammiferous quadrupeds are most remarkable for their magnitude, strength, and ferocity; that reptiles are larger and more venomous; that birds are decked with the most splendid plumage, and the insect tribes are distinguished for their size and brilliancy of their tints. These effects of light and heat appear to be extended even to the inhabitants of the ocean. Sharks and some of the fish are larger and more ferocious in the seas of tropical regions, and some species of fish are adorned with gayer colors than those of temperate zones. It is also from the warm regions of the earth that the greater number of the most beautiful shells of molluscous animals are obtained, and there likewise do the coral animals and other radiata occur in the greater variety. Animals belonging to cold climates are provided with warm coats, which would be unsuited for the inhabitants of hot regions. Sometimes when animals of the same species inhabit countries possessing different climates, the garb of the one will differ from the other in accordance with the difference of climate. Thus, the skin of the stoat in England is comparatively thin, and of a dull grayish-brown color; but in Northern Russia and Siberia the coat of the animal is transformed into a beautiful thick fur of a clear white in every part except the top of the tail, which is of a deep black, affording under this form the well-known fur called ermine. If by accident or the agency of man, animals are removed to places uncongenial to their natures, they either perish altogether, or some change takes place to fit them for their new abode. Thus the race of sheep now inhabiting some of the valleys of intertropical America, which were originally from temperate European regions, possess instead of their warm woolly fleece, a coat of glossy hair better adapted to the heat of the climate in which they have now become naturalized."

Upon the color of the African's skin, Darwin lays the greatest stress as the distinguishing feature establishing man's

identity with the lower animals; but we ask, if these facts and their teaching—which might be almost indefinitely extended—are not of sufficient weight to

account for these peculiarities without in the least changing or modifying a single species, so that it approximates the nature of another? THOS. MITCHELL.

HONDURAS AND ITS PRESIDENT.

THE Republic of Honduras geographically lies midway between North and South America, and in the center of Central America. It has a population of between 350,000 and 400,000 inhabitants, who are principally descendants of the

The houses of the people have usually but one room, and some of them are furnished with but one chair, one bed, and a hammock, with possibly a table, but more frequently none. Table-ware, such as plates, knives and forks, etc., are rarely



old Aztecs. Along the northern coast, however, the people are chiefly negroes or mulattoes; but there is scarcely a village where one may not see the European, African, and Indian races clearly represented.

seen, as the people eat with their fingers from a common earthen pot in which the beans or rice have been cooked. The best houses are usually those of Americans who have made their homes in Honduras, married a half-Indian and half-

Spanish woman. Such residences may have a tile-roof, and two apartments besides a kitchen.

Marco Aurelio Soto, President of Honduras, was born November 13, 1846, in Tegucigalpa. He was educated at Guatemala, and in 1866 received the degree of LL.D. from the college there. On the 27th of August, 1875, he was appointed provisionally as President of Honduras, and in May, 1876, although but thirty years of age, was elected under the Constitution as President for four years.

President Soto has an organization which, phrenologically considered, indicates health and vigor, power, balance, stability, and self-reliance. He has enough of the perceptive intellect to give him intelligence, but the reasoning faculties, whose organs are located in the upper part of the forehead, predominate. He has scope, outreaching mental grip, power to see new views, and to plan for the future. The width of the head at the temples shows organizing power and mechanical capability; hence he has talent for engineering, and especially for organizing affairs; the ability to harmonize conflicting interests. His head is high; the top seems to be well filled out and rounded, showing strong Benevolence, reverence for a higher power, and for religious sentiment. He seems to have large Hope, and will dare to undertake great things in the way of reforms and progress. If he were called to military defense, he would inspire the army, and if he were trained to military duty would lead it successfully. He is firm, proud-spirited, ambitious, upright, a believer in Divine Providence, sympathizes with the poor, and will be popular with the people at large. It will be only his rivals and those who bring power into action against him that will call out his opposition, and that which will awaken dislike in men. Those who are not rivals, but who are just, kind, fair, and proper in their conduct, will meet in him a generous reciprocity, and the better phases of humanity. He would be a strong opponent, but not a

tyrant. He has in him the elements of reform, progress, beneficence, and civilizing leadership.

He has succeeded wonderfully in turning nearly all his enemies into warm and steadfast friends. It is said of him that any one desiring to remain an enemy must not get within his reach nor enter into conversation with him.

His greatest ambition is the progress of the country, and an entire revolution in its industries. He therefore earnestly desires to protect colonies, of whatever nationality, for, comparatively speaking, the country is almost depopulated. Its many and constant revolutions have driven or kept away those who might have added to its growth.

The Government has no means of assisting such colonies as might come to settle within its territory, in the way of furnishing transportation, seeds, and implements; and this is probably the greatest drawback to populating the country. Exaggerated newspaper reports have recently had a good deal to say about the "immense wealth" of Honduras, whereas "immense poverty" would come much nearer to the truth, according to the opinion of a correspondent of the PHRENOLOGICAL, who thinks that such reports have originated with some one who wishes to secure the favor of the President. The mines, on account of their geological formation, are very uncertain.

The most prevalent diseases of the country, and especially of the higher latitudes, are affections of the respiratory organs. This does not accord with the influence of high latitudes generally, but it can be traced to certain influences of the northern trade winds. When they cease to blow for a few hours or half a day, the temperature rises very suddenly, and when they again blow, the temperature falls so low that sometimes it is very uncomfortable without a fire.

"YOUTH," says an old author, "nimble runs neck-and-neck with folly, but both are out-distanced by experience."

THE MI-WOK INDIANS.

THIS nation or race is at once the most numerous and interesting, in many respects, of the ancient people still dwelling among the mountains of California. Their ancient dominion extended from the snow-line of the Sierra Nevada to the San Joaquin River, and from the Cosumnes to the Fresno. The mountain valleys were thickly peopled as far east as Yosemite; the great and fertile San Joaquin plains, and the banks of the Mokelumne, the Stanislaus, the Tuolumne, the Merced, the Chowchilla, and the San Joaquin, were once crowded with multitudes of these Indians. Even the islands of the San Joaquin were made to sustain their quota, for on Feather Island there are said to be the remains of a populous village. The rich alluvial lands along the lower Stanislaus, Tuolumne, and Merced contained the heart of the nation, and were probably the seat of the densest population of ancient California.

In Powell's "Contributions to North American Ethnology" it is said that north of the Stanislaus these people called themselves *mi-wok* ("men"); south to the Merced, *mi-wa*; on the Fresno, *mi-wi*. On the Upper Merced the word "river" is *wa-kal-la*; on the upper Tuolumne, *wa-kal-u-mi*; on the Stanislaus and Mokelumne, *wa-kal-u-ma-tuk*. This is undoubtedly the origin of the word "Mokelumne," which is locally pronounced "mo-kal-u-my" (accent on the second syllable). Although the largest, this is probably the lowest nation intellectually and morally in California, presenting one of the most hopeless and saddening spectacles of heathen races.

Major Power says: "I felt the heads of a rancheria near Chinese Camp, and was surprised at the diminutive balls which lurked within the masses of hair. The Chief, Captain John, was at least seventy years old, yet his head was still perceptibly flattened on the back, and I could almost encircle it with my hands."

The special points to be noted in their physiognomy are the smallness of their

heads, and the flatness of the sinciput, which is caused by their lying on the hard baby-basket when infants.

There are, however, occasional specimens of noble physical stature, especially in Yosemite and other mountain valleys; but the weakness, puerility, and imbecility of their ideas, and the obscenity of some of their legends, almost surpass belief.

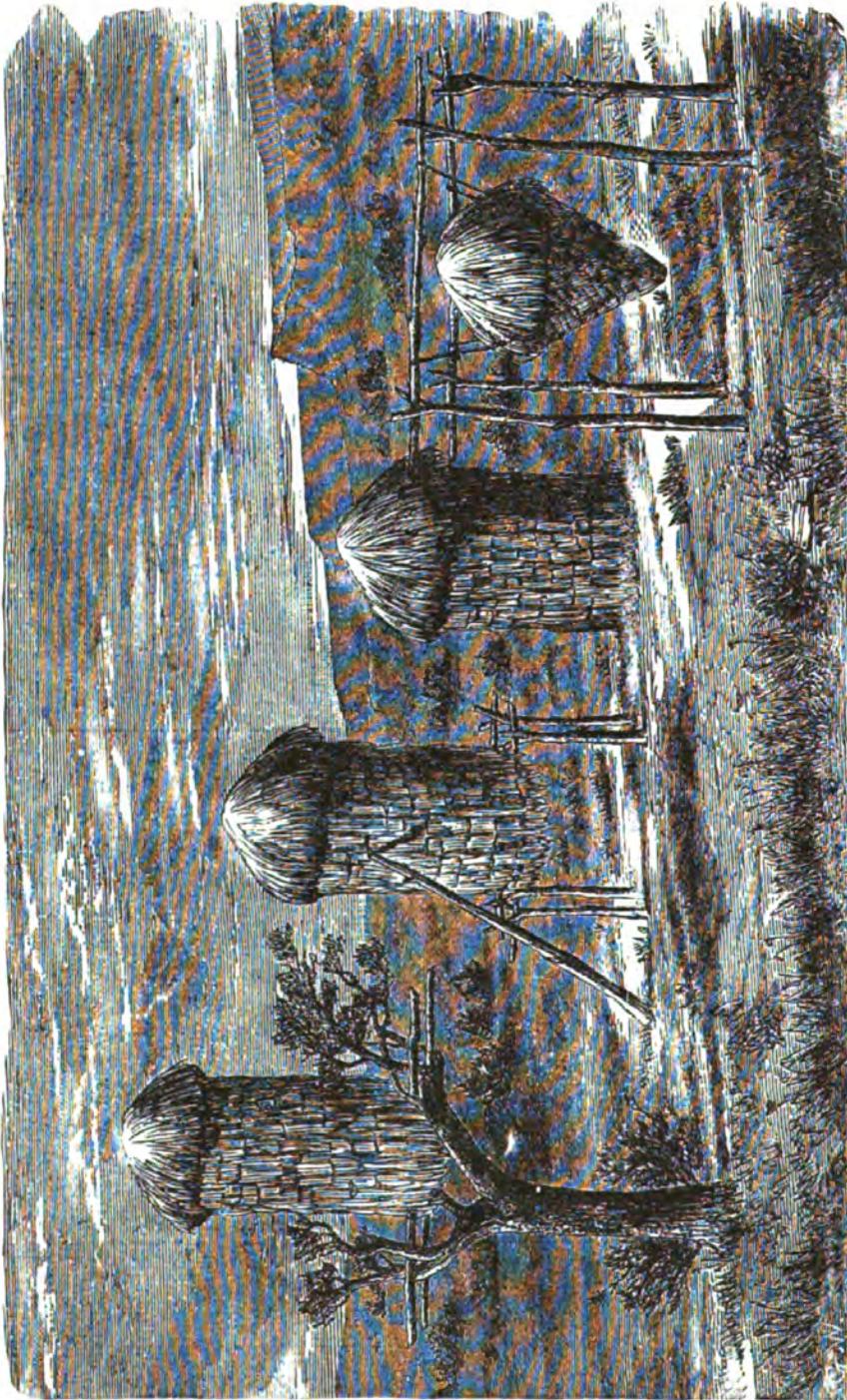
For houses the Mi-wok construct very rude affairs of poles and brushwood, which they cover with earth in the winter; in summer they move into mere brushwood shelters. Higher up in the mountains they make a summer lodge of puncheons in the shape of a sharp cone, with one side open, and a bivouac-fire in front of it. Their food is acorns chiefly; although they eat all creatures that swim in the waters, all that fly through the air, and all that creep, crawl, or walk upon the earth, with a dozen or so exceptions.

It is customary with them as with many of the neighboring tribes to store acorns in granaries for winter use. If the crop were good and they harvested more than they wished to carry to camp just then, they laid by the remainder on the spot. Selecting a tree which presented a couple of forks a few feet from the ground, but above the reach of wild animals, they laid a pole across, and on that as a foundation, wove a cylinder-shaped granary of willow wicker-work, three or four feet in diameter and twice as high, which they filled with acorns and covered with thatch. There these remained safe. As these were often miles from a village, the circumstance denotes that they reposed no small confidence in each other's honesty. It goes near to refute altogether the frequent allegations that they are a nation of thieves. Nowadays they make most of their granaries close to camp, either right on the ground or elevated on top of some posts.

They are industrious to a degree, but most of the labor is performed by the women. They make comfortable robes

of hare skins. These are cut into narrow slits, dried in the sun, and then made into a wide warp by tying or sewing

brushes of the fibrous matter encasing the bulb, with which they sweep out their wigwams. With millions of tall straight



ACORN GRANARIES OF THE MI-WOK INDIANS.

strings across at intervals of a few inches. Soap-root is used in the manufacture of a kind of glue, and the squaws make

pinces in the mountains the Mi-wok had no means of crossing rivers, except logs or clumsy rafts. All their bows and ar-

rows were bought of the upper mountaineers. White shell buttons, pierced in the center and strung together, were used as money, \$5 worth making about a yard; periwinkles being rated at \$1 a yard.

Their chieftainship, such as it is, is hereditary when there is a son or brother of commanding influence, which is seldom; otherwise, he is thrust aside for another. The Chief is simply a master of ceremonies. When he decides to hold a dance in his village, he dispatches messengers to the neighboring rancherias, each bearing a string whereon is tied a number of knots. Every morning thereafter the invited Chief unties one of the knots, and when the last one is reached, men, women, and children joyfully set forth for the dance.

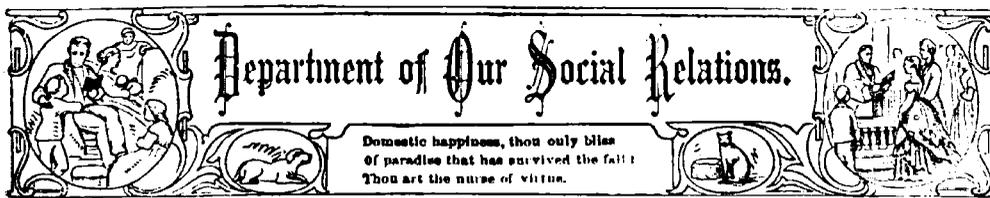
Diseases are treated among them by scarification and prolonged suction with the mouth; physicians are called shamans, some of whom are women. In case of colds and rheumatism they apply California Balm of Gilead (*Picea grandis*) externally and internally. Stomachic affections are treated with a plaster of hot ashes and moist earth. The shaman's prerogative is that he must be paid in advance,

usually fresh carcasses of deer or so many yards of shell money; the patient's prerogative is that if he dies his friends may kill the shaman.

A majority of all who have any well-defined ideas whatever on the subject, believe in the annihilation of the soul after death. A dead man was referred to as *itcheh*, representing the memory of a being that once was. While other tribes mitigated the final terror by an assured belief in a Happy Western Land, the Mi-woks go down with a grim and stolid sullenness to the death of a dog that will live no more.

They have, however, a most degraded and superstitious belief in wood-spirits, who produce those disastrous conflagrations to which California is subject; in water-spirits, who inhabit the rivers, consume the fish, and in other malicious beings who assume the forms of owls and other birds, to render their lives a terror by night and by day.

Here is a field of effort for the Christian missionary which offers as good an opportunity for hard work as may be found in the darkness of Africa, or in the mountain regions of Asia.



GETTING RID OF INTEMPERANCE.

DURING the late civil war a rather "smart" Dublin lady of our acquaintance used to amuse us not a little with her comments on the state of affairs. Like many another of our imported residents of that period, she criticised adversely almost every movement of the Government, and seemed to think she knew a little better than any of us older settlers how things ought to be done. After we had had our Bull Run, and another call had been made for troops, she

exclaimed: "What's the sense of going to war on this subject? Why don't they just take some policemen and go down there and arrest those fellows that are making all this disturbance?"

So it is with a great many of the philosophizers on temperance movements. They say: "Stop the fellows' drinking; *make 'em stop!* Shut up the drink where they can not get it, or shut them up away from the drink." One man has actually within a few years seriously advised and

publicly advocated the shutting up in asylums all those people who were either addicted to drink or in any danger from tipping or from temptation. He did not say how we could get the money to build asylums, nor where we should find the people to take care of the half of all our men; for there would be no less than that who would be thus shut away from the ordinary avocations of life if that plan were faithfully carried out. The other plan of putting the drink where people can not get it, is familiar to most of those who have paid any attention to Temperance movements.

The third plan is that of putting the people themselves in a position or in a mood where they will not wish for it. This, it seems to us, is the crowning grace of all Temperance work, without which it is imperfect and insecure. We hear it said so often that the ultimate object of Temperance work is Prohibition, that many have fallen into the habit of repeating it without really considering what it means. We say the ultimate object of Temperance effort is to get the individual to *be temperate*. This may be done with or without the aid of the law, according to circumstances; generally better with it, we think, because every help should be enlisted. But we need to be very careful about thinking that it can be done by the law alone, or even mainly. The most of the people must believe that they not only can do without the stuff, but that they, as individuals, would be better off without it, before they will either make laws or execute them to any considerable extent.

With the prevalent idea about the wholesomeness of "a little" for a great many purposes, largely in consequence of the deceitful nature of the stuff itself, there are many people in most communities who would not like to be known as other than Temperance people, who yet make large mental reservations when drink is denounced. "Oh, yes, it does a vast amount of mischief; there is A and B and C who are killing themselves by it and ruining their families." "Something

ought to be done." But, somehow, people who talk so fairly never go on and "do" anything unless they are dragged into it, and then not very effectively. In a surprising majority of such cases, if you could see into the thoughts or the life, you would find self excused for using a little. "Yes, it hurts others, but it is good for *me*;" "I could not get along without a little," "for medicine, you know;" and then follow some very peculiar ailments that "nothing else helps at all." They treat it as people sometimes do a friend who has fallen into bad repute. They can not defend him; public opinion is too strong to be stemmed, and appearances are too much against him, yet they associate with him privately, and in their hearts they believe in him. Of course, they will never take nor favor any effective public measures against him.

Now if we can convince these people that the drink is altogether bad, that it poisons *them* every time they take it, and deceives them besides, we take a long step toward waking them up and getting them to renounce it and denounce it and fight it. I do not say, and I do not think that this is the only thing to be done; but I do think it is one of the best things, and that it lies at the foundation of an immense amount of practical Temperance work of all sorts. Some years ago I spent several weeks in the State of Maine, determined to find out, if possible, the secret of their success, and I found a large amount of intelligence and of intense feeling in this direction. Very many would not use alcohol for any purpose, even for medicine, and I had then met with very few such elsewhere. One quiet and undemonstrative lady, the wife of a public officer of high rank, took some pains to say that she had kept house for twenty-five years and never had had a drop of alcohol in the house for any purpose whatever—would not have it. Her husband was engaged in very active and practical educational work in the same line. It became easy to see how such sentiments, intelligently held, sustained the people there in very radical measures.

There were mighty convictions behind the workers.

One of the features of the work had always been a large amount of reading and study about the real nature and effects of alcoholic drinks. When Gen. Neal Dow commenced operations, one of his "maneuvers" was to get up Temperance concerts. He secured a choir, with one or two good voices well practiced in Temperance songs, and made engagements and routes for concerts all through the State. Every school district was visited, or nearly every one. The singing was sure to bring out the people, and this was interspersed with short Temperance talks by himself and others, but the main feature was that every man, woman, and child present had a Temperance tract to take home. This was only one of many ways in which the people were induced to read on the subject.

Another very important measure was the careful instruction of the children. Many years ago Bands of Hope were common in different parts of the State. One which I visited was faithfully attended by over one hundred children, and had been in existence twenty years. During that time it had turned out upward of sixteen hundred youth, who had received a large amount of drill and teaching on the nature and effects of alcoholic drinks. A large number of these Bands have been carried on at one time or another in different parts of the State, and often kept up for years. But this little institution in Maine differs from the Band of Hope elsewhere, just as other Temperance work there differs from Temperance work elsewhere; for in the former the aim is study and information, while in the latter it is mostly performance, songs, recitation of "pieces," and a good time. Scholars drilled in primary studies make good readers of Temperance truths.

And they were a reading people. I think that hardly stress enough has been laid on the fact that Maine was settled from Massachusetts, and has never had a large admixture of foreigners. They are therefore a people of ideas, and they have

had it all their own way, with few to oppose them compared with other States. When they took up the Temperance work, they went into it thoroughly, and they have kept at it without abatement. Their reading made them understand the first principles, so that there was no serious division in their ranks. And although outside of the State the Maine Law has given them their reputation, no people understand better than they do the value of moral suasion, and the necessity of it to their success. With this they built entirely at first. Hear what ex-Governor Dingley said last summer at Sebago Lake, than whom no man is better able to represent the facts: "In no other State has there been so general a use of moral agencies in promoting Temperance as in Maine. The most potent moral movements that have ever been known had their origin here. The prohibitionists in this State have ever been foremost in moral work. They have simply used legal suasion as a buttress to moral suasion. They have done this in order that the men saved by moral agencies might be aided in keeping their good resolutions by the removal of the dram-shop temptations." Just as we said, it is the moral change that saves the man, it is the heart belief and the heart desires that mold the man and control his actions. You can "bend the twig" by Temperance teaching as well as by other teaching. It is not enough to keep the temptation to drink away even from children. There should be strength of character, fortified by information within as well as favorable influences without, and of the two the former is by far the more important.

There is another very important difference between Maine and other States in their getting rid of Intemperance. For a long time they were intelligently working for Temperance as an ultimate object, and not for the law. Hear what Governor Dingley says again: "There is little doubt that when the Maine Law was enacted in 1851 as a buttress to moral suasion, a majority of our citizens doubted its wisdom

and consented to it only as an experiment. The fact that the experiment has become a policy of over twenty years' growth (it was repealed once and re-enacted), and the policy so well established that no political party dares to set up the banner of repeal, is convincing proof that the people of Maine regard its wisdom as clearly established."

That is, the Maine people did not work very directly for a law until, by what are usually called moral measures, they had secured a majority, so that they had a reasonable prospect of passing a law and enforcing it. If they had undertaken it before they had educated a majority, they would have weakened themselves continually by appealing to the majority while that majority was against them. For these efforts for prohibition are nothing more nor less than appeals to the majority, while majorities are largely manufactured by other measures.

That is where Maine has had the advantage of us. She has studied her own work, and devised measures to suit its condition as she went along, while we have, many of us, been led away by appearances to imitate what we could not or would not fashion for ourselves. So in many of the States we passed "Maine Laws" and could not execute them after we got them, because we had not Maine people and Maine ideas to help us in the work. Our main effort has been to "get the law," as if that would do everything. Hear Governor Dingley once more:

"Prohibitory laws will not largely execute themselves as other laws do, for the reason that the victim of the dram-seller usually endeavors to protect his greatest enemy, while the victim of the thief usually takes the lead in securing his apprehension."

It seems, then, that what we want at every turn is staunch Temperance men and women. We know perhaps more or less such in every community. "Oh, if we only had a dozen such to meet the enemy at every turn, we should have some hope!" This is the despairing cry.

They seldom seem to think they can go to work and *make* such men by educating and training them in Temperance schools, and by all moral and religious methods. But that is exactly what they have been doing in Maine, and hence they have the men that they can rely upon, men that hate alcohol more than they do any other poison.

"So you think education will do it!" says an objector.

Well, no, not "education" in the common acceptance of that term. A man may be learned in half a dozen sciences, and if he has not studied the science of physiology, and the injury done to the system by the use of alcoholic liquors, it will be no certain guarantee of safety. We have had lawyers and statesmen, professors and *literati* who have found their way down to the gutter through drink. There have been poets who have sung of the beauties of the delirium and hallucination that came through the poison of the cup; and we have had doctors not a few who have sent their patients to a drunkard's grave and then followed them thither. While it is true that comparatively few educated men become drunkards, it can not be denied that there is no certainty of safety in a literary or business education.

But we do not see its probable advantages fully till we look upon the terrible ruin that comes to ignorant savages through drink. It mows them down with the certainty, if not the swiftness, of pestilence, and there seems to be no preventive except through civilization, as we call it, which is just another term for education. So we can greatly advance the temperance of a people by education or civilization; we can very nearly assure the safety of individuals by careful instruction in scientific Temperance, and we can—yes, there is another step—we can convert the majority of these into faithful, effective workers and apostles of Temperance, by an infusion of the vitalizing influences of Christianity, for none but Christian nations have Temperance societies.

To rise to the realm of personal security and aggressive work, a man must not only know what alcohol does to the individual who takes it, but he must be self-denying enough, conscientious enough, not to yield to its seductions. Weak consciences often indulge in things known to be hurtful. Then, if the work is to be pushed, he must be philanthropic enough to sacrifice comfort, emolument, time, and often "all his living" for the sake of getting others to share the same spirit and gain the same intelligence. The spirit required for this is true Christian heroism. Hence the wonderful success and after results of the Woman's Crusade. The permanence of these results will now depend largely upon the amount of scientific truth upon which

they build. They must have "zeal *according* to knowledge." No matter how zealous and diligent they may be, if they allow that beer is a wholesome drink, there will surely come a general backsliding; if they look upon "the wine when it is red," they will soon cease to see much that is worth working for in the Temperance cause. But the more they mingle with their overt labors a keen intelligence as to the truth, and a stalwart self-denial, a white, shining purity of right living, the sooner there will be "giants in those days" who shall sweep away the films of this vice and let in the sunshine of God's purity, to banish the miasm which is now desolating the fairest portions of God's heritage.

JULIA COLMAN.

A VALENTINE.

THERE'S a witching, magic spell
In your eyes o' bonny blue;
There's a charm I can not tell,
Nor can you—nor can you.

You've light ripples in your hair,
That have grown since first I knew
How from all the lassies fair
I chose you—I chose you.

On each softly-rounded cheek
Is an apple-blossom hue;
Would that I could really speak
Thoughts to you—thoughts to you!

For I've heard from ripe, red lips
Words so kind, and brave, and true,
I'd not mind old Fortune's slips
Had I you—had I you!

E. S. CONVERSE.

WAIT.—Yes, wait, till the heart grows sick and faint, till the step grows weak and faltering, till the eyes grow dim with weeping, till hope is lost, and after that still work and watch, and wait. How can one wait for the good that never comes; the hopes that are never realized; for the love which is to brighten all things, and make all things endurable? How can we wait for friends kind and true; for wealth to ease our burdens; for homes of beauty and happiness, to crown our lives with peace and content; to satisfy the heart-cravings of our inner life? How can we wait to wade through the sloughs of dependency; to grope through the dungeons of despair; to struggle through the quagmires of discontent; to sail o'er the seas of sorrow; to climb the hills of difficulty; to bend 'neath the burdens of

sin; to wander among the shadows of doubt and uncertainty; to buffet the waves of adversity; to be pierced with the arrows of distrust, withered by the frosts of disappointment, blackened by the breath of slander—how can we wait for all this, carrying about with us our dead loves, our buried hopes, our crushed enthusiasm, and never give up, never lay down our burdens, but go on and on in the paths that lead to the gates of victory? The gates of victory? How do we know they will ever be opened to us? We know this: that they will not except we patiently work and wait. What if the way is long and dreary? The victory is sure—it lies at the end, and these hours, and days, and years of weary waiting will only be stars in the crown of our rejoicing. Brave soul, work, and wait.

OLIVE A. DAVISON.

HECTOR: HIS WORK AND HIS WAYS.

HECTOR was the son of Priam and the hero of the Trojan war. The modern Hector is the son of Original Sin, and the hero of a more cruel, if less bloody war, than the Trojan.

If a man breaks his leg, he can bear the pain and wait for recovery. If his house burns down he can estimate his loss, and the amount required for rebuilding. If his ship is lost at sea he can deduct the worth of vessel and cargo from the sum total of his property. In all of these calamities he is more or less of a philosopher, according to temperament and circumstances. But the man who would utter no complaints in these situations, is frenzied by the bite of a flea or the buzzing of a mosquito. No logic or philosophy avails against these tormentors: and if he were to be continually at their mercy, life itself would cease to be desirable. "I can endure being crushed by elephants and clawed by tigers," said a man who had had a taste of such exhilarating experiences. "I lost an arm in the war, and a whole block of buildings in the Chicago fire, but an Adirondack gadfly is worse than the whole of them put together."

The human mosquitoes, fleas, and gadflies are those persons in a community who aspire to be funny, their wit consisting in the constant ridicule of the dress, appearance, or peculiarities of their companions; the burlesquing of speech and manner; imposition upon a too ready credulity, or the pretended disapproval of deeds and words. The designation, "a great tease," is considered a compliment; and the individual so termed is gratified by the fear and aversion of his victims, the blushes, tears, protests, and bursts of temper called forth by his attacks, measuring his success by the magnitude of these results.

It is acknowledged that this propensity, as it is exhibited among children, is hurtful to the last degree. The attempt of one child to tyrannize over another, to hector, to tease, to provoke, to aggra-

vate, to tantalize—all synonyms of the same thing—is rebuked by his elders, the offender sometimes soundly cuffed, his victim sympathized with and comforted. But there is no reason to expect from the little ones, the consideration, tenderness, generosity, and self-control that grown people are supposed to exercise. These graces of the spirit belong to maturer development. If they always accompanied it, there would be fewer needless heart-aches in the world.

John Smith sincerely loves his wife, but also dearly loves what he calls his "little joke" at her expense. She is a matter-of-fact woman, a devoted wife and mother, good housekeeper and kind neighbor, but she is utterly lacking in appreciation of humor, at least of the kind which her husband enjoys, if it can be called by that name.

"Wife," he calls out, in a tone of great suffering, pulling up his shirt sleeves, "look and see if you can find the splinter in my arm." Down go spools, scissors, and button-box, in the wildest confusion, on the floor. The sensitive woman, with a glance at the contorted face, stands over him, hindered by many groans and much writhing, till, as he sees how pale she has grown, he removes his hand and cries out in a very different tone, "Come to think of it, there isn't any there! Ha! ha! ha!" He laughs long and loudly. It is very funny; very funny, indeed. It is funny to him exactly in proportion as it is painful to her. He does not notice the trembling of the fingers with which she picks up her scattered sewing, or how, for the rest of the day, she starts at every little sound. He has given her nerves a wrench in comparison with which a blow in the face would have had a far less injurious effect.

But it is generally before visitors that the good man displays his greatest efforts. It is more trying to his wife, consequently more satisfactory to him, to have several spectators. It is for such occasions that he reserves his affectionate witticisms

concerning her "slack housekeeping," her "poor cooking," her neglect of his clothes, her general good-for-nothingness, usually ending with some facetious remark concerning the value of second wives. She bears it with the equanimity acquired by long practice. For her guests—they can best testify as to their enjoyment of these matrimonial courtships.

John Smith, Jr.; inherits his father's disposition. "Mary," he calls out to his sister, whose thorn in the flesh is her red hair; "lend me one of your curls, will you, to light my cigar? Oh, it has struck in again, has it?" is his observation on her flushed cheeks, another peculiarity to which she is sensitive. She is credulous and frank, too, like her mother. "Did you know the City Hall was burned down?" he asks her, with a serious air. "Why, no. Is it?" is the natural answer. "Not that I know of. Ha! ha! ha!" laughs John, Jr. She speaks of a sick friend who has eaten nothing for ten days. "Why, Mary, there is a man I know of who has not tasted a mouthful for ten years," he exclaims. "Why, where?" she asks, hastily. "Oh, in Greenwood Cemetery;" and he laughs again. He is the punster of the family circle. He asks his little sister, an affectionate child, who hangs about him in an unwelcome way, why she is like a silver dollar, and answers her questioning look by the assertion that she is always 'round. The burst of tears which follows this announcement, the child perceiving only the offense of the remark, is satisfactory to him, as he is thereafter allowed to read his newspaper undisturbed. It is true, as Emerson says, "There are people who

can never understand a trope, or any expanded sense given to your words or any humor; but remain literalists after hearing the music, poetry and rhetoric, and wit of seventy or eighty years. They are past the help of surgeon or clergy. But even these can understand pitchforks and the cry of fire, and I have noticed in some of this class, a marked dislike of earthquakes."

Unfortunate, indeed, are the poor people who can never "see the point" of a joke, or join in the laugh which it raises. But misfortune of body or soul deserves tender treatment. We are not to toss these mental cripples upon the pitchforks of our wit, shout false alarms into their too credulous ears, or startle them with assumed convulsions which may throw them into the same condition. "Fun is better than physic," and a good joke is one of the best things in life; but fun and joke on one side at the cost of discomfort or suffering on the other, ceases to be funny, but becomes, of all things, the most silly and stupid. It is worse than that; it is cruelty and persecution. There are gravestones on the hillsides upon which could be truthfully inscribed: "Teased to death by her loving and disconsolate husband."

There is no time of peace in which the modern Hector prepares for war. He never lays down his arms; his enemies are always in expectation of his assaults. He is an ignoble warrior. He beats down weakness which can make no resistance. He attacks not the seen and the physical, but the more precious unseen and spiritual, and his military record is but a series of mean and dishonorable exploits.

C. B. LE ROW.

A PLUCKY WOMAN.

WHO shall say that "circumstances make the man"? We accept this old statement if temperament and organization are accepted as a part of the "circumstances." Ole Bull is, without doubt, a first rate circumstance to aid in developing the character of a violin, but this great

master will tell you that the instrument itself must have peculiar qualities of form, proportion, and resonance, or even he can not make it discourse seraphic melodies. God be thanked for a good organization, and then, for favorable circumstances, but "the greatest of these" is organiza-

tion. This is illustrated by the following story of a woman who died lately in the city of New York, as related by the *New York Times* :

"In Elizabeth street, not far from Broome, stands a dingy, old-fashioned house, managed by an Englishwoman upon the stereotyped English lodging-house principle. This house is owned by, and has for years been the residence of, a woman whose career possesses some extraordinary features, who commenced with nothing and amassed a fortune of \$1,000,000 by real estate operations, and at seventy years of age intended to finish her career in the world by writing a treatise on religion and science. More than fifty years ago a young girl in an interior county in this State walked thirty miles to engage the principalship of a village academy. Although not competent to pass an examination for the vacancy, the trustees were struck by the indomitable pluck of the young rustic, and kindly promised her the situation if she would prepare herself to pass an examination within the two months' vacation between the spring and fall terms.

"The girl went home, shut herself up in a little garret room, lived on bread and water, quarreled with her mother about the housework and applied herself night and day to arithmetic, geography, and grammar. But when sturdy little Louisiana St. John reported for examination at the expiration of the two months, she answered every question triumphantly, and entered upon her duties as the principal of a village academy. For more than twenty years Miss St. John pursued the career of a pedagogue, amassing money, dollar by dollar, and investing

her savings with circumspection, until she thought herself financially strong enough to abandon the schoolma'am's desk and remove to this city. At first, her operations in real estate were small and tentative, the Englishwoman, then young and active, acting as her agent.

"But successful accumulation engenders confidence, and the year 1873, memorable for its financial crisis, found the adventurous schoolma'am operating on a large scale in western land, St. Louis city lots, etc., and exercising from her little parlor in Elizabeth street a potent influence on the market. Her habits were peculiar and methodical. Rising with the sun, she laid out the business of the day with mathematical precision before breakfast, and issued her instructions to her trusted lieutenants, giving minute directions as to the conduct of each enterprise, and holding each subordinate to a military accountability.

"Although seventy years old and suffering from dropsy, about ten months ago, and shortly before she died, this indomitable old lady journeyed unattended to St. Louis, and there, week after week, while the bridge across the river was in progress, looked after the interests of a large property likely to be affected by that enterprise. Beset with sharpers and interested parties of all sorts, her woman's insight rapidly sifted out the false from the true, and protected her million alike from the speculative enterprises of the visionary and from the bubble companies of the professional financier. Having no heirs, her aim was to apply her fortune to found an institution that shall in some way benefit humanity."

SONG LIFE.

BEYOND the beach's trodden slope of sand,
Down past the frothy, shifting water-line,
Deep underneath some fathoms of the brine,
A crystal spring rolls up sweet waters bland,
Fresh 'mid the saltness of the straud.
No ebb-tide ever lets the sunlight shine
Unblurred upon it; and around it twine
Dark, dangling weeds by West wind never fanned.

So, in the poet's heart, amid the gross
And brackish bitterness of earthly tides
The well-spring fresh of song forever flows,
Sweetening all, where'er it, mingling, glides;
For though its life is lost in surging woes,
Its birth was on the hills where light
abides.

H. L. KOOPMAN.

RADICAL TEMPERANCE REFORM.

MRS. IDA FOX LEGGETT'S lecture on Temperance at Masonic Hall, New York, deserved a very much better hearing than it received. She stepped outside of the beaten track of the average Temperance exhorter—disclaimed all attempt at emotional preaching, and held out very little encouragement for much progress in the work of reformation through that means; and the logic of her discourse gave little hope for the confirmed drunkard. She believes in studying the organic or temperamental constitution of ourselves and our children, and in so educating the appetites and feelings, that there shall be no tendency to drift in the tide which sweeps on to the fatal maelstrom. She spoke of phrenological science as the only true road to this self-knowledge and self-improvement; made many references to Prof. Fowler's writings, and frequently quoted from his "Hereditary Descent;" she went to the root of the upas in the declaration that the great army of drunkards is recruited from the millions who are brought into the world by ignorant mothers, loaded with the depraved appetites of dissolute fathers, and from the cradle to the threshold of manhood are nursed with cordials, tea, coffee, mustard, and pepper-sauce, tobacco, wine, and whisky.

She said that until parents knew something of their physical and mental organisms, and those natural laws which are unvarying in their operation, so long may we expect to manufacture drunkards by the thousand, and fail in the process of reforming one. What is most needed by society is to educate woman in the knowledge of her power to mold the character and tastes of her future child, and to appreciate the importance of imbibing such fixed principles herself as to become the model of good judgment, and correct habits for her children to imitate; imitation is the first great educator of the child, and every little child at six years old has already shaped or chosen his ideal man; above all, the mother should be the companion of her children; make home their play-house and herself the genius of

the frolic; devise ways of amusement at home; keep the play-ground around the hearth-stone.

Until we have reached first causes, and popularized a system of education for the passions and feelings, we can not expect much permanent progress in the Temperance movement. The literature of our science teaches the exercise of our animal nature in and through the influence and under the direction of our moral and intellectual natures, and we only show ourselves superior to the animal kingdom, when we lift our lower up to the plane of the higher nature; when we purify our physical impulses and expressions by the moral and spiritual attributes with which we as human beings are alone endowed. While we live in the base of the brain merely, we may expect to be tobacco-chewing and whisky-drinking idiots, and brutal animals; but as we grow up to the top sphere of the brain, and live more and more in the moral, spiritual, and intellectual realms, we annihilate those conditions. This is the improvement which must be made, this the reformation which must be brought about if we hope to organize a society of sober, industrious, fellow-loving, God-worshiping people.

Let the pulpit and the press, particularly the latter, because of its vast influence upon the masses, help to disseminate our philosophy, and the good effects will soon be felt in the decrease of crime, a better state of society, a higher and truer conception of integrity, and a purer moral and religious life.

E. W. A.

A P R I L .

Now o'er the earth young April comes,
 Her apron full of flowers;
 And oft her fingers sprinkle them
 With soft and dewy showers;
 She brings the birds to sweetly sing,
 The bees to hum around;
 She fills the air with balminess,
 And carpets the dark ground.

J. H. WILSON.

THE YOUNG FOLKS OF CHERRY AVENUE.

CHAPTER IV.

THE READING LESSON—A YOUNG LADY FROM NEW YORK.

AFTER the door had closed on the man of science the school was rung to order, and the lessons of the afternoon were begun. First in order was the reading exercise, in which both apartments joined. It was customary to appoint two critics, one in the front and one in the back room, a girl and a boy, who watched while the others read and corrected their mistakes in pronunciation. Any one who was reading could ask the critic the meaning of a word he did not understand. Milly was appointed the critic for the girls, and Lester Phillips, one of the oldest boys, received the honor in Miss Grace's room. Little Jennie Trevor taking her turn stumbled in the word ingenious—calling it ingenus. "Ingenious," spoke out Milly, making *e* short. "Ingenious," quickly said Lester. Milly turned red, and flashed out angrily: "I meant ingenious, of course; and I think Lester Phillips need not have been so quick, because I would have corrected myself in a second."

"Well, Milly, don't get unnecessarily angry about it, if it were only a slip of the tongue," admonished Miss Julia.

"Well, some are rude enough to laugh if I make the least mistake," replied the girl.

"You don't often give them the chance to laugh at you, Milly. Now, Jennie, go on."

"What's the meaning of ingenious?" asked the child.

"It means—why, it means having genius; being smart in doing things. Don't it, Miss Clem?"

"You are to answer the question, if you can, Miss Critic," replied her teacher.

"That is all I can say about it," insisted Milly, whose ruffled temper had not quite calmed down.

"What have you to say, Lester?"

"I think she's about right, ma'am."

"Yes, and to explain it a little further,

it means having the power to invent new ways of doing things; having uncommon talent or skill in the use of tools. Dr. Welling would tell you that some men are better carpenters or blacksmiths, more ingenious in making boxes or building houses, more skillful in shoeing horses and doing iron-work than others, because they were born with larger faculties in their heads for doing those very things than others. Can you understand me, Jennie?"

"Yes, I think so. Mamma says that I'm real smart in learning to crochet; that I pick it up real quick, while it takes sister a great while to learn a new stitch—that means ingenious; don't it?"

"Yes, my dear; but you should have said doesn't for don't, for—why, Milly?"

"Because *it* is singular number, and the verb should agree with it in number and person."

"Right."

The reading lesson was about ants, some account being given of their habits and wonderful intelligence. The children appeared to regard the statements of the book pretty much as they did the astonishing feats of the fairy stories; even the oldest now and then appealed to the teachers for confirmation of the truth of the writer. After reading a paragraph which stated that common ants have regular settlements with sentinels always posted at short distances from the nests, and that those sentinels are sure to give the alarm when any danger approaches, Lizzie remarked:

"How funny, Miss Clem, that such little, tiny creatures should show so much wisdom; they seem to do many things just like men."

"Yes, small as they are, some naturalists have devoted many years to watching them, and tell us that scarcely any other living creature is more interesting. One of these naturalists, M. Huber, a

Frenchman, has written a great deal about them, showing how skillful they are in building their houses, under ground and above ground; how they work and play and fight. Some species keep servants or slaves to do their rough work, and I have read that in some ant families there are nurses who feed the baby ants, and take them out of the nests to walk and enjoy the sunshine. It seems, indeed, too much to believe. And yet these scientific men who tell us such things, would not be so dishonorable as to deceive us."

"Miss Clem," spoke out Edith, raising her hand.

"Yes, Edith."

"People are all the time talking about ants being so industrious, and saying they are examples. Now, here it says that some of them don't work at all, but make others work for them. And I think that people ought to know this, so they wouldn't be saying what isn't right."

"You think, then, that there are lazy ants who will not work, just as there are lazy men and women who do not like to work?"

"Yes, ma'am."

"That is true; but the ants who do not work are said to be the masters of the others."

"Do you think they pay the workers for what they do?" asked Lester Phillips.

"I can not answer your question now; but I shall look into the matter and learn what I can about it. I fear that those master ants don't pay much wages to their servants."

The reading went on to its conclusion, and other lessons were taken up and gone through until the time for dismissal came; when Miss Julia distributed the tickets and circulars which Dr. Welling had left for that purpose.

On the way homeward nearly all the girls living down the avenue fell together in a group, and talked about the lecturer who had so unexpectedly addressed them. There were Edith, Lizzie, Milly, Sophie, and Adah Bang, a tall, young lady of six-

teen, who lived in the new white cottage just beyond Mr. Williams' elegant villa. She was a new comer, having attended the school only from the beginning of the spring term; and until her father's removal to the little hill-side town, had resided in New York. She had certain manners of the city which quite awed many of the younger girls, and she deemed her age and her city experience, especially, good warrant for claiming superiority to the pupils generally of Clem Academy, although to Milly and Sophie, whose parents were deemed among the wealthy of the town, she showed special deference.

"I suppose we'll all go to the lectures, of course," said Sophie; "for they must be very interesting."

"La sakes! didn't you ever hear of such stuff before, Sophie? Why, when we were in New York—I've been lots and lots of times with Alf. My pa says that it's all clap-trap, and he knows everything; but Alf and I used to have awful jolly times at the lectures. Sometimes they'd magnetize people, and get them on the stage, and make them do such funny things. Why, you'd just die of laughing at them."

"Do you think Dr. Welling will do anything of the kind?" asked Milly. "He's such a dignified-looking man, I think he would not make people ridiculous."

"Why, you dear innocent," returned Adah, "that's just their lay to make fun; because only lectures that keep people in a roar pay. Pa says that nobody wants to hear sober, long-faced chin-music nowadays, when they go to hear men speak. They want to have a good time."

The girls looked at the speaker with astonished eyes. And Lizzie remarked:

"Well, I thought Phrenology was a serious thing. I've heard papa speak of it to mamma, and say that it was a most valuable science, and that when he was a young man, Prof. Dean examined his head, and told him things which have been of great use to him ever since."

"I wonder what he'd say about me?" said Edith. "I'd like to know."

"Oh, young fly-away! you'll have to pay the fiddler if you want him to play on your pate," laughed Adah. "I've had my head examined I don't know how many times—I guess about forty—and they've told me a heap of stuff. Pa says he wishes to goodness I'd try to do some of the things they say I can do. La, me, it would kill you up to hear how Prof. Emmerly went on about this organ, and that development. He's the feller that went through my wool last."

"Adah Bang, how can you use such words?" asked Milly.

"What words are you so much troubled about, my dear?"

"Why, those you so often use, 'kill me up,' 'feller,' 'wool,' and ever so many others. They are really vulgar. Aren't they, girls?"

"Just look here! needn't any of you get up on your ear; for my language is used by young ladies in the best society of New York," replied Adah, with an offended shake of her much-frizzled and ribboned head.

"I don't care if they do; it is very ungentle to speak that way; don't you think so, Lizzie?"

"Yes; but Adah's heard so much of it, she doesn't think it improper, I suppose," answered Lizzie. "Papa was reading one of the papers he gets from New York, the other night, and he told us that it had something about slang words, and how many nice people used them in talking."

"My stars! what a fuss you two girls are making about nothing. How I pity you for not having seen life; you don't know anything about it away out here in this poky, stick-in-the-mud little place!" exclaimed the half-angry girl.

"I wouldn't live in New York for all the money there is in it!" exclaimed Edith. "Papa took Clara and me there two years ago, and we stayed three whole days. It was fun to see the people, and look in the stores, and see the animals at Central Park; but I got sick of so many great, tall houses, little narrow streets, and the noise. I

don't see how people can love to stay there."

"There, fly-away! that shows how much you know about it. If you had lived there all your life, as I have, you wouldn't want to leave it, I can assure you. Anyhow, my daisies, you wouldn't have had a sight of my back-hair, if it hadn't been that ma's health was so delicate, that Dr. Spoon said she must go into the country, and packed us off here. I cried my eyes out; but it was no use."

"I'd go anywhere, if it would do my mamma any good," said Sophie, in a tone of rebuke.

"So would I, indeed!" cried Lizzie. "And would be ever so glad too if dear mamma were sickly, and any place would help to cure her. What should I do without my mamma? Girls, isn't it dreadful to be motherless? Those poor Stryker children, how I pity them!" The tears sprang into the little maiden's eyes as she spoke.

"La, sakes, girls! how you do cut up! Well, I suppose it's because your mothers are so sweet on you. Why, before pa failed a year ago, we had so much company, and ma was so busy going to parties and balls and everywhere, that I scarcely saw her. Besides, I used to attend Madam Supercilli's lyceum for young ladies, where they had things in nobby style, and I was very intimate with some of the richest and loveliest girls up-town. There was Cleandria Sickerson and Estelle Van Pusen and Clarabel Minor. Oh, you ought to see them! Every day they'd come to the lyceum dressed in the richest silks and laces, and looking perfectly splendid."

"Were they good scholars?" asked Sophie, as Adah paused a moment for breath.

"Of course; but Madam Supercilli didn't give much attention to those common, vulgar studies like reading, writing, arithmetic, and so on; but had the most elegant masters to teach us French, Italian, music, painting, dancing, and other accomplishments. Oh, you just ought to

have seen Prof. Mincatina, such a handsome man! the way he used to come into the room with his 'shappaw' in his hand, was perfectly charming. Just half of the girls were dead in love with him."

"What did he teach?" asked Milly.

"French; and he spoke it with the purest Parisian accent."

"I'd like to hear you speak a little of it!" cried Edith; "because Clara has studied French, and I know a few words myself."

"I do believe I've forgotten all I ever knew of it. Besides, Madam Supercilli said that she thought it was very necessary to study French and other languages, because if one didn't use them, they improved the pronunciation of our own language. Any way, I can make out the directions in music-books, and"—

"Hey, girls!" shouted Tal, who had been home and left his books, and run out again; "aren't you going down to the mill?"

"Yes, I am; wait, won't you?" replied Edith.

"I'll go, too," said Sophie.

"I'd like to go; but must speak to mamma first," said Lizzie.

"All right," replied Tal. "I'll wait for you. Milly, you'll go, I s'pose?"

"No, thank you, sir. What do you intend to do down there?"

"Oh, I guess we'll find Joe, and he'll give us a sail on the pond. And over by the spring the blackberries are turning already, so we can pick some ripe ones I guess, if we like, and"—

"I would not get into a boat with Joe Winkle; he might upset you, and then you would be drowned. Why, Adah, that man is intoxicated most of the time, and I wonder that Mr. Manley allows him to be around his mill so much."

"He isn't intoxicated most of the time," replied Tal, indignantly; "for he has behaved himself real good lately; and he's the best rower I ever saw. Adah, would you like to come?"

"No; thanks. I've a fearful headache. This hot sun is using me up. I think

I'll take a good swig of Madeira when I go home, and then nap it till supper."

"I guess you'd better bathe your head in water if it aches; that's what Clara does when her head aches," suggested Tal.

"Oh, that wouldn't at all answer for me, my little boy! I'm so weak that I must have a stimulant, and the very idea of water sets me in a chill all over. Well, Milly, let's toddle on. These young people may go and soak themselves in pond-water if they like. By, bye!" thus speaking, Miss Adah walked on; and Milly, after a much more refined word of parting, followed her.

The party of school companions had stopped at the Manleys' gate for a moment.

"I'll run home with my books," said Sophie, "and be out by the fence when you come along."

"I'll ask mamma if I can go," said Lizzie, "and be over at Sophie's, if I can, in five minutes."

"All right," said Tal, who jumped up and seated himself on a fence-post in front of his father's dwelling. Edith ran into the house to leave her books and exchange her school dress for one better suited to a ramble, while the other girls hastened on to their homes.

While awaiting his sister, Tal drew from his pocket a fishing-line and unrolled it, examining its condition meanwhile with a critical eye.

"Guess it'll do," he soliloquized. "Think I'll try for that big fellow—that carried off Joe's line, bait'n all, t'other day. Joe said he was a whopper. I'd just like to have 'm take hold of those hooks Horry give me. He says they're real Limerick, and 'll catch just the biggest in the pond." He mused in this strain until he had re-wound the line and was trying the points of the hooks, and weighing the probabilities of their success if dropped into the water that afternoon, when Edith came behind him slyly, and gave him a push, which caused him to lose his balance and fall down on the grassy lawn.

"There, see what you've done now!"

cried he, scrambling to his feet, and showing a finger into which one of the steel barbs had caught as he fell. "You're never satisfied, Edith, till you've done something you shouldn't."

"I didn't mean to. I didn't see the fish-hooks," said Edith.

"You ought to have seen 'em, for you know as well as I, they're dangerous. Phew, how it stings! I'll have to go in to mamma, and have her take it out. So, you'll have to wait for me, now, Miss Make-trouble."

CLARE.



DISEASE—WHAT IS IT?

IT seems a little strange, after the practice of the "healing art" in some form, ever since man was known to be afflicted with disease, and in the present enlightenment of the nineteenth century, that the *essential* nature of disease should be so much open to doubt as to afford room for its wide discussion.

The title of this article may bring a sneering smile to the face of some readers, who think with the advent of the Hygienic school and its many able teachers, the nature of disease has been fully and completely explained and its proper treatment. Undoubtedly nearly all the readers of the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH do not believe in any of the drug-systems, and probably a large share are believers in the theory that disease is "a remedial effort," so ably advocated by the late Dr. Trall; but the writer, although a practical hygienist, thinks he discovers a want of harmony in it with some of nature's manifestations.

If disease is a "remedial effort" for

the purpose of eliminating poison and restoring the system to a state of health—if it is an effort of "reparation," then why should anything be done to change that action or to relieve the patient? If disease is a "remedial effort" for a purpose, no person could tell but that constipation of the bowels and dryness of the skin in cases of fever, were for a purpose also, and not to be interfered with. Again, if "all healing power is inherent in the living system," how can there be any healing agents outside of the organization? If nature has provided no remedies for diseases, why are, or how can air, magnetism, etc., be "curative" or "remedial agents?" They are life-agents in health, and a life-agent can not be changed to a "remedial agent." Their nature can not be changed in sickness. If "drugs do not act upon the living system, but are acted upon," how can they poison? If because they can not be used by the system for nutrition, why does not one drug produce the same effect as another? or why does one

seemingly affect the liver, another the kidneys, etc. ?

The above, with numerous other questions, have naturally risen in the minds of those who were favorably disposed to the hygienic system, and who totally denounce drug-medication. In fact, I have known intelligent persons who accepted the above theory, do nothing in sickness for relief only to live physiologically as far as they could, for, they said, "if disease is a *remedial effort* it is an injury to use an agent for relief."

While I agree with Dr. Trall upon most of his principles, I deny that disease is a "remedial effort." If any one is disposed to scoff at this bold assertion, and wonder "who comes here?" I beg to be heard in the matter before expressions are made.

It is said that "dead matter is inert," that "it can not act upon living matter," and "that there is no chemical action within living structure." But chemical elements of opposite natures, when placed in contact, often unite, and form a compound wholly unlike either of the elements. Oxygen has an affinity for carbon, and in uniting evolves heat. It has a greater affinity for hydrogen, and hence it evolves a greater amount of heat in uniting with the latter than the former. In this union *there is an action of some kind.*

Now, if nitrate of silver is placed upon the back of the hand, in a short time we experience pain. We remove the offending substance, and we perceive that under the caustic the skin is injured. It is said to have "eaten into the flesh." If the silver did not act on the skin, it had an affinity so great for that tissue, that an excitement was produced in the living structure which led to its destruction. If there were no chemical union, the tendency was in that direction. If the caustic had no power to act, it certainly had a destructive force. Here we get an inkling of the force of all drugs. It is an excitant force, and the effect is destruction.

Calomel is taken to excite the liver.

Why does it not have an equal effect upon the other organs? Because it has little or no affinity for them. In other words, it has a tendency to unite with the atoms composing the liver. The organic system perceives the injury, the nervous energy is sent in that direction, the blood follows it, which produces an increased action in that organ. No matter how inimical the drug, if there were not more blood sent to the liver there would be no increased action. The resistance produces the injury—the destruction. The same is true in regard to all drugs said to act upon the kidneys, bowels, lungs, skin, etc. The system does not, as some have taught, use certain channels and excretory organs to eliminate certain poisons, because the system can best rid itself of them through those channels and organs. The increased action is in self-defense of its *own* structure. Let us look at some experiments which have been made.

Going to the slaughter-house, we procure a liver and kidney of a newly slain ox. Taking them to our laboratory, we place calomel upon the liver. Very soon its tissue is decomposed—a union has taken place between certain elements of the liver and of the calomel. Taking now the kidney, and placing calomel upon that, we witness no disorganization—there is no union. We now take a drug said to act on the kidney, say spirits of nitre, and place that in contact with the liver. No union, no disorganization follows. We place it on the kidney, and the result is similar to that of the calomel on the liver. The principle holds good with all drugs. Those that are said to act on the liver in the human system, whether mineral or vegetable, we find disorganizes that organ, but have no effect on other tissue; and those that are said to act on the kidney disorganize that, but have no effect on the liver. Even sugar and common salt show phenomena in accordance with known facts in regard to their effects upon the human system. Sugar produces quite a change upon the beef's liver, seeming to harden it, while

it has no such effect upon the kidneys; while salt perceptibly changes the kidneys, it produces no effect upon the liver. We know that sugar is productive of liver disease, and salt of kidney disease. Other drugs were experimented with upon different organized tissue, and all confirm us in the conclusions relative to the *modus operandi* of medicines, and we feel warranted in saying that the tendency of the union of a drug with living tissue is to the disorganization of the latter. If this is not chemical action, it is analogous to it. The increased vital action on the part of the system, when attacked by drugs, it is obvious at once is a resistance, an effort at self-preservation. Do we not see here the true nature of disease? Although an "action," it is an action in self-defense. It is war, and war means destruction. The system has no purpose in view, only self-preservation. It does not increase its action *for the purpose* of elimination of poisons. It fights as I would fight if attacked by a highway robber, in self-defense, without any thought as to what shall be done with my would-be destroyer. I might be exhausted in the conflict, as nature often is in disease. In acute diseases we can always witness the fight by increased vital action. In chronic disease we see the damages and marks of exhaustion consequent upon previous resistance. The first wrong act or violation of physiological law excites resistance, which, if heeded, would always keep a person on the true road to health. Here we perceive, then, that disease is always a destructive process, and can not be a "remedial effort." It is contrary to all our ideas of remedy. After the fight is ended—the resistance stopped—there is a healing process which is as natural as growth itself. An "abnormal action" can not be a "remedial action." There can be no remedy in *any* action, unnatural or abnormal, in the human system. All healing power and healing process is naturally inherent in the constitution, and requires no extra effort. Where the blood is perfectly pure, there is no in-

flammation in repairing damages—like a broken limb, for example. In disease, the power of the system to eliminate poisons is sometimes greatly abbreviated, so much so that the only avenues remaining open are the lungs. In many diseases the skin becomes dry, the bowels constipated, the kidneys and liver torpid. In those cases, if disease was a "remedial effort," why should it prevent the very thing it sought to accomplish? Again, if disease is a "remedial effort" *for a purpose*, etc., a small dose of arsenic should vomit a person as well as a larger one. It is well known that many people take so large a dose of poison, with intent of suicide, that it operates as an emetic, whereas a smaller dose would have killed. The reason of this is, that the arsenic produced such an excess of blood in the stomach and caused so violent an action, that vomiting was the result. But there was no intelligence on the part of the system that looked forward to that end when the action commenced; for if the abnormal action began with that intent, it would have removed a small dose in the same manner. Corrosive sublimate, however, is not thrown out of the stomach, although it destroys that organ in a short time—a fact going to show that a certain action is required to produce vomiting.

Slavery was the fundamental cause of the Rebellion. But the war produced the great destruction of life which marked it. When the fight began, it was not for the purpose of removing slavery or of doing away with the evil: it was a fight for the preservation of the Union. After the war was over, all hands went to work to repair the damages. This, I think, a good example to explain my theory of disease.

Disease is an effort at self-preservation, and is always a destructive process. Here we see clearer than before the injurious effects of medicine, and also the necessity of assisting nature to remove the enemy so as to stop the injurious effort—the resistance. This can be done only by balancing the circulation, so that

each excretory organ will perform its duty in the living domain. This is the philosophy of water applications in cases of fever. It is not so much because water reduces the temperature, as it is because

it helps to restore the skin to a normal condition and eliminate the poison of effete matter. There can be no disease where the circulation is perfectly balanced.

FOOD FOR YOUNG AND OLD.

THE question is often raised as to whether children should use the same articles of food that adults use. This question would require but a moment to answer, if the list of articles which grown people generally use were to be presented for decision. Neither children nor grown people should use some of the articles that are commonly taken as food, because they are not good for any class of persons. But the question as commonly put, does not intend to discriminate in the food, against anything, but whether children from two to ten may properly eat the same articles of food that their parents take, who are from thirty to forty years of age. We read in the Scriptures of "meat" as being the proper food for those who are of full age, and of "milk" as suitable for the use of "babes." Milk is the proper food for young animals, doubtless, because they have not the teeth nor the digestive strength for food of other kinds. When we analyze milk, it is found to contain the same ingredients as the flesh of the animal that produced it. Certainly the calf rejoices in health and vigor, which has had nothing but milk for the first six weeks of its life, and has derived all there is in it of bone and muscle, every tissue, indeed, that belongs to it, from the milk. It must be conceded that the milk the calf has taken is equivalent to its own structure; hence, he who eats the veal gets that which is the product of milk.

Animals that live without milk, or without the necessity of taking nutriment from the mother, derived from the food which she has digested, live well enough without it. A brood of chicks eat cornmeal, boiled vegetables, flies, and worms, as their mothers do, and probably if we could investigate it, we would find that

all the animals of any considerable size that do not belong to the mammal or milk-giving tribe, eat the same food that their parents do. The puppy and the kitten, the whelp of the wolf, the cub of the bear, and the young of the lion and the tiger, are born blind, and are therefore much more helpless than the young duck or chicken, and are supplied with milk as food, simply because they are not adapted at birth to seek and capture the prey which constitute the food of their parents. The gosling and the duck follow their mother and eat grass, dig in the ground for worms, and dive their heads under water and ferret out the roots at the bottom, or pick up anything eatable as the mother does. It is to be supposed, therefore, that if the young duck or chicken, or the young eagle or hawk or owl, eat the very same food that their parents live on, that the young of the wolf and the lion and the tiger could do the same thing, if the economy of nature had provided them with the powers of obtaining and converting it. The eagle catches game and tears it to pieces and feeds it to her young; and who shall say that the young tiger and lion could not be nourished on the same food that gives the mother material for milk?

Milk for babes, therefore, is the most proper, only because they have not the sense nor the teeth to partake of other food than milk in a proper manner. If the soup of oysters, beef tea, and the delicate juice of wheat or oatmeal strained off, leaving the sediment behind, were given to babes, they might thrive nearly as well as on their mother's milk; or better, if the mother were in a poor condition of health, by means of improper diet and improper habits. The nourishment from a mother who drinks whisky or beer is

very poor food for the babe; so is that of one who overworks or dissipates in any way; the food that she imparts is not half so good for the little one as the pure juice of the grains or fruits in combination with milk. The digestive apparatus of an infant is not adapted to these materials as they are commonly taken, for they are too coarse, and also need mastication. But so far as the essential essence of the beef, grains, and vegetables is concerned, we think it would provide fully as perfect nutrition as the milk of its mother, which is extracted by her nutritive system from these same articles of diet, and then secreted in the form of milk. Since the babe has no teeth to masticate food, and can not swallow anything that is in lumps, the digestive apparatus is presumed not to be adapted to the absorbing of the food in such crude forms. If we had the charge of a child's hospital, we would certainly "fight shy" of the ordinary cow's milk that is furnished in the vicinity of large cities, which is obtained from imprisoned cows fed chiefly on distillery slops.

It is a settled fact, of which most people are aware, that the milk of the cow or the goat is, in some way, too strong for the human infant; and that to prepare cow's milk for a babe, it requires the addition of sugar and water, to reduce it to the consistency of the human milk. This is easily explained when we remember that the calf and the kid stand to take their first meal, and walk and run from the day of their birth; they need, therefore, that kind of food which contains an abundance of material for muscle and bone. The human infant, that can not hold up its head for the first fortnight, nor sit erect for several months,

nor walk till it is twelve, and sometimes twenty months' old, does not need the food which stimulates muscular activity and energy, because it has no need of such muscular support; therefore, cow's milk in its natural state, when given to the babe, makes it worry and struggle; but when it lives on cow's milk, which is modified by the addition of sugar and water, it thrives; and when it is old enough to exercise freely, it can take cow's milk in the natural state; then it can take farinacea, and also beef, provided that it be reduced to the liquid form or very finely divided. As persons advance in years and can take on responsibility, and have to perform the physical and manual labors of life, they may take the "strong meat," the concentrated food—that which contains abundant material for muscle and bone.

At first we have to change cow's milk, reduce the proportions of the ingredients, make it more simple and more like the human milk, so it may properly be said, that cow's milk and cow's meat belong to strong men, and something different from these belong to babes, who are not old enough to need strength or demand an abundance of the material which goes to make up the substance of the brain, bone, and muscle. Young children, from a year old and upward, might properly be fed on bread and milk, oatmeal and milk, fruit, potatoes—articles which in themselves are simple, that do not admit of seasonings and condiments; while persons who are older, and whose labor demands action and strength, may be fed on various sorts of food that is concentrated and contains an abundance of nutriment.

NELSON SIZER.

HOE-HANDLE MEDICINE.

ON a bright, pleasant summer morning, a young man, with a silk muffler around his throat, and a woe-begone look in his pale face, plied the big knocker upon the doctor's dwelling. A lady answered the summons, and informed the

applicant that the doctor was in his garden at work. To the garden the young man went, where he found the man of medicine engaged in hoeing his sweet corn.

"Well, sir, and what is the matter?" the

doctor asked, when the applicant had stated that he had come for medical advice and assistance.

"Well, doctor," with a lugubrious face, and a whining, moaning tone, "I feel poorly all through. My head has spells of aching, my appetite is poor, my food does not set well, and I am very weak. Really, I need help."

"Yes, I see. Let me look at your tongue. Ah, yes! Now your pulse."

The pulse was felt, and after due deliberation, said the doctor:

"Look you, young man, you do certainly need help. Now see; I must attend an important case at ten o'clock, and I must have this corn hoed before I go. So, while I am gone to make up a prescription for you, do you take my hoe, and go on with my work here. You know how to use a hoe?"

"Yes, sir. My father was a farmer; but I haven't worked on a farm since he died."

"And you haven't worked much anywhere else, I take it," the doctor threw in unpleasantly.

"No, sir; I am not obliged to."

"Very well. I'll warrant you the work here won't hurt you, so go on with it until I come back."

With that the doctor trudged off, and the young man went on with the work of hoeing. He hoed to the end of the row, and there removed the light muffler from his neck. Then he went at it again. Half way down the second row he stopped and looked up, but no doctor appeared in sight. At the end of that row, as the absent one had not yet appeared, he pulled off his coat.

The third row he hoed more slowly, stopping several times before the end was reached; but he finished it, and after a good rest, attacked the fourth row. There was but one more row after this, and the fancy seized him to have it done before the old fellow came back. It would be a surprise to him. The thought quickened his pulses, and gave him renewed *vim*. He had just completed the last hill of the last row, when the doctor came back.

"Well, well, my young friend, how are you feeling now?"

The patient really had to consider. He had been looking to see what the physician had brought with him of medicine; but he had brought nothing. His hands were empty. "The work hasn't hurt you, has it?"

"Oh, no, sir;" his face glowing with the exercise.

"I thought not. Let me feel your pulse again." He held the young man's wrist for a brief space, and then—

"It has worked to a charm. Now, sir, do you go home, and repeat this dose twice a day, every morning and every afternoon; do it faithfully, and be honest with your diet; don't use tobacco, and if that don't work a cure, come and let me know. My fee, sir, is one dollar."

"One-dollar!" gasped the astounded youth.

"That is all I charge when patients call at my door."

"But, sir, in mercy's name what is it for? Where is your prescription? What have I taken of yours?"

"My prescription, my dear young friend, I gave you before I left you here with my hoe; the medicine you have been taking in my place—a health-giving potion which I should have enjoyed had I not given it up to you. And now, dear sir, I will tell you frankly, you are rusting out, literally falling to pieces for want of exercise of both body and mind. That is all, sir. You can follow my prescription and be cured, or you can take your own way."

The young man paid the dollar and went his way. Not then could he be cheerful; but afterward, when he had allowed reason fair play, and had come to prove the life-saving and the life-giving virtues of the doctor's prescription, he came and thanked him. ANONYMOUS.

AN old story is told of a youth who was compelled to choose between three crimes—parricide, blasphemy, and drunkenness. He shrank from the first two with horror, and chose drunkenness; but while he was drunk he killed his father and committed blasphemy.

TIGHT-LACING.

What is it makes a lady's head
 Feel heavy as a lump of lead?
 What makes her nose's tip so red?—
 Tight-lacing!

What makes her cheek burn like a coal,
 Her feet as cold as Arctic pole?
 What cramps her body and her soul?—
 Tight-lacing!

What makes her temper short and sharp?
 What causes her to fret and carp,
 And on the smallest ills to harp?—
 Tight-lacing!

What makes her waist a wasp-like thing,
 And gives her tongue a waspish sting?
 What balks her when high notes she'd sing?—
 Tight-lacing!

What is it with its vice-like squeeze,
 Destroys its faded victim's ease,

And brings her doctors countless fees?—
 Tight-lacing!

What is it makes her gasp for breath,
 And—so stern modern science saith—
 Dooms her too oft to early death?—
 Tight-lacing!

What beauty's lines in her destroys,
 And fashion's powerful aid employs
 To crush from out her life its joys?—
 Tight-lacing!

What, quite ignoring Nature's facts,
 Her waist so cruelly contracts,
 That each inch saved fresh pain exacts?—
 Tight-lacing!

And what bad fashion of the day
 Is it that ladies now should say
 They'll spurn without an hour's delay?—
 Tight-lacing!

DRINKING AT MEALS.

ANOTHER "OPINION," WITH A PREFACE.

DEAR JOURNAL:—I have always been a firm believer in Phrenology, since when I was but a pioneer farmer's boy, over thirty years ago. On one occasion a neighbor (all were neighbors then who lived within a radius of five miles) was calling at our prairie home, and as Phrenology was then beginning to come into popular notice, the conversation turned on that subject. Peck—that was his name—had been reading up the subject to some extent, and thought he knew something about it; and to enforce or illustrate his ideas, he turned to the writer, and scanning him a moment, said: "For instance, that boy has Order very largely developed," and he pointed out the development that led him to think so.

After an early supper, as it was harvest time, all hands went to the field to shock up the oats that had been cradled during the former part of the day. Neighbor Peck went along for company, and a little friendly assistance as well. Work began, and "we boys" were set to gathering the sheaves while the men set them up. I gathered sheaves for a shock, and instead of tossing them into a promiscuous heap,

placed them nicely in two rows, with heads outward, so that a man could begin at one end, seize a sheaf from each row, one in each hand, turn them right up into position, then two more, and so on, till the shock was ready for the cap sheaves, thus saving much time to the shocker.

Mr. Peck came to set up my sheaves, when he stopped short, and exclaimed: "There, Horace, didn't I tell you that boy had large Order? See how orderly he has placed those sheaves."

Well, as I said, I have been a firm believer in Phrenology ever since, and I value none of the publications received at the present time, more highly than your valuable JOURNAL. It is often read while many of the popular magazines are laid aside with a mere glance at their contents, for want of time to read all. And no part of the JOURNAL is more highly prized than that treating upon health subjects. Generally I agree with the opinions expressed; but occasionally find somewhat to criticise. So much by way of preface; now to the subject.

In the November JOURNAL I noticed an article on "Drinking at Meals," to

which I must take some exceptions; even though you say in your introduction that the writer "evidently knows what he is talking about."

In the first place, the writer bases his whole argument on wrong premises, in assuming that people drink at meals to satisfy thirst. Now my observation and experience teaches that most people drink at meals either from mere habit, and because the habit formed in early life by having the cup of tea, coffee, or other beverage constantly set beside the plate, has so largely dried up the salivary fountains that the food must be washed down with some fluid; or else they do it from sheer love of the beverage, born of customary use.

Observe a tea-table party wherever you will, and you will see that those who habitually drink at meals—unless eating soup or other moist food, and some must have their tea or coffee "allegre samee"—have their arms going up and down like a "teeter board," when one hand goes up with a morsel of food, the other goes down after the cup, saucer, or spoon for a sip; and as the food-hand goes down for another bite, the drink-hand goes up with the fluid to moisten the previously deposited mouthful; and so to the end of the meal.

One of the worst features of all this is, besides the deleterious effects of the astringent and narcotic properties of the decoctions usually drank, that the drink is usually *hot*, which makes it very injurious to the teeth, particularly when the drinks are alternated with cold victuals; and it can not but be very injurious to the stomach, and, through that organ, to the whole system. Saliva, too, is essential to good digestion, and this washing-down process sends the food to the stomach with very little of it present to assist in the work of assimilation.

My theory is this; and I think the facts of science and experience will back it up: If thirsty, drink a few swallows *before* eating; and again: *if thirsty*, drink *after* meals; but very seldom, if ever, indulge *while* eating. This has been my

custom very nearly all the while from boyhood, and I can eat a full meal of dry crackers without taking a swallow of fluid, or even a thought or desire for it; for the salivaries—not being seared with hot drinks, nor dried up by washing everything down without calling them into action—furnish all the moisture needed, by the time the food is properly masticated.

Saliva is one of the most powerful solvents known, and if plentifully mixed with well-masticated food before its passage to the stomach, it will take care of all the "soluble substances" spoken of by the writer quoted—at least until a drink can be taken after the meal is finished, when the gastric juices have already been called forth, and with the saliva have seized upon the food and begun the work of digestion.

I quite agree with the writer, that a free satisfaction of natural thirst should be allowed at the proper time; but here, again, many people err by drinking too much. Usually a few swallows will quench thirst quite as well as a pint, as my own experience, in the army in particular, proves.

Now for a few facts in substantiation of my position. I have tried drinking coffee at meals for a time, and soon found that it dried up the flow of saliva so that it became difficult to swallow dry food without washing it down as most other people do. And then it gave an uncomfortable sense of fullness in the stomach, with dullness and symptoms of dyspepsia. A return to the above described rules soon overcame the difficulty.

A near neighbor suffered for years from dyspepsia, until he abandoned the use of drinks at the table, when the disease soon left him.

I have a little wife—God bless her—and she was unfortunately brought up where tea or coffee was set at every plate. She could not eat without a drink—so she thought—could not swallow the dry morsels; they would stick in her throat. Weakness of stomach, and dys-

pepsia followed, and at length the hot drinks at the table were abandoned; and now she can eat any kind of food pretty well without washing it down, as the saliva flows freely enough to make swallowing a comfortable operation. There is also great improvement in the stomach difficulties.

Besides, let us reason a little from nature. Food and drink are rarely found together, except in the case of amphibious animals. None but the last-named ever drink except before or after eating—mostly after, as notice all domestic animals, which will be seen to hunt for water after hunger has been satisfied, thus supplying the “diluent” your quoted writer speaks of. Man alone,

through his artificial and acquired appetites and habits, brings the food and drink together, and sends them in a conglomerate—usually hot—mass together into his much-abused stomach, to breed dyspepsia and a thousand ills to which flesh might not be heir, but for such violations of Nature’s laws.

I have, or advocate, no “foolish fear” of *water*-drinking your author refers to. Water, even at meals, would be comparatively harmless to the hot drinks, to say nothing of narcotic, astringent, or other evil effects. But water or any other drink ought not to be used while eating—in my opinion. At other times quench thirst freely.

THEO.

A PARABLE

THEN shall the kingdom of Satan be likened unto a grain of tobacco seed; which, though exceeding small, being cast into the ground, grew, and became a great weed, and spread its leaves rank and broad, so that huge and vile worms formed habitations thereon.

And it came to pass that the sons of men looked upon this weed, and the eyes of their understanding being darkened, thought it beautiful to look upon, and much to be desired to make youth of tender years look big and manly. So they did put forth their hands and did chew thereof. And some it made sick, and others to vomit most filthily.

And moreover it came to pass that those who chewed thereof became weak and sick, and could not deliver themselves from the desire of having bits of it continually in their mouths, which aforetime had been clean and ruddy, but now became foul and black, and besides, the chewers were seized with a constant and violent spitting of unclean humors, and they did spit in all places, even in ladies’ parlors, and in the courts of the Lord of Hosts. And the good and true, and all that led pure lives were grievously plagued thereby.

And it came to pass that men were dissatisfied with merely chewing the strange weed, but sought out other and cunning devices for using it. Some, indeed, did make it into a fine powder and filled their nostrils therewith, and they were taken suddenly with fits, and they did sneeze with great and mighty sneezes, insomuch that their eyes were filled with tears, and their faces with wrinkles, and they did look foolish exceedingly.

And yet others cunningly wrought the leaves thereof into rolls, and did set fire to one end thereof, and did suck vehemently at the other, and did look very grave and calf-like; and the smoke of their burning and sucking ascended up forever and forever.

And there were men whose wisdom being that of the fox beholding the multitude which did chew, and smoke, and snuff, said among themselves, “Come let us plant, and water, and increase the production of this weed, whose name is tobacco, for therein is a mighty and increasing business;” and they did so, and the merchantmen waxed rich in the commerce thereof.

And it came to pass that even the saints of the Most High became bond-servants

to the weed, and defiled themselves therewith; even the poor, who said they could not buy shoes and books for their wives and little ones, spent their substance therefor.

And the anger of the Lord was kindled by such great wickedness, and He said "Wherefore this waste? And why do these little ones lack bread, and shoes, and

books? Turn now your fields into corn and wheat; and put the evil thing far from you and be separate, and defile not yourselves any more; and I will bless you, and cause my face to shine upon you."

But with one accord they raised their voices and exclaimed: "We can not cease from chewing, snuffing, and puffing; we are slaves."

COOKING NOTES.

SOME further inquiry being made with reference to "Gems"—one recipe for which was given in the March PHRENOLOGICAL JOURNAL—I venture another rule which will be found to work well in the production of light, toothsome biscuit:

1 pint of sweet milk,
1 " " Graham flour,
1 egg.

In this the milk is merely substituted for the water, and the manipulation is the same as in the first recipe. I would add by way of a suggestion, that, as the baking will occupy from thirty to forty minutes in a hot oven, it is not advisable for the cook to open the oven for at least twenty minutes after the pans have been put in place, and then the pans may be turned around, as it is usually found that one side has been more rapidly baking than the other. Opening the oven too soon may interrupt the swelling of the dough by permitting too much heat to escape, so that the desirable result of well-puffed-out and thoroughly-baked gems is not obtained.

Sometimes it happens that a friend drops in unexpectedly to dinner or tea, and we are desirous of placing an attractive dish on the table in place of the ordinary bread which may be low in the box, or "a little too stale for company." Of course the "gems" can be made, and are delicious enough for a queen; but our friend may have been brought up on bakers' stuff, and share in that mistaken fancy of so many which regards "Graham" as unfit for the stomach be-

cause it has *bran* in it. It may be added here that proper Graham flour contains a very small proportion of bran.

Well, here is a suggestion for making

WHITE BISCUIT,

which can be speedily prepared:

1 quart of "new process" flour, sifted,
1 pint of sweet milk,
3 teaspoonfuls of "Royal" baking powder,
 $\frac{1}{2}$ teaspoonful of salt,
2 ounces of sweet butter.

Mix the butter through the flour—then sift in the baking-powder. Mix well, then add the milk, and thoroughly work all together. Now roll out the dough into a sheet about half an inch thick and cut out forms of it with a biscuit-cutter. Have the pan well oiled and hot, as in the case of "gems," and also the oven in good baking condition; with these conditions the biscuits to the number of two dozen or more, should be ready for the table in twelve or fourteen minutes, and will please your guest by their delicacy.

Thinking a formula for a pudding not difficult to make, and generally acceptable to young and old would be in place here, I add

INDIAN PUDDING—WITH FRUIT.

1 cup of sifted Indian meal,
1 " refined sugar,
 $\frac{1}{2}$ teaspoonful of salt,
1 quart of sweet milk,
8 medium-sized *sour* apples—
or,
 $\frac{1}{2}$ cup of sugar, with
8 medium-sized *sweet* apples.

Put two-thirds of the milk on the stove to boil. Grease an earthen pudding-dish well—one that will hold two quarts. Put the meal into it; then add the sugar and salt; mix thoroughly. Peel and core the apples, then chop them fine. When the milk has boiled, pour it over the meal, sugar, and salt. Now add the ap-

ples, stir all together, and lastly add the remaining third of the milk, cold. Mix all the components thoroughly, and bake in a hot oven for an hour and a half.

This is a healthful, nutritious dish, suitable to form part of a true meal.

MRS. H. S. D.

ATTITUDES AND PHYSICAL GROWTH.

SO many people are crooked, distorted, or out of shape in some respect that to find a man or woman of symmetrical contour is a rarer matter than is generally supposed. The tendency to distortion is given in ninety-nine cases of a hundred during childhood, and especially while the boy or girl is under the eye of a teacher in the restraint of school. At a meeting of the French Academy of Medicine a while since, Dr. Dally read a paper on the subject, in which he showed clearly enough how the body is rendered unshapely by careless habits of posture. He stated:

“Repeated and long standing in a stiff upright position produces a certain amount of deformity in the vertebræ of the neck and lumbar (loins) region, which ultimately has the effect of interfering with the proper elasticity of the spinal column. The injurious tendency is easily neutralized if, after each effort, the individual sits down, taking care to slightly arch the back, so as to counteract the effect produced. But if the person is required, when seated, to maintain a perfectly rigid attitude, the evil is continued, and finally results in making the figure stiff and ungraceful. Standing on one foot for a long time, or repeatedly, produces in time a scoliosis (curvature of the spine) and a deformation of some of the vertebræ. The same effect is produced when the individual, instead of sitting square on the two hips, leans to one side. Most writing masters advise their pupils to lean to the left

when engaged in their duties, and, in fact, that attitude is instinctive when the right hand is brought into play habitually. It becomes more useful and prolonged with girls, who, generally speaking, remain seated for longer periods than boys. The effects of that position are not immediately visible, and often the person feels some uneasiness, in the shape of fatigue in the lumbar region, without particular suffering, and though the injurious effect may never have any serious consequence, the germ is always left of some distortion if not promptly seen to. All those ill effects are more liable to occur during the second period of youth, the teens, when the bony structure has not acquired the strength to properly support the rapidly-increasing weight of the body. When the schoolmaster or schoolmistress notices any symptom likely to indicate that the mischief above alluded to is in progress, he or she should make the person lie down straight on the back for an hour or two daily, so as to counteract any injurious tendency acquired.

BURST HIMSELF.—A German medical journal gives a detailed account of a man who literally burst, split his diaphragm, and died. He had swallowed four plates of potato soup, numerous cups of tea and milk, and then taken a large dose of bicarbonate of soda to aid digestion. His stomach swelled enormously, and tore the diaphragm on the right side, causing immediate death.

NOTES IN SCIENCE AND AGRICULTURE.

Lightning-rod Construction.—

According to a late writer, certain conditions must be observed in putting up rods to insure their protection viz: The main stem of a copper lightning conductor should never be less than four-tenths of an inch in diameter. This dimension is not sufficient for a building more than 80 feet high. Galvanized iron may be used instead of copper, but then the diameter must be greater in the ratio of 6.7 to 2.5, the conducting capacity of iron being to that of copper as 14 to 77. A galvanized iron-rope conductor should never be less than eight-tenths of an inch in diameter; a galvanized iron strip should be four inches wide and one-eighth of an inch thick. A lightning-rod must be continuous and unbroken from end to end. A rod need not be attached to a building by insulated fastenings; metal clamps may be safely employed, provided the rod be of good conducting capacity and otherwise efficient. Above, the rod must terminate in metal points, well projected into the air. These points should be multiple and perfectly sharp. The bottom of the conductor must be carried down into the earth and be connected with it by a surface contact of large extent. All large masses of metal in a building should be metallicly connected with the lightning-rod, except when they are liable to be occupied by people during a thunder-storm; an iron balcony, for instance. In such cases it is better not to have the iron connected with the conductor, for there is some risk of persons standing on the balcony furnishing a path for the lightning to the rod.

The Finest Cow.—The most perfect model of a beef creature in the world is said to be the shorthorned heifer *Icich*, which at the last Smithfield fair in England won the \$200 prize for the best Shorthorn, the \$250 prize for the best heifer of any breed, the \$500 prize as the best beast in the exhibition, the agricultural hall prize of \$525, and the decoration prize of \$525; in all about \$2,000. She is described as a red roan shorthorn heifer, not big in stature or in actual weight, but the most nearly perfect fat animal ever seen. Her top is wonderfully broad and long. She is very short on the leg, marvelously wide and deep in the breast, and very deep and spacious in the hind quarters. Her bone is very fine and small, and the proportion of offal very small compared with that of meat.

In France they use for fuel tablets of pressed peat ostensibly, but more generally made of stable-sweepings, it is said. Similar *mottes*, made of camel's dung, are used for cooking in Algeria and all over the oases of Sahara, for wood is too scarce to be used for fuel. The *motte* makes a clean, odorless, sootless, and almost smokeless fire. Compressed peat in London, and

indeed in all the large towns of Great Britain and Ireland, is rapidly coming into use. The cakes there are made in great blocks, while the French *mottes* are only about six inches long by four wide and two thick. On the Belfast and Northern Railway of Ireland the compressed peat has been tried with great satisfaction. The engineers report that twenty-one pounds of peat raises steam for a mile of transit, twenty-six pounds of coal being required to do the same work. They prefer it, moreover, because so clean to handle and so light compared to coal. Its cost is less than one-half that of coal. "In the manufacture of gas," says our *Scientific American*, "as compared with coal, its illuminating powers are tested and put down as 342 to 100. So the rich and practically inexhaustible bogs of Ireland promise to bring back prosperity to that country. The drying and compressing of this substance render its transportation cheap and easy, and as it is superior to wood in many respects, and less expensive, there is no apparent reason why it should not be very extensively used. A charcoal is also manufactured of the Irish peat, and the compressed cakes are in great demand for land-fertilizing.

A Petrified Human Hand.—A curiosity which astonished scientists and puzzled them to account for is now on exhibition in Gould's cabinet at Mill City. It is a perfectly formed hand, which apparently belonged to a boy about fourteen years of age. The hand is open, the fingers being slightly bent toward the palm, on which the thumb rests. The back of the hand seems to have been crushed or decomposed before it was petrified, but the palm, thumb, and fingers are perfect. We were informed that it was found at the sulphur beds near Rabbit Hole by one of the men employed in shoveling crude sulphur into the refining retort, and is supposed to have been imbedded in the sulphur bank for ages. The fingers are comparatively short, a fact which indicates that it did not belong to an Indian, as the red men's fingers are generally longer than those of the white; but the thumb is rather longer than the average. To what race the owner of the hand belonged, and how and when it was imbedded in the sulphur, will probably remain unknown, unless some scientist should investigate the hand and the sulphur bank where it was found and explain these mysteries.—*Winnemucca (Nev.) Silver State.*

Length of the Day in Norway.—At Christina, at the summer solstice, the sun remains below the horizon only 5h. 17m.; at Trondhjem, 3h. 34m. At Bodoe, the chief town in Nordland, the sun does not descend below the horizon from the 2d June till the 11th July; at Tromsøe, from the 20th May to the 24th of July; at Hammerfest, the chief town of Finmark, from the 15th May to the 29th July.

On the other hand, the center of the sun does not appear above the horizon at Bodoe from the 14th to the 28th December; at Tromsøe, from the 25th November till the 16th January; and at Hammerfest, from the 20th November to the 21st January.

On account of the prolonged daylight for two or three months of the year, it is not surprising that barley, potatoes, and many other plants and vegetables ripen in the most northern latitudes. In those regions where the sun hardly descends below the horizon in summer, there is no night, only a short twilight; the growing plant, therefore, enjoys, without interruption, the heat and light which it requires.

To Clean Wall Paper.—Soiled wall paper may be made to look as well almost as new, in most cases, by the following expedient: Take about two quarts of wheat bran, tie it up in a bundle in coarse flannel, and rub it over the paper. It will cleanse the whole paper of all description of dirt and spots better than any other means that can be used. Some use bread, but dry bran is better.

Corks are made both air-tight and water-tight if plunged into melted paraffine, and kept there for about five minutes. Thus prepared, they can be easily cut and bored, and may be inserted in, or withdrawn from, bottles without any difficulty.

Chemicals the Measure of Commercial Prosperity.—Prof. Roscoe, in a late lecture on chemistry, remarked that the commercial prosperity of a country may with great accuracy be estimated by the amount of sulphuric acid it consumes. This will readily be acknowledged as true when it is borne in mind that there is scarcely an important branch of industry which, directly or indirectly, does not need to employ sulphuric acid for carrying on some of its processes; and when you learn that the result of this universal demand is that no less than 850,000 tons of sulphuric acid were manufactured in Great Britain in the year 1875, whilst this enormous amount is likely steadily to increase. By far the largest portion of this acid is employed in the manufacture, from common salt, of the alkali soda in the different forms, the remainder serving to carry on an endless variety of trades, among which those of the artificial manure maker, the gold and silver refiner, the candle-maker, the dyer and bleacher, the calico printer, lucifer-match maker, the wire-drawer, the galvanizer, and the color-maker may be mentioned as some of the more important.

Cause of Intermittent Fever.—The July number of the *Zeitschrift*, edited by Professor Klebs, contains some particulars of an investigation into the physical cause or poison to which marsh or intermittent fever is due. The inquiry was conducted by Professor Klebs, of Prague, in conjunction with Signor

Tommasi, Professor of Pathological Anatomy at Rome. The two investigators spent several weeks during the spring season in Agro Romano, which is notorious for the prevalence of this particular kind of fever. They examined minutely the lower strata of the atmosphere of the district in question, as well as its soil and stagnant waters, and in the two former they discovered a microscopic fungus, consisting of numerous movable shining spores of a longish oval shape. This fungus was found to be artificially generated in various kinds of soil. The fluid matter obtained was filtrated and repeatedly washed, and the residuum left after filtration was introduced under the skin of healthy dogs. The animals experimented on all had the fever, with the regular typical course. After explaining minutely the results of their various investigations and experiments, these gentlemen are of opinion that they have discovered the real cause of the disease in question. As the fungus grows into the shape of small rods, Tommasi and Klebs have given it the name of *Bacillus Malariae*.—*Medical Times and Gazette*.

Eye-Sight.—Milton's blindness was the result of overwork and dyspepsia.

One of the most eminent American divines having, for some time, been compelled to forego the pleasure of reading, has spent thousands of dollars in value, and lost years of time, in consequence of getting up several hours before day, and studying by artificial light. His eyes never got well.

Multitudes of men or women have made their eyes weak for life by the too free use of the eye-sight, reading small print and doing fine sewing. In view of these things, it is well to observe the following rules in the use of the eyes:

Avoid all sudden changes between light and darkness.

Never begin to read, or write, or sew for several minutes after coming from darkness to a bright light.

Never read by twilight, or moonlight, or of a very cloudy day.

Never read or sew directly in front of the light, or window or door.

It is best to have the light fall from above, obliquely over the left shoulder.

Never sleep so that, on the first waking, the eyes shall open on the light of a window.

Do not use the eye-sight by light so scant that it requires an effort to discriminate.

Too much light creates a glare, and pains and confuses the sight. The moment you are sensible of an effort to distinguish, that moment cease, and take a walk or ride.

As the sky is blue and the earth green, it would seem that the ceiling should be a bluish tinge, and the carpet green, and the walls of some mellow tint.

The moment you are prompted to rub the eyes, that moment cease using them.

If the eyelids are glued together on waking up, do not forcibly open them, but apply the saliva with the finger—it is the speediest diluent in the world—then wash your face and eyes in warm water.—*Exchange*.

This has been going round for about ten years, and its ownership, we guess, is lost; but it is good enough to go on indefinitely.



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AN IMPORTANT QUESTION.

A LETTER lately received contains this inquiry: "Why is it that Christians, as a general thing, oppose Phrenology and infidels advocate it? I know of fifty infidels, and every one of them is a believer in Phrenology, while nearly all the orthodox Christians are opposed to it. I do not know that Phrenology is opposed to Christianity, but I am satisfied that Phrenology is true. If there were simply the choice between Phrenology and Christianity, then is Phrenology sure to triumph."

Our correspondent has touched upon a sore subject, probably the sorest one that the friends of phrenological science have to discuss. A great deal of space would be required to consider the points embodied in his question with comprehensive fullness, much more than can be appropriated in this department of the JOURNAL. We shall, however, try to afford him some light in the few paragraphs which can be placed here. All who have much acquaintance with this system of mental science, know that when it was first announced to the world,

eighty or more years since, the ecclesiastics were its only opponents, and for many years afterward they led the battle against it with earnestness, skill, and persistence. If such qualities can accomplish anything in the way of suppressing a new cause, Phrenology should have been crushed out. But its truth was its main ally, and that defied the attacks of bigotry and prejudice. The men who gave time and thought to its thorough investigation, were in every instance won over to its side, and became its advocates or friends.

Our correspondent is an intelligent man, and knows that the progress of science, as far back as history enlightens us, has been attended by constant warfare. The bigoted, prejudiced, conservative, and ignorant, have stood up and disputed astronomers, and chemists, and philosophers, inch by inch; and out of this warfare has grown most of the bitterness of modern infidelity. Considering the nature of this opposition to science in general, it was but natural that a system which bore directly upon the character of mental operations, which, in fact, goes behind the objective phenomena of thought and defines its subjective relations, should stir up many adversaries in Church and State; hence a very large proportion of the opposition exhibited to-day may be deemed an inheritance.

We think our correspondent mistakes in saying that Christians as a general thing oppose Phrenology. Such is not our experience, at any rate. Our whole life has been one of intimacy with "Christians," or the professed members of different branches of the Christian Church, and we have found many more who express either a belief in, or favorable dis-

position toward, Phrenology, than we have of disbelievers or avowed opponents. We think, however, that it is true that nearly all of those who are liberal in religious faith or indicate unbelief in Christian doctrine, are friends to Phrenology. This latter fact, so far as this country is concerned, may be due to one of two things, or to both. First, that two or three of the more conspicuous advocates and teachers of Phrenology were known as unfriendly to "orthodoxy." Second, that Phrenology, as a science, does not furnish special data in behalf of Christianity as a religious doctrine. Nevertheless, Phrenology does support the idea of a Supreme Being, of a Providence, and of a future state; and in its favor is the fact, which, somehow, religious opponents appear to lose sight of, that among the sciences Phrenology is the only one that offers a method for the reconciliation of faith and reason. In its detail of the organization of the brain, physical instrumentalities are indicated by which the spiritual in man is brought into connection with the affairs of everyday life; in the very substance of that wonderful structure, which is the acknowledged center of all that is great and glorious in human nature, Phrenology finds agencies which direct man upward, which draw him toward the contemplation of the supernatural. It declares that a well-developed, harmonious mind recognizes high and holy impressions; that man is refined, elevated, and ennobled by certain superior spiritual sentiments, one of the most important of which is the reverence and worship for a Divine Being. The man who is lacking in this single quality, is found to display in his life more or less of irregularity and incoherence. He is wanting in the grand central balance.

ONE NEED OF THE HOUR.

WE are rapidly approaching another Presidential election, and the struggle for candidacy, and the strife between parties, promise to be great and exciting. The extraordinary character of the last campaign has, it may be said, made of the present term of office scarcely more than a field of preparation for the next battle at the polls; for Republican, Democrat, and Greenbacker, have been marshalling their forces, and weighing the chances all along. The third term question has been discussed on the platform, and in the newspaper *ad nauseam*, and men whose character as professional politicians has been recognized by the people for many years, have been advocating their own "claims" to the "highest office in the gift of the people," in a way that may put to the blush the "cheekiest" of sewing-machine agents.

We read and hear much of this or that policy being of essential importance to the welfare of the nation. We are told that such a man must be elected or the nation will be in great peril. We thoughtfully analyze a ringing manifesto in one of our prominent dailies, and find it a panegyric on a party or a man, but singularly lacking in patriotic counsel—advice of a practical, impartial sort, adapted to the intelligence of the masses with reference to the essentials of good government.

Why are the men who support the better departments of trade and industry, and are known as conscientious, steady-going persons, so indifferent to political matters? Why are gentlemen who belong to our churches, teach in our schools and colleges, and give a high moral tone to certain walks of society, so little inclined to exercise their rights as voters?

They are often heard, in the reserve of the home circle, complaining of the corruption of parties, of the ignorance and greed of officials, yet they stand apart and suffer demagogues and pot-house politicians to manipulate civil affairs, to buy and sell places according to their depraved inclinations.

Good government is demanded, not legislation for railway and banking schemes, for great "jobs" which shall serve as "spoils" to faithful constituents, for private monopolies of trade and limitations of industry. Can it be expected that this good government will be had so long as selfish, incompetent, or partisan men are permitted to give the reins of authority to creatures like themselves?

There is great need of an awakening among the respectable men of the American community to a sense of their grave responsibility as citizens. They have been too long in their shells of social exclusiveness, dreaming of a future political millennium, perhaps, to be brought about by their *passive* influence, certainly not by their *active* participation in political affairs.

It is high time that such as these arose in their intellectual and numerical strength, and in grand co-operation commenced an era of true reform by elevating men to represent them in the councils of the nation and of the State who are competent to do and to dare in the cause of truth and justice. There are men among us who are high-minded, men who know their "rights," and it is our plain duty to give them an opportunity to act as leaders and representatives, because in *knowing* their own rights they are most likely to respect those of their neighbors.

STARVING IRELAND.

THE benevolent sentiments of the American people have been much stirred by a strong appeal from Ireland, where failure of crops and the peculiarly muddled state of political affairs have combined to cause great destitution and suffering. A certain Mr. Parnell came to our shores lately and addressed the American public with a double purpose—to obtain money and sympathy in behalf of the starving, and contributions for the prosecution of a great political movement. In this political movement Mr. Parnell, as every reader probably knows, has been a leader, and its object is the overthrow of the old system of land-tenure in Ireland, and a distribution of the estates into small farms to be held and occupied by the people. It is manifestly true that the mere tenancy of land at the sufferance of a few proprietors has exerted a very depressing influence upon the Irish peasantry and so contributed to the poverty, ignorance, and distress for which Ireland has been notorious for generations; but the wasteful and intemperate habits of the laboring class, particularly in the lower counties, have had even more to do with their destitution.

We will admit readily enough that the habit so common with Irish landlords and manufacturers, to reside in England, or elsewhere out of Ireland and to spend abroad the money procured from tenants for the sale of their goods, has a close relation to the impoverishment of the Irish people, and so far as this sort of absenteeism is concerned their complaint is just, for money should be spent where money is made, if the balance of affairs social, political, and commercial is to be preserved. If the wealthy class in America

should get into the habit of spending half the year in Europe, the effect in a few years upon our population, despite our marvelous industrial resources, would be evident in many phases of embarrassment and discontent on the part of mechanic, tradesman, and agriculturist. In fact, a condition of languor would creep in and the whole machine of American industry would move sluggishly; while abroad, the millions distributed by American prodigality would energize English, German, French, and Italian industry.

Who can help a sense of compassion for the Irish people? With many admirable qualities of character, with such possibilities of mental and moral growth under favorable circumstances, it is apparent that their condition is due, for the most part, to exterior influences. To be sure, it is a matter of disgrace to themselves that so much intemperance and wastefulness exist among them. But it is more disgraceful that their English masters have not given them proper advantages and means for mental improvement. Since 1845 the population has declined nearly three millions, but in proportion to numbers and in spite of circumstances there is far less crime and pauperism in Ireland than in England or Scotland. According to recent data, to every thirty-three of the population in England there is one pauper; in Wales the same proportion holds good; in Scotland there is one in fifty-three, while in Ireland there is but one in every sixty-eight of the population. As for crime in 1876 four persons were sentenced to death in Ireland, while thirty-two were sentenced in England; for crimes of which the penalty was imprisonment for life, the numbers were fifty

and 280 respectively. The proportion of minor offenses is also much larger in England than in Ireland.

The land-owners have been too intent upon their own self-indulgence; the Government has been too much concerned in Oriental aggrandizement to listen to the pitiful appeal for considerate treatment. If measures long ago had been undertaken for the suppression of intemperance and bigotry in Ireland, and education made compulsory we would have to-day no occasion to respond to the cries of starving women and children.

HEARD FROM.

THE invitation which was editorially made in the February number to our readers to write us their views on the character and work of this magazine has brought a "host" of replies, all of which—*every single one*—(you see how our Self-esteem has grown lately and helps the emphasis of our assertion) contain acknowledgments and compliments. Most of the writers have their preferences, however. This one likes the biographical sketches best, and would have more of them if it were convenient. Another is very fond of metaphysical discussions, and "fairly revels" in the essays relating to the manifestation of character. Another would be particularly pleased if we gave more articles on clairvoyance and magnetism. Another is interested in physiology and hygiene, and finds in the department, "Science of Health," just what is wanted, but not quite enough. Another goes for the small type first when the number arrives, and thinks the "Answers to Correspondents" and "What They Say" the best of all.

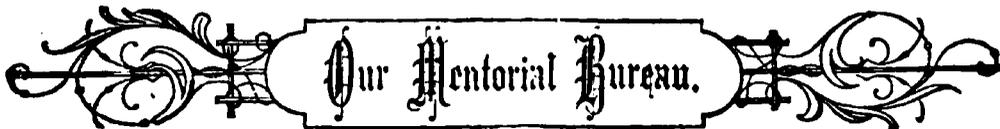
In these differences of liking, our readers but express their character and training, and it is gratifying to us to know that the PHRENOLOGICAL JOURNAL responds so well to each one's special preference.

Some of the replies contain allusions to the projected Institute building and a few contributions toward its establishment. This is a sort of "doubling-up" of approval, and, of course, is very highly appreciated. One letter comes from a gentleman over eighty years of age, who was one of the subscribers at the outset of the PHRENOLOGICAL career over forty-

one years ago, and who has remained a warm friend all along to the present time, and notes "a great improvement" in its present form. He says: "The early volumes, however, taught me (with the aid of Hydropathy) how to live, and I have not taken a dose of drugs for fifty years."

Our growing Self-esteem inclines to the expression of doubt as to whether any other American periodical can show such ancient and solid testimony in the line of well-doing.

We thank each one of you, kind friends, for your good opinion.



"He that questioneth much shall learn much."—Bacon.

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. But one question at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of an early consideration.

IF AN INQUIRY FAIL TO RECEIVE ATTENTION within two months, the correspondent should repeat it; if not then published, the inquirer may conclude that an answer is withheld, for good reasons, by the editor.

WE CAN NOT UNDERTAKE TO RETURN UNAVAILABLE CONTRIBUTIONS unless the necessary postage is provided by the writers. IN ALL CASES, persons who communicate with us through the post-office should, if they expect a reply, inclose the return postage, or what is better, a prepaid envelope, with their full address. Anonymous letters will not be considered.

FRANCIS GALTON.—J. N. U.—This gentleman is a member of the Royal Society of England, and a physiologist and author of some reputation. He has given careful attention for many years to the study of human nature, particularly in its relations to inherited evil, both moral and physical. He has written on the subject of Heredity with force, and is accounted authority in that line. We know that he believes that mind and character have special relation to physical organization. His recent assertion that "the very foundation of the differences between the mental qualities of man and man admit of

being gauged by a scale of inches and a clock," indicates that he is about as much of a phrenologist as a man may be supposed to be. He does not, however, go by that name; "Mental Physiologist" probably covers the field of his aspiration.

SIGNS OF THE ZODIAC.—The zodiac is an imaginary belt in the heavens, whose branches extend eight or nine degrees on each side of the ecliptic, within which the motions of the sun, moon, and principal planets are observed. This belt was known to the ancients, and divided by them among the twelve signs or constellations of stars, which are named as follows: Aries, or the ram; Taurus, the bull; Gemini, the twins; Cancer, the crab; Leo, the lion; Virgo, the virgin; Libra, the scales; Scorpio, the scorpion; Sagittarius, the archer; Capricornus, the goat; Aquarius, the water-carrier; and Pisces, the fishes. These names were given from a fancied resemblance of the groups or groupings of the stars to such things.

WELL WATER.—*Question*: Is the water of an uncovered well as healthy as that of one covered?

Answer: The water of a covered well is more suitable for the purposes of drinking than that of an uncovered one, for the reason that there is less exposure to the influence of the atmosphere.

The air constantly holds in solution matter more or less pernicious, and water, being a powerful absorbent, takes the matter, and, as a consequence, becomes in time impure. If, however, the water of the uncovered well is subject to constant draught, it will remain good, for the reason that it has not time to stand to become affected by the atmospheric impurities. We have heard of old cisterns being found several feet beneath the ground, and with a considerable supply of water in them, which was in a superior state of excellence for drinking. These cisterns had existed so long that the people of the neighborhood did not know of them, and the water had doubtless been lying there hermetically sealed for at least a generation or two.

SKIN DISORDER.—A. J. K.—The eruption which you describe is probably a form of acne, and such as is frequently found on the faces of young people. By living as closely to the rules of hygiene as you can, you will probably experience some improvement. Bathe often; avoid oily or greasy food; eat an abundance of good vegetables and fruit; if you must eat flesh-meat, let it be lean and well cooked, not *fried*, however.

GRAY HAIR.—J. S.—The causes of gray hair are numerous. One that is fundamental is inheritance; another is weakness of constitution; a third is improprieties of life, or bad habits, while climate also has something to do with it. Where it is constitutional for the hair to grow gray early, the effect upon the health is nothing. We are of the opinion that most of the cases of premature gray hair are due to the "fast" or dissipated habits of young people.

SOFT SPOT ON INFANTS' HEADS.—A new-born child has what is called a "soft spot" on the top of the head in the region of Veneration (see illustration in article on "Comparative Phrenology"), because the bones of the skull have not closed at that point. Nine or ten months are necessary before the gap will be completely closed. Your question in regard to tooth-wash was quite fully answered in the March number.

THE BETTER REASONER.—*Question:* Suppose A and B have Causality equally well developed, but A has large Comparison, in which B is deficient. And suppose, otherwise, A and B are exactly alike in temperament and in size and quality of brain, etc., would A be as capable of reasoning from cause to effect as B?

Answer: Yes, and more so; for the reason that his large Comparison would enable him to appreciate much more clearly the differences and correspondences of the data relating to the subject discussed. B's reasoning would be lacking in

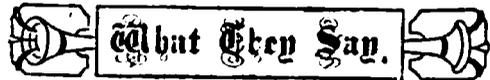
the desirable attribute of illustration, and so would be a bare presentation of logical sequences. A, because of his capability of illustrating his points, would make his logic more forcible to others than B.

WEAKNESS.—What is the reason some persons faint at the sight of blood?

Answer: A very sensitive temperament and an organization lacking in courage and stamina are at the bottom of this weakness. Loss of blood, in the mind of some, is associated with suffering and death, and a dread of these has something to do with the faintness.

SPOTS ON FINGER NAILS.—F. W. S.—The white spots which appear on our finger nails are due to the variable nutrition of the nails. When the vital forces are vigorous and every part of the body is supplied with good blood, their growth is steady, and there is uniformity in color and consistence. It is a peculiarity in the growth of the nails, that if a person experiences a severe attack of disease, or some strange shock to his organization, the nails will indicate it. There will be a change of color, a partial cessation of growth, and as they emerge from the skin, ridges may appear. In some remarkable cases the nails have dropped out as a consequence of illness.

Several ANSWERS must be deferred to the next number.



Communications are invited on any topic of interest; the writer's personal views, and facts from his experience bearing on our subjects, being preferred.

A LEAF FROM PERSONAL OBSERVATION.—It was on a gloomy March day in 1872 that the hand of our loved friend, S. R. Wells, traced a letter to an intimate friend of his and mine in answer to the question, "May I make her my wife, if I can?" The gentleman in the case had been a personal friend of Mr. Wells for six years; the lady had some two months before submitted to an examination at the instance of a friend mutual to both parties; and now the question was put and to be decided in the light of science and for the good or ill of both concerned in the future days of life. As the letter lies open before me now, I can almost see the pleasant, frank look of him who wrote it:

"I've been thinking, thinking, this stormy, gloomy day, of your question, and my answer, all things considered, must be this: 'If you were my son or she my daughter, I would say, Nay; but whatever your decision may be, to it

may God add His blessing. She is lacking in ambition to shine, and has not the adaptability for the high polish you would have her take on. You are ambitious and will not stay where or as you are, and your wife should be of the class that will keep up with you, keep beside you, encourage and aid you. . . ."

If this counsel had only been heeded—what might have been—two persons might have been happier, and probably others about them. He was educated, impulsive, earnest, and very energetic, frank, open; and life was a battle to be won. She had many good qualities; was kindly disposed and wished to do right; was loving, to an extent; but there was a sort of negativeness in the disposition and a lack of kindly encouragement that gives the sweetness of wifely rest, when the husband, in active life, seeks from his wife, in the quiet of home, that confidence and cheering aid which none other can impart. There was a selfishness that even kindness could not overcome, or love win from its citadel.

The wedding was duly celebrated, and the dual life commenced. Seemingly all was well; but by and by the crash which has shaken, not only our own country, but the world, came; and the time finally arrived when it came very near home; and then it was found that a change was perceptible. At length the worst had come, and the man found himself where the whole of his property must be given up in order that all should fare equitably, and it was done. A fortune more than most men ever hold, a position few men ever gain, a name untarnished—all but the last was gone. But the life was not gone nor the spirit; and, so soon as could be, he looked around for the place where bread could be had, and was soon at work again. But the home was not as was the old one; something had gone, yet no break had occurred. Two children had been given them, yet the tie was not as complete as it might be; and no unkindness or real lack had occurred in the means at command. All seemed to prosper; a pleasant home outside our city was secured; and an offer came from a distant part of the country to come there and try his hand; and he left with the approval and wishes of all at home to prepare a new home, and by his skill and energy to build him a new interest. Hardly had he gone, when quietly, deliberately, the wife abandoned him and the home, taking the little ones, writing such a cold, heartless letter as few would care to see but once; and the man, sorely tried before, came back as soon as he could to the place he left as home. No reconciliation could be had. "He was poor," and so the load was taken up, and has been carried ever since. A straightforward line of duty has been followed. The temperaments of these two people were not those that sympathize and gradually grow into each other as they grow older

together; the angles of the one were not rounded over by the good-nature of the other. All this Mr. Wells saw clearly, and gave his answer so plainly that the parties had no shadow of right to do otherwise than follow his advice. Yet they did not, and we tell you the result—it is one of the common chapters of life.

If those who contemplate a partner in life or business would give the same attention to it which they do to more ordinary matters of life, and then follow that advice, to be had by seeking in the proper quarter, it would not be necessary to read "incompatibility," "uncongenial," or "divorced" so many, many times each month or year in the newspapers.

Life comes to us; let us make such a use of it as will redound to the good of some one or more when our task is done; let us try to benefit some one or some thing by having lived rightly; and not go sailing against the tide and wind when we can do better by keeping our eyes open and using the faculties given us rightly.

T. P. J.

A WOMAN'S TROUBLES.—FAMILY LETTER No. V.—*Dear Mister Editor*:—I was a tellin uv wot Missis Dawkins sed when my letter stopt, and hoppin that it is interestin enuf I'll jest go on ter say that Moses lookt trubbled. Finally he says I dont want to hurt ennybuddiz feelins but you must see that my Wife is little moar than A Child and is not kapable of choosin what is best for her. She is injuring herself by the way she dresses.

You are partly Rite and partly Rong says Missis Dawkins. It is tru her Intelleck has not bin Devellupt in meenny direckshuns but her faculties are as good as yours. She kan reed and Understand and Apply an artickkle on the fashuns over which you wood be Distracted. Missis Dawkins was getting ecksited. Look at that dress your wife has on ses she. kood you make that? Kood you Plan it? Bekauss it isnt a Church or a House or a problem in Ukild dont prove that it dont need judgment and skill to plan and make it. The trouble isnt that Wimmin hasnt judgment and facultiz but tha is mledirected. Lot all the tallant that is put into making trimming be put to sume better yuse, let all the studdy that's given to Fashion Books be Devoted to Sanitary matters and I dont think thare wood be so meenny sick wimmin as thare is now.

(My memry is pretty good and I give the sens of what She sed the probly I dont get the Egsact words).

I was getting my ise opund a litle and Missis Dawkins was about out of broth so I legun and says I Moses I was brot up to think wimmin didnt need Judgment nor Intelleck and that the less tha had the moar attractive tha was—and that tha didnt need to no Nothin. And all the

time Befoar we was married you inkurridged me in it by telling me I was so Sweet and Pretty that it made up for evrything and evry new dress I had you sed was the most Bekumming one I ever had and you yoused to say that men Valyoud affeckshun in wimmin but not Intelleck.

Yes say He that was when I was a Konsected Ass and thaut I had Intelleck enuf for a hole Fammully but I think now that a wommun aut to hav as much intelleck as a man and a man aut to hav as much affeckshun as a wommun.

The Editors of them Daly Papers says I dont seem to think wimmin aut to have neether affeckshun nor intelleck—Nothing but klose—for all tha put in the kollum for wimmin is sumething about the fashuns.

I spose thare something like I yoused to be says He.

Youre not verry flattering to them Daly Editors accordin to the Account you hav given of yourself says I but never mind them. You see how You youst to tawk to me and now—

Yes I see I see Ive bin a Fool says He and I see a new look cumming in his fase but I went on—And now you keep tawkin and tawkin with sum boddy else about things I dont understand and Never take onny Panes to hav me understand and then try to devellup my Intelleck by taking off my korsits and wareing short dresses and Big Shoos, and then I broke down and kride. I was going on to tell them how Id lookt in the Papers to find sumthing to help me but my husband kum and put his Arm around me and says My Dear Wife Ive not only bin a Fool but a cruel selfish beest. Missis Dawkins says he I never realized befoar that all the Trainnin given to girls was towards Childish youselessness. Tha are not to blame. We men Praze and enkurridge them when young for the verry things we dispise in em when tha gro older. It is a solum and almost youniversul truth that my poor Josie has reveeled in her short story Hereafter she shall Teech me moar love and then I shall better perform my Dutiz to her and will try to teech her moar Reason.

God bless you both sed Missis Dawkins and she went out wiping her ize I shall awlways think moar of Her after this. And now Mister Editer I spose I shall bid you Goodby seeling my trubbles is ended for Moses says I can ware what I plices if its Coat and Pants (as if I shood ever want to) or korsits and skirts. He always was the Best Man that ever lived till he got those Dress Reform Noshuns in his hed.

I think I shall lern Sumthing now for we stay at home evry evening and he's teeching me Grammer and reading He says he duzent care a sent about my Spellin bekause evry boddy is goin to spell by souns pretty soon. But I find it bothers me not to no how to Spell a word

when I go to the Dickshunerry to find out what it means.

Well Good by Mister Editer I no youll be Glad my Trubbles is ended.

Yours Truly JOSEPHINE JACKSON.

PERSONAL.

BENJAMIN BRANDRETH, one of the most eminent of latter-day manufacturers of patent medicines, died suddenly in February last. He was born in England and was seventy-two.

Miss **HARRIET HOSMER**, the sculptress, has left London for Rome. She still pursues unremittingly the object of her life, which is to discover the secret of perpetual motion. She declares that she is on the eve of success, and that ere many months have elapsed the world will be astonished.

M. F. DE LESSERS, who was lately prospecting in Nicaragua for the purpose of ascertaining the practicability of his scheme for a ship-canal between the two oceans, is about seventy-seven years old. His wife is under thirty-five, and when at home he is said to be her regular society companion, exhibiting the activity and sprightliness of middle life.

KING JOHN of Abyssinia is about forty-seven years old, is reported never to smile and to have a most ungovernable temper. He is a most earnest tobacco reformer, cutting off the lips of all those who smoke and the noses of all who take snuff. He is a very prominent Christian advocate, too, for by means of torture he has converted one hundred thousand Moslems to Christianity.



In this department we give short reviews of such New Books as publishers see fit to send us. In these reviews we seek to treat author and publisher satisfactorily and justly, and also to furnish our readers with such information as shall enable them to form an opinion of the desirability of any particular volume for personal use. It is our wish to notice the better class of books issuing from the press, and we invite publishers to favor us with their recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

THE EMOTIONS. By James McCosh, D.D., LL.D., President of Princeton College, Author of "Intuitions of the Mind," etc. 12mo. pp. 255. New York: Charles Scribner's Sons.

The eminent author opens his new volume with a deprecatory "preface" touching the indefiniteness of the terms in common use by which mental emotion is designated. This, of course, encourages the intelligent reader in the expectation that some of the fog involving the

subject of mental philosophy will be dissipated, and he will be enabled to see his way clearly, at least in part. An examination of the work is disappointing, however, particularly to one acquainted with the sharp definitions of the Gallian system of mind. Dr. McCosh appears to go over the same old ground so much plowed by the Scottish thinkers, and although he gives little rein to speculative fancy, he does not simplify his subject. Here and there appears a remark which suggests that the author is inclined to accept a physical basis for mental action, but the remark is rarely more than a suggestion, which leaves us without an assurance of his exact belief. On page 3, for instance, we are told "the seat of it (organic affection) seems to be somewhere in the cerebrum, whence it influences the nervous centers, producing soothing or exciting, and, at times, exasperating results." This, by the way, is one of the stronger expressions of the author, which intimate a disposition to a belief that the mind has a localized relation to the brain. The author finds it convenient to use, occasionally, the terms of Phrenology, and borrows largely from Mr. Darwin and Sir Charles Bell in describing the play of emotions upon the features. How the feelings are excited by external objects, by society, etc., is considered at some length in relation to their particular expression—as hope, fear, contempt, cheerfulness, horror, the sense of the beautiful, the ludicrous, and so on; but we do not find that Dr. McCosh has given us more information in this respect than is to be found in authors like Burke, Bain, Mandaley, Bray, and others. In many respects the volume is interesting, especially in its discussion of æsthetics, where the author's cultured taste finds congenial employment. As an attempt, however, at classification, it is not successful, being too complex and diffuse for the purposes of the practical thinker.

THE DIVINE LAW AS TO WINES. By Geo. W. Samson, D.D., former President of Columbian University, Washington, D.C. 12mo, 326 pp. Cloth. Price, \$1. Published by the National Temperance Society and Publication House, New York.

This fresh contribution to the Bible view of wine-drinking, comes from the pen of a gentleman who has had the matter under his observation from youth, and has had exceptionally good opportunities for its investigation, viz: the study of Bible history as a clergyman, and travel in Eastern lands, where many of the customs in vogue have been transmitted down the ages. His motive in preparing the book is to discuss the duty of religious people, especially those who profess to be Christians, with reference to the use of wine, and to establish a true law upon the subject.

In carrying out his purpose, Dr. Samson retraces the field of ancient history, examining the

customs and laws of Hindoo, Greek, Egyptian, and Roman, as well as Hebrew, in the remote past, and gleaning whatever of importance bears upon the matter in hand. Science is also called upon for its testimony, and the opinion of Oriental scholars is held up to the scrutiny of the reader with not a little of philological criticism. Some excellent reflections are found near the end, on the practice of drinking intoxicating wine at the Lord's Supper, and the impropriety is placed in a vivid light. We commend the book to Christian people in general, and to the Christian ministry in particular, as there is great need of sound teaching on the alcohol question from the pulpit.

FROM FATHER TO SON. By Mary Dwinell Chellis, Author of "The Brewery at Taylorville," "The Temperance Doctor," etc. 16mo, 419 pp. Cloth. Price, \$1.25. New York: National Temperance Society and Publication House.

Our friend T. S. Arthur must, we reckon, take care of his laurels, as the above-named author is multiplying volumes in the temperance interest at a rate which, if sustained a few years longer, will give her a high place among American writers. To be sure, there is much similarity in her plots, but as she devotes her nimble pen to one object, we can not expect a wide variation of style and incident. However, her stories are graphic portrayals of the fell work of the drink demon, and well adapted to aid in the cause of moral reform.

"From Father to Son" illustrates the effects of intemperance upon the physical organism and the operation of the law of heredity. Chief among its characters is a country esquire, who is addicted to drinking intoxicants. He is the father of six sons, several of whom are, through his example, brought to distress and ultimate ruin. This book is of interest and importance to the young.

LIFE AND EDUCATION OF LAURA DEWEY BRIDGMAN, the Deaf, Dumb, and Blind Girl. By Mary Swift. 12mo. 373 pp. Price, \$1.50. Boston: The New England Publishing Company.

Nearly every intelligent American, and, we might add, intelligent foreigner, has heard of Laura Bridgman, on account of the very extraordinary circumstances of her education, they attracting the attention of physicians, economists, and educators the world over. A brief biography of the lady may not be out of place, however. She was born in 1829, at Hanover, N. H. When about two years of age she lost her hearing altogether and all *distinctness* of vision, by scarlet fever. In a few years, the indistinct vision entirely faded away, and thus shut out from the world, in silence and in darkness, she was taken, by the advice of Dr. S. G. Howe, who became interested in her case, to the insti-

tution for the blind in Boston, in 1837, where her education—physical, intellectual, and moral—was begun, and where she still resides, except during the summer and fall months, which are spent at her home in New Hampshire. How she was trained, step by step, in reading, writing, spelling, grammar, arithmetic, geography, history, zoology, philosophy, physiology, astronomy, and her moral nature enlightened concerning the practical workings of the principles of honesty and truth, and taught the fundamental doctrines of religion, is related in detail and in an interesting manner by Mrs. Lamson (then Miss Swift), who was her teacher.

Prof. Park, of Andover, contributes an introduction, in which he draws out some of the lessons that are taught by this remarkable life. To all who are interested in the study of mind, the career of Laura Bridgman supplies an exceptional opportunity for observing how great results in development may be attained through a single avenue of mental approach, by means of a single sense, and the *Boston Advocate* fittingly said: "The story of Laura's life and education is one of great human interest. Through the one sense of touch, her spiritual nature, her moral sense, and her intellect have been harmoniously developed, and the little child whom fate seemed to have shut out from her kind, and ordained to darkness and ignorance, has grown into a useful and loving woman, pure and holy in her life and thoughts."

PUBLICATIONS RECEIVED.

PETER HENDERSON & Co.'s 1880 Catalogue of Everything for the Garden. An elaborate, well illustrated list.

HOW GEOMETRICAL LINES HAVE THEIR COUNTERPARTS IN MUSIC. By Isaac L. Rice, author of "What is Music?" Asa K. Butts.

THE RELATIONS OF RAILROADS TO THE PUBLIC. Report of the Committee on Railroad Transportation; on railroad trade and transportation; upon the regulating commerce by railroad among several States.

THE TEMPERANCE WORKER and Band of Hope Educator. The number for January of this London publication is at hand. It contains many suggestions of practical value to the Temperance advocate.

ALCOHOL AND THE HUMAN BRAIN. By the Rev. Joseph Cook. A strong and characteristic lecture. This was delivered a few months ago by the well known Boston orator. It presents from a scientific point of view the injurious effects of alcoholic drink upon the brain. Price 10 cts. National Temperance Society.

THE NEW YORK SOCIETY FOR THE PREVENTION OF CRUELTY TO CHILDREN. Fifth Annual Report. This organization has accomplished

much good during the past year, partly in the way of rescuing children from the control of brutal parents or guardians. It would seem that many cities now have similar societies. A list of them is given in the pamphlet.

READINGS AND RECITATIONS, No. 3. A new and choice collection of articles in prose and verse by the foremost temperance advocates and writers, suitable for use in classes, temperance organizations, reform clubs, etc., adapted to public and private readings. Edited by Miss L. N. Penny. Price 25 cts. Published by the National Temperance Society, New York.

LIMITED LICENSE in its Relation to the Liquor Traffic. By S. Lennet, Jr. The author proposes a novel and yet practical plan for the consideration of all friends of Temperance. This in a few words is expressed by the title of the book, and comprehends, as may be inferred, legal suasion and moral suasion; so has some claim upon the attention of both sides. Price 15 cts. Published by the American Temperance Publishing House, New York.

THIRD ANNUAL REPORT of the Society for the Prevention of Crime. The energetic prosecution of the work of this association, of which the eminent Howard Crosby is president, has made it well known to the public. The report is a condensed statement of the object and works of the association. We are of opinion that any one who feels at all interested in the improvement of the masses in morality, can not do otherwise than approve it.

METEOROLOGY. Evidence from the Weather Maps of the United States Signal Service. By Isaac P. Noyes. This is an intelligible consideration of the importance of a systematic observation of the weather, and an appeal for the enlargement of the Bureau which has been established by Government. So much has been accomplished, in Mr. Noyes' opinion, that a few more stations in the extreme West and South-western Mexico would help greatly toward perfecting the system.

BABY'S GUIDE TO HEALTH, or How to promote and preserve the Health of Babies from the time of birth, in all seasons and climates. Wm. H. Price, M.D., A.A., Surgeon. Price 25 cts. Deeply impressed by the great mortality among infants and children, particularly of the poorer classes in our cities, Dr. Price has prepared this pamphlet with the view to aiding parents in the care and treatment of their children. He furnishes practical hints on clothing, feeding, ventilation, exercise, etc., and shows the enlightened physician in his aspersions of patent medicines and the extreme method of drugging. He deprecates the use of cold, especially ice-cold, drinks; while alcoholic beverages he strongly condemns.

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WILHELM RICHARD WAGNER.

WHEN this portrait was presented to the examiner, the name being hidden, his first remark was: "Who is that? He looks as if he were listening to music." The reader will observe in the expression a kind of dreamy enthu-

siasm, as if the original were listening for something to come to him, instead of looking that he might see something. That is a strong and handsome face; no fault can be found with any of its features. That is a massive and magnificent head, especially large in the upper side regions. How capacious across the brow in the region of Perception! How heavy and broad in the upper part of the forehead, where the organs which theorize and comprehend are located! Then look at the breadth and expansiveness of the temples in the region of Tune, Constructiveness, and Ideality, faculties which are employed in musical composition, and in invention, or in the study of combination. All great musical composers, as well as all great poets, artists, and mechanics, are broad and full in the temporal regions, and especially in the higher part of the temples.

The portrait also shows immense Spirituality and Hope. Let the reader draw a line on this portrait, from the center of the chin upward through the eye-ball, to where the line touches the hair, and the head will at once appear to be very much elevated, and exceedingly full. The distance from the eye, in the picture, to that point, is very great. That is the region of Hope and Spirituality, one giving enthusiasm, and the other creative fancy which believes in the possibilities of the undemonstrated. These are the faculties which hunt for undiscovered stars or planets, which lead one to believe in the possibilities of the unrevealed field of invention; hence, most inventors who step beyond the orbit of common observation and endeavor, are called "dreamers" or "lunatics." Copernicus, Watt, Fulton, Morse, Howe, are examples. They were considered theo-

retical, visionary, half-crazy, and those who ought to have been their best friends stood aloof from them.

The subject before us, an inventor in music far beyond the common prescribed boundaries of musical composition, with his wonderful, weird passages, has bewildered, astonished, and sometimes maddened the world of criticism. There are those who are his rivals for the public ear, who would decry his work; there are others who believe that he has touched the realm of the musical future; that he is the phenomenon of the time, and for the future.

Such a head belongs to the realm of poetry, invention, and music. If he had been directed in the pathway of theology, of mechanics, or to the science of war, he would have been a leader among men. He has massiveness of brain from the opening of the ear and the eye, upward. At Firmness and Self-esteem his head is strongly developed; consequently he is resolute, persistent, independent; he has also ambition, is capable of ardent affection, wonderful courage, and also of manifesting financial wisdom.

His Language would make him an orator, and if he had taken the drama as his pursuit he might have out-ranked all rivals.

The temperament is exceedingly fine, susceptible, and enthusiastic. He does not need to take inspiration from other people's mental life, nor to light his torch at their taper. He warms himself by his own fire, and like the locomotive, travels with his own strength, and illumines his pathway for himself.

Among all the musicians who have won exalted positions, not one can be mentioned whose early life was a greater

struggle against difficulties both social and pecuniary than Richard Wagner. Many of these difficulties were self-created, because he not only sought advancement as a musician and composer, but also aimed to introduce new ideas and methods, which were in themselves so novel and repugnant to the existing schools.

Wilhelm Richard Wagner was born in 1813, at Leipzig. His father was a police actuary, a man of considerable talent, who died six months after the birth of his distinguished son. The widow married again, taking for Wagner's stepfather an actor, a painter, and the author of several comedies. It was this gentleman's intention to make a painter of Richard, but he found him possessed of no talent for drawing. Richard was only about seven years of age when his second father died, and the day before that event he requested the boy to play several pieces which he had learned on the piano. After listening to his playing, he remarked: "It is possible that Richard, who is good for nothing else, may make something of himself in music yet." Left now to himself, and having no special musical advantages, he of course learned nothing which he could not claim as entirely his own, although his method of learning was, as he himself confesses, solely by imitation. He imitated everything he saw or heard—was it a symphony of Beethoven, he composed a symphony; was it a drama at the theater, he immediately set about writing a drama; and all this without the least knowledge of the rules which govern musical or literary composition. With every step forward in life, he of course changed his opinion and his tastes.

He wrote plays when but twelve, and he was but fifteen years of age when a composition of his was put upon the stage, and from that time his whole career, which we have not time to trace in detail, has been one of advancement, although every step until he had reached his thirtieth year was against very discouraging obstacles.

In his eighteenth year he finished the studies of the gymnasium and entered the University of Leipsic, as a student of philosophy. He now received music lessons of Weinlig, who was at that time chorister in the Thomas-school, and already renowned as a teacher. He then gave most of his attention to composition—mainly romantic pieces. In 1833 he produced a symphony, which was performed in the Leipsic Gewandhaus concerts. In the few years following, he composed also a "Faust Overture," and the unperformed operas: "The Wedding," "The Fairies," and "The Love-Prohibition." The composer wrote the texts of these himself—a very remarkable peculiarity, and one which he has retained in all the works which he has yet produced. At the same time, he felt himself called to compose exclusively dramatic musical works for the opera. Concert pieces do not exist among his later productions.

When scarcely twenty-one, he was made Music Director of the Magdeburg Theater, where he remained from 1834 to 1836, going from thence to accept a similar position at Königsberg, and thence into the theater at Riga, in the same capacity. Here he began his "Cola Rienzi," which he finished in Paris, where he was obliged to struggle with heavy responsibilities and want; but neither his spirit nor his creative powers were weakened, for immediately after having finished this work he began to compose his "Flying Dutchman," for which he had received the first suggestion on a voyage from London to Calais.

At the instance of Meyerbeer, this opera was represented on the Berlin, and "Rienzi" on the Dresden stage. Wagner was now appointed Court-organist at Dresden, in company with Reisziger. Here appeared the "Tannhäuser," which was represented in 1845, and also the sketch of "Lohengrin," which was finished later in Zurich. In consequence of his having taken part in the insurrection of May, 1849, he was obliged to fly from Saxony to Switzerland, where he

took up his residence in Zurich. Here he was first enabled to bring his peculiar musical talents into public favor. He wrote the three pamphlets, "Art and Revolution," "Art in the Future," and "Opera and Drama;" and also a considerable part of the so-called "Nibelungenring," a trilogy of operas, upon which he was more or less engaged for fifteen years. This work, together with its introduction, required four consecutive evenings for its complete representation. In Zurich, he wrote "Tristan and Isolde."

From 1858, he spent two years in Italy, making Venice his residence. In 1860 he returned to Paris, where he succeeded in having his opera, "Tannhäuser," performed in the Grand Opera House, but without the expected success. In the meanwhile, the political situation had so altered in Germany, that he was enabled to visit Vienna and several other cities, and was everywhere received with the highest honors. In 1862, the King of Saxony cancelled his political disabilities and made him his musical favorite. Shortly after his return to Saxony, he made an extensive tour, in the course of which he visited St. Petersburg and Moscow, where his concerts brought him a rich harvest.

Herr Wagner has been twice married; the second time in 1870, to Madam Von Bülow, a daughter of Liszt. The Abbé has been a steadfast friend to the eccentric composer for many years, and exerted a powerful influence on public opinion in Wagner's behalf.

The great undertaking for the production of his "Nibelungenring," which had its accomplishment in the little town of Baireuth in Bavaria, in 1876, constitutes an era in German music. A theater was specially erected, and the series of operas belonging to the Nibelungen performed before a great and brilliant audience. Wagner's aim has been to give to German music a peculiarly German character—the motive, sources, *dramatis personæ*, melody, being German; at the same time he asserts that the hitherto popular drama and music

"are insincere and trivial," and not calculated to elevate the mind of the hearers. His views on the proper sphere of music, and the nature of his own efforts as a composer are set forth with much elaboration in his "Gesammelte Schriften und Dichtungen," which constitute nine volumes, and were published in 1871.

In person, Wagner is tall and thin, with a large head, strongly marked in outline, and resolute in expression. A writer says of him, with more of candor, perhaps, than eloquence:

"The man is highly nervous and passionate—a perfect volcano. In all he does, in all he says, there is a mixture of lava, of flame, and of fire. He is haughty and violent in his sublime extravagance. Despotism and love of power are the basis of this contradictory and warm nature. He must tyrannize, he must abuse. He beats his players, and then afterward, with tears in his eyes, begs their pardon. One moment he insults his singers, the next flatters them and heaps presents on them. He has quarreled with all his friends; he has never been able to agree with any theatrical manager, and, at last, determined to reign as absolute monarch, he has been obliged to build himself a theater. He works in the morning. In the winter an immense fire is lighted in his study, where rose-colored candles, burning in silver candlesticks, emit voluptuous odors; in the summer the windows are opened, and the room is filled with the sweet scent of the dawn. Before setting to work, Wagner takes a bath, and a cup of black coffee is brought to him in a gold cup. When he begins to work he insists upon having all his surroundings in perfect harmony with the musical subject he has on hand, and when his object has been attained, he exhibits his inspiration with strange antics and exclamations of joy. Wagner can only work in complete silence. As soon as he is heard to caper and to cry, no one is allowed to move; at the slightest noise his music takes immediate flight, and the world loses a *chef d'œuvre*."

During the past winter he experienced a severe attack of illness, which at one time it was thought would prove fatal, but Richard appears now to be almost himself again. It will be remembered by the reader, that to Wagner was given

the honor of composing a grand centennial march, which was performed at the opening of our Exposition in 1876. For this piece, of which little is heard nowadays, the author received the sum of five thousand dollars.

THE PHILOSOPHY OF SUPERSTITION.

I AM not naturally credulous, but so far from pluming myself upon the absence of this quality, I meet the fact with a sort of tender regret. I come from the old Pilgrim stock (the Primes), who could never take anything upon trust, but must always be able to give a reason for the faith that was in them, and, therefore, have been rather of the Doubting-Thomas order; whereas, I consider the child-like faith and lovingness of John as belonging to a far finer order of character.

Superstition is the blind side of Faith, and I would a great deal rather believe too much than too little. In justice to myself, let me say, I have not that mean, distrustful nature, that inclines one to doubt the fidelity of friends, and which imputes interested or unworthy motives to the friendly demonstrations of others. I am never jealous, never suspicious. I am apt to think that people say no more than what they mean, and truly feel. If they praise me I am apt to think I deserve it, at least in their estimation, and I take their reproaches with a like simplicity.

All this does not apply to the kind of credulity of which I wish to speak, which applies more properly to what is popularly called superstition; a belief in the occult, spiritual, or supernatural. On this ground, where most of persons behold what is strange or unnatural, I am apt to see a beautiful fact in Nature, vouchsafed to the few, but which, in the progress of human development, will become an ordinary experience.

Does any one doubt that the process of civilized culture is gradually evolving finer intuitions, a higher moral sense, and

a more Christ-like tenderness and sympathy; and does it not thence follow, that faculties once in a rudimentary state have grown to be leading characteristics; the brute, man, rising to the spiritual, intelligent being? We now behold the things that pertain to the Spirit, as in a glass, darkly; but in process of growth we shall see face to face, and be no more surprised when beautiful creatures, who have laid aside the garniture of earth, as an outworn garment, come to greet us, and sit down by our side, or walk with us by the wayside; than we now are at the visit of friends to us from a journey, or making neighborly calls upon us, of our friends and acquaintances.

Even the Gradgrinds of science, who decry the human tendency to superstition, and scout at the idea of accepting as truth, what they call the "crude Jewish teachings, wrought out in the infancy of science," can not deprive us of the *natural* inferences to be deduced from the stony gifts they offer us in lieu of bread. Grant that our religious ideas have come to us when Geology and all other sciences were unknown, it should be remembered that the Scriptures do not teach any scientific system, but are addressed to the moral and spiritual nature of man, and in the abstract it does not matter whether they come from a small or large section of the world as known in history; the only question being, do they teach as they pretend to teach? Do they bring us a certain oracle? Do they aid our aspiration, and purify our hearts? Are they the best inculcations of wisdom for the guidance of just such beings as they propose to teach and guide; or would the world be better if

thoroughly convinced that all our moral ideas were gradually evolved from the slowly-expanding brain of a monkey; and that the far-off Lawgiver, in the silence of the Eternities, has never revealed a Fatherly face to the creature thus produced? Never affirmed the justness of ideas so laboriously reached; never revealed to him His eternal will and pleasure?

Suppose we are evolved from a higher race of monkey, surely the creature, when he first held his head erect, and dropped the caudal appendage, must have exclaimed by instinct: "It is never too late to mend!" But I do not see how, without a revelation, the creature could ever get hold of a single abstract idea! How, after ages upon ages of chattering and screaming; cracking nuts and eating birds' eggs, he should reach the grand idea of gravitation, of the infinitude of suns and stars, or be able to snatch the lightnings, and make them propel him through seas and over mountains, and convey his thoughts under oceans and over continents—far less reach that most ennobling of all our ideas, that of a life beyond the physical life of this present world. It seems to me that man, without a revelation, would indeed be cast a hopeless waif upon the quicksands of time.

Still, if Darwin will have it so, and all our ideas have been the slow growth of necessity, if man *has* through the myriads of ages developed thus much; has already mastered matter, and plucked out the mystery of being; has become capable of law and order, science and aspiration; has evolved spiritual, no less than material ideas; even following up the idea of evolvment, there is no limit to progress, no limit to development, and a creature who has mastered one world *has earned his right to another*; and in proportion as he has outgrown the natural body, he has developed into the spiritual body, and the natural evolvment is a soul, and a Soul-Life.

Thus, even in the least acceptable theory, we reach the conclusions we reach through a revelation of God to His

creature, namely, an Immortality. We also perceive that the natural development must be on the side of what is highest in sentiment, and most spiritual in idea; and hence it will be as natural hereafter to see, upon occasion, groups of those of whom Milton sang:

"Millions of spiritual creatures walk the earth
Unseen, both when we wake, and when we sleep."

All this I fully believe, and I have tried to believe in, and sympathize with, the so-called Spiritualists. I wish I could do so without questioning. I am ashamed of my lack of faith and sympathy, but, because they do not see much that I see, and as I see, I am apt to treat the matter coldly. I shrink from their pretentiousness, their rhapsodies, and revelations from the dead, in every point of view inferior to the ordinary expression by the same individuals while they were denizens of this terrestrial sphere. I admit that all may be true, but I do not see the utility of wasting ourselves over what seems of a retrograde character.

It may be that vast numbers of persons who leave this world wander about its confines in a sort of Limbo, driven, as Dante saw, "like feathers before the wind," or such as Milton describes, as too vile for heaven, and short of the vileness of hell; characterless, aimless beings upon earth, they can hardly be "clothed upon" in the world of spirits. I have an idea that these weak and bodiless beings, having more of terrestrial instinct than spiritual aspiration, linger for a time near the earth and suffer torment from a perpetual desire to communicate with, and participate in, scenes and companionships with which they no longer possess the organs necessary for such intercourse; hence, when by means of any of the more subtle elements, such as electricity, they are able to make themselves known to persons in the flesh, they will do so, and assume any name desired by the consultant. They are not the spirits of those whom they pretend to represent, who may have long since passed onward to a higher sphere, but pretenders to the same, and hence they, from their false-

ness and weakness, give us but a poor simulation of the language and opinions of those whom they pretend to be.

I have before me communications purporting to come from Margaret Fuller, Felicia Hemans, L. E. L., my honored mother, Plato, and the "poor Indian," who is made to father so much nonsense, and who professes unbounded admiration of my character, etc. St. John has written me, and apostles and martyrs. Now, I do not believe all this to be collusion, falsehood, a mere delusion. I believe there are atoms of truth in all delusions, which will hereafter be better understood.

We do not half enough reverence the body, and I remember how my beautiful son, Edward, who possessed a mind of great purity and tenderness, would often quote, "Know ye not that your bodies are the temple for the Holy Ghost to dwell in?" and his life and death accorded with this high sentiment. We are indeed "fearfully and wonderfully made." A medical writer has lately asserted that the ecstasies and spiritual visions of St. Theresa were in fact an "unconscious exaltation of the reproductive organs;" grant that it may be so, I do not see that it renders her state of mind and her life any the less wonderful or beautiful; it only points to a deeper and a holier mystery of being; intimates that there is more in marriage than is yet comprehended—that unchastity is a more fearful crime than is yet accounted for; that errors springing from impurity of mind and consequent action, are deeper in their significance than we have yet learned, and drag down the soul to depths of earthliness and degradation, just in proportion to that sanctity of person, as in the case of St. Theresa, which is able to lift us up to divine visions. It but shows that the companionship of the "natural body" and the "spiritual body" is more intimate, and of a deeper foreshadowing than we are apt to think.

I like to read of the superstitions of different people, and see how they are gloomy or cheerful, just in proportion to

the wildness or loveliness of the aspect of nature about them, or the asceticism of their religious ideas, or otherwise.

Thus, in some parts of Germany, the Will-o'-the-Wisp is supposed to be the souls of unbaptized children, who thus flit from place to place till some pious hand shall sprinkle them with consecrated water, when they are able at once to find rest!

In Denmark the Will-o'-the-Wisp is supposed to be the souls of unjust and extortionate land-owners, who are condemned forever to measure off land with red-hot iron rods.

In these northern countries, also, is to be found the Khobold, which sometimes takes the shape of a black cat, and even of a calf with *fiery eyes*; which are known to be Khobolds by antics peculiar to themselves, and a disposition to tease untidy house-maids, or inhospitable householders, when they will sometimes appear in the shape of a blue flame in the stove, which will burst out and scatter the ashes over the kitchen.

In Friesland and Jutland they call him a Puk. The North American Indians have the word Puck-wudjies, which were a sort of woodland sprites, not unlike those described by Shakespeare, and it is most likely that the great dramatist obtained the word from these Indians through Sir Walter Raleigh. They are more erratic and mischievous than the good household Brownie, which sometimes takes up his abode in a favorite family, and though invisible, makes himself known in various ways, by pinching and bruising the maids who neglect their work and keep a dirty house; on the contrary, when the maids set a bowl of milk for them after sweeping the hearth clean at night, they drive away evil spirits, make the bread light, and the cream to rise thick in the pans of milk; and when the tired girl nods at her work they finish it up while she sleeps; and rock the cradle of the sick child while the poor anxious mother is beguiled to slumber.

The Brownie seems to answer to the

classical Lares or Penates, those beneficent deities who presided over the hearthstone of the ancients, and to whom was allotted a bit of bread and fruit daily; the Hindoos of the lower caste, and the Chinese, have a like order of spirits, before whom they daily place a few grains of rice. These beliefs and customs are the initiative faith in a daily providence, and a superintending daily beneficent power, which the Christian recognizes in the grace before meat.

Time was when children shuddered at the recital of a ghost-story, and were afraid in the dark, and their elders shook in their shoes at an unwonted appearance at midnight of an object in white. Times are changed now; the goriest ghost has ceased to be a bugbear. Whole communities are on the alert for the very shapes that once inspired terror. People have learned through science that the *death-tic* is a bug, and the owl may screech his throat out and inspire no dread, so intent are all upon discovering ghosts in the creak of a table or the flutter of a curtain. If the Banshee should scream at the chamber-window now, thousands would little heed it, or would rejoice at the manifestation. The thumping, rattling spook that infested the paternal roof of the great founder of Methodism, is completely eclipsed by the rapping spirits of the present day. Spirits are thick as blackberries; every family has its medium, and have their bell-ringers and rappers, so that it is difficult to know which is the street-door, and which is the ghost. Little boys talk as coolly about spirits as about a top, and little girls name their dolls after children in the spirit-world. The earth seems to have been invaded by a perfect swarm of spirits, "thick as leaves in Vallombrosa," and now a ghost-story, so far from exciting awe, is received with a sense of thankfulness, and considered a refreshing.

What then? Are we to look upon all this as delusion? as an imposture? By no means. There must be recognized therein the wonderful diffusion of the Scriptural idea of "ministering spirits,"

as taught by the Christ, as sung by Milton, and the poets, from Shakespeare down; and as elaborated by that most wonderful man, Swedenborg. It is nothing new, nothing more than an extension and deepening of the old Socratic idea of an attendant genius; of the warning of Brutus, "Meet me at Philippi"; of the experience of a thousand saints and martyrs, who saw celestial faces beaming upon them in their hour of agony.

True, these modern manifestations have not the prestige of remoteness and dignity, but that does not militate against a vast amount of truth and reality involved therein. I think too well of our humanity to believe that such vast multitudes are practicing a deception. I do not call it a new religion. I think the spiritual idea has become involved in much that is lascivious, and to be reprehended—ignorant people who will not and can not accept the awe-inspiring inspirations of Job, or the rapt visions of Isaiah, or the pure and comforting teachings of Jesus, will bow down in admiration of the crude rhapsodies of some medium, who may or may not be entranced while uttering a jargon of platitudes.

But let us not be too critical; let us believe all that it is possible to believe; and in the course of time the positive truth contained in all this will be made to appear, and the chaff will be rejected. As at present found, it may not meet a need of yours or mine, but it comforts many dear, simple souls.

To illustrate what I have said, I might quote some of the poetry addressed to me. Many of my readers are familiar with the fine utterances of Amelia B. Welby; now I have more than one communication from her, who seemed the very soul of melody, and from Frances S. Osgood, that lovely child of song, but all are so crude, so disjointed, that I reject them, and believe they come from one of those poor, flighty spirits, who assumed their name; in that case the expression is most likely an advance on their part, while it would seem to be ret-

rograde if really coming from those gifted women who are purported to have written them.

I am willing to believe that celestial poetry is unlike terrestrial; am willing to believe that the rules of Lindley Murray have not penetrated to the seventh heaven; that the cherubs are not bothered with orthography, logic, or rhetoric, but I must believe that thought, harmony, beauty, are progressive, and that to remove impediments is to place us in diviner affinities; hence those women who struck so melodious a harp while bodily with us, would, if permitted to revisit this mundane sphere, afford us gushes of melody such as would enrich and enchant our earth-wearied senses.

Alas! these communications, purporting to emanate from such a source, are but a miserable rigmarole, devoid of aspiration or any nobleness of thought. I am pre-Raphaelite enough to accept a good idea, even though faulty in execution, but I must reject what is unredeemed by a single poetic idea.

To say that I have been greatly flattered by Mediums of various kinds, would but poorly express the sentiment of my heart in this matter, for, looking upon the whole as involving the elements of truth, though as yet but imperfectly revealed, as an evidence of the partially evolved spiritual organs, these revelations addressed to me assume a sacredness and solemnity.

Often at the close of one of my lectures before a Lyceum or Literary Association, my hand has been grasped by some attentive listener with solemn aspect and weird, sunken eyes, who whispered in my ear: "You are a Medium; all the time you spoke I saw a halo of light around your head."

This is certainly a very beautiful tribute, and that must be a weak, vain mind that would receive it other than reverently.

Again, I have been warned, that, being a Medium, I was "resisting the light, guilty of great wrong, exposing myself to the loss of power, and health, and utter-

ance, if I did not accept the mediumship so forced upon me."

Indeed, I was like the miserable Caliban, so fearfully threatened by the potent Prospero:

"For this, be sure, to-night thou shalt have cramps,
Side stitches, that shall pen the breath up; urchins
Shall, for that part of the night that they may work,
All exercise on thee; thou shalt be pinched
As thick as honey-combs, each pinch more stinging
Than bees that made them. . . .
If thou neglect'st, or dost unwillingly
What I command, I'll rack thee with old cramps,
Fill all thy bones with aches."——

Perhaps I am not entirely deficient in that development of the brain, which brings us into a certain relationship with the hidden mysteries of Nature, but I have always forborne so to exercise such faculties, that they would become urgent, and thus, perhaps, render me less alive to those actualities of life which the relations of wife and mother require in this world. Having assumed these relations, every woman is bound to carry them out with the utmost conscientiousness, and the best common-sense, pertaining to her, which can by no means be affected in that dreamy, irresponsible state belonging to the spiritual mediumship so called.

For instance, I have often been in that exalted aspect of the eye that I could see objects in total darkness, read, note the position of books, furniture, etc., this too while in perfect health. At these times the human body is to me transparent, and I note any lesions, any abnormal condition, and have prescribed with great success. I have felt and realized presentiments, and my dreams have been true fore-shadowings. Certainly some of these have been peculiar.

For instance, I lately dreamed that I was traveling—that I saw a country most lovely to behold; mountains and valleys through which crystal waters flowed, the banks being lined with rose-blossoms; trees waved their tall branches, and fountains of purest waters leaped from the hill-side. Colonnades of marble festooned with vines gleamed in the softest light, soothing the senses to repose. I was en-

chanted with all I beheld, and yet I saw no human face. I had a sense of companionship, and was by no means lonely; on the contrary, I was conscious of a feeling of indescribable peace and happiness.

At length my companion seemed to say, "It is time for you to go back."

I re-entered my chamber; I saw the pillows of my bed, the quilt, the book upon my table, the extinguished lamp, and said to him of whom I have a distinct recollection, "Where is my body? where can my body be?" and immediately I saw it sleeping, with one hand under my cheek, as is my wont; and I whispered again, quite confidentially, "There, I have slipped in, but I came pretty near losing the chance;" and immediately I felt myself to be alone and awake. I was in perfect health, and experienced no inconvenience from having left the body for a brief journey to the unseen land.

I believe there is some mystery connected with all spiritual manifestations, by which persons lose sight, for at least the time being, of *human moral obligations*. I have observed that those who devote themselves to them have a strong tendency to exaggeration, if not falsehood. Surprised, gratified, and elated by what seems extraordinary, the imagination takes the lead, and the merest trifle assumes enlarged dimensions; vague intimations are exalted and magnified quite beyond their intrinsic value, just as children magnify events, and with their immature judgment make a mountain out of a mole hill.

This is natural, for the spiritual organs are yet in their infancy, and they can as yet learn only the A, B, and C of the spiritual language. I have heard conscientious persons acknowledge and deplore this wayward tendency, and eventually refrain from the exercise of a faculty so little to be regulated.

There is no doubt that such is the weakness of this undeveloped, rudimentary organ, that no sooner does an indi-

vidual perceive in himself one inlet of light denied to his fellows than he is seized with an unaccountable and childish tendency to exaggerate it, and thus runs the hazard of extinguishing altogether the divine ray, and of plunging himself and others also into the quagmire of falsehood and delusion. He will have this spark to become a flame; he will convert the star, just trembling upon the horizon of a human soul, into a great, burning sun, to amaze the beholder. He loses the simplicity of truth by making her the mere creature of noise and wonderment.

This has always been the case in every general advance of the human faculties. A multitude of delusive elements swarm in, and gross, perverted, unhallowed sensualities come in to cast suspicion and reproach upon all connected therewith; but at length a generation goes by, the judgment of the times becomes awakened, and the grain of truth is separated from the mountain of falsehood, and the ever advancing mind accepts it, and casts the delusive chaff to the winds. So has it been in all ages, and one superstition after another yields to the superior light of science, just as moles, and bats, and owls retire to their dim hiding-places before the resplendent rays of the rising sun.

ELIZABETH OAKES SMITH.

SPRING.

WINTER has risen to bid his gruff good-bye.

I feel the first warm touches of the sun,

As of a mother's hand when work is done.

I hear the first lark's anthem in the sky;

I watch the great white clouds go flying by;

I note the flowers awaking one by one;

And soft airs whisper, "Summer is begun!"

O how the soul leaps up exultingly,

As it would break its heavy prison-bar!

And man seems dearer, God seems nearer, far,
For this is truth, deny it how we may—

That light and darkness make us what we are.

We are the creatures of our moods, and they
Are creatures of the clear or cloudy day.

B. W. HOWSON.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER II.—Continued.

SECTION VII.—THE OCCIPITAL BONE.

THE occipital bone (Fig. 61) is uneven in form and situated at the inferior middle and posterior part of the skull. Seen on its external face, it shows the following characteristics: first, a surface almost quadrilateral in form, which furnishes processes for the attachment of the large and small straight muscles of the head; second, the occipital opening, through which passes the spinal marrow,

of this bone into eight regions: first, two superior, 1, 1; second, two middle, 2, 2; third, two laterals, 3, 3; fourth, two inferior, 6, 6. The spaces included within the two lines, *m, m.*, *b, b.* correspond to the lateral sinuses (see Fig. 62).

The internal surface of the occipital bone (Fig. 61) corresponds to the surface of the cerebrum and cerebellum, from which it is separated by the dura-mater.



Fig. 61.—OCCIPITAL BONE. INTERIOR SURFACE.

its envelopes, and the spinal nerves, and vertebral arteries. On the lateral parts of this opening are two processes, directed from without inwardly and covered, when in fresh condition, by a cartilage; these articulate with the *atlas* or first vertebra. Beyond these apophyses are two grooves, and still farther outward, two knob-like crests designed for the insertion of muscles.

We divide the whole external surface

In the large posterior spaces are seen the impressions of the cerebral convolutions, while the two inferior regions present a smooth surface wherein the cerebellum is lodged. The cerebellum is formed by layers, without ridges, or, in other words, without having between these layers more than very shallow furrows, which are almost obliterated in life, being filled with a fluid secretion.

In the center one observes a crest

(Fig. 62) which starts from the occipital foramen; this affords attachment to the *falx cerebri*. Upon the sides are seen two channels, m, m, m, m, (Fig. 62) which contain the lateral sinuses; another channel, k, k, k, incloses the extremity of the longitudinal superior sinus. Before the occipital opening is an osseous process called basilar, while upon the internal surface 9, 9, the annular protuberance, and the commencement of the spinal column, lie.

The occipital articulates with five

at this point. Let one compare in this respect the head of the Sajou male (Fig. 36) with that of the Sajou female (Fig. 40). It is usually at the point of union of the superior margin of this bone with the parietal, that the super-numerary or Wormian bones appear. These bones we have met with in the cranium of no quadruped unless one should consider as such a small osseous growth which we shall mention when we come to describe the crania of quadrupeds.

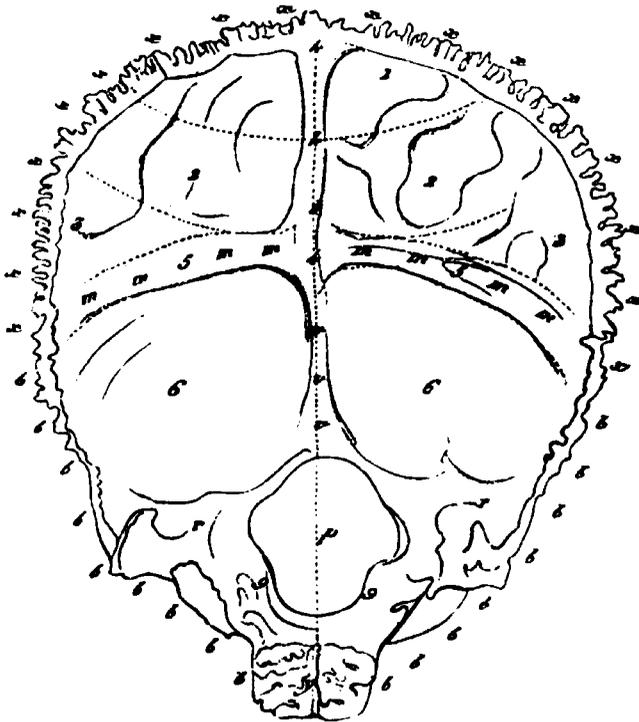


Fig. 62.—OCCIPITAL BONE, INNER SIDE, IN OUTLINE.

bones of the cranium and the first vertebra. These five bones are the parietals, temporals, and sphenoid. The variations of the occipital in form are as remarkable as those of the bones of which we have already given descriptions. They are seen in the different races, nations, and in individuals of the same species. In man, and in all other species of which the female is more attached to the young than the male region, 2, 2, is much developed, whence results an increase of the longitudinal diameter of the skull

TEMPORAL BONE.

The temporal bone is double, and situated on the lateral parts of the head, chiefly at the "temples," which lie between the forehead and the ear (Fig. 63). Two parts of this bone have a structure entirely different from each other; one is thin and flat, called the squamous or scaly portion; the other triangular, inclosing the organs of hearing, and called the petrous or stony, or pyramidal portion. The scaly portion shows two faces, one external and the other internal (Fig. 64)

The external is covered by the temporal muscle; at its base there is an osseous appendix directed from within outward, and articulating with the bone of the cheek; another appendix, much larger, is noticeable at the angle below the opening of the ear, which, on account of its assumed resemblance to a nipple, is called the Mastoid process. This latter part is almost entirely cellular, and covered by a thin plate of compact matter; it has no relation to the cerebro-spinal organism, but affords on the outside insertion for the sterno-mastoid muscle. Surrounding the auditory canal a rough prominence is seen, which serves for the attachment of the external ear. This opening does not exist in the foetus until that is well advanced, being replaced by an osseous circle, upon which the membrane of the tympanum attaches itself. The internal surface of the scaly part of the temporal bone presents impressions differing in depth and relief corresponding with the convolutions lying at that region. This part of the temporal bone shows sometimes very little thickness. In one instance the examination of the head of a woman sixty-four years old, revealed the fact that this part was not thicker than letter-paper. When examined on its external surface and placed between the eye and the light, this bone showed the appearance of paper that has been soaked in turpentine, which painters use for copying their designs. The lightest blow would have been sufficient to produce fracture, and perhaps death.

At the base of the internal surface of this scaly portion is seen a triangular process, of which we have already spoken. Behind that appears a channel, 5, 5, 5, (Fig. 65), where lies part of the lateral sinus; in front of the sinus are some impressions of the cerebral convolutions, and the internal orifice of the auditory canal, *c*. The inferior surface of the petrous portion affords nothing of interest to the phrenologist. It is uneven, and there is sometimes a long process, which articulates with the temporal bone by a cartilage, and often becomes united with it.

The temporal articulates with five bones; three belonging to the cranium and two to the face. The first are the parietal, the occipital, and the sphenoid;



Fig. 63.—TEMPORAL BONE. EXTERIOR SURFACE.

the others are those of the cheek and the inferior maxillary. The form of the temporal bone, especially of its scaly portion, shows very remarkable differences in man. Its examination would suffice,



Fig. 64.—TEMPORAL BONE. INNER SURFACE.

in certain cases, to enable one to know to what nation the skull belonged. For instance, in all the peoples of the East, the scaly portion is found depressed rel-

atively. This is particularly the case among the Egyptians and Hindoos. An example of this conformation is seen in the heads of mummies brought from the



Fig. 65.—TEMPORAL BONE. INNER SURFACE—OUTLINE. catacombs of Egypt. The Caribs have this part of the temporal bone much expanded.

The temporal bone might be divided into three regions—(1), the posterior; (2) the superior; (3) anterior. (Fig. 65.)

CHAPTER III.

BONES OF THE SKULL IN QUADRUMANA, QUADRUPEDS, BIRDS, AND REPTILES.

Having not only in view the study of the anatomy and physiology of the hu-



Fig. 66.—FRONTAL BONE OF APE. EXTERIOR SURFACE.

man brain, but also of the leading classes of vertebrate animals, we must, of course, enter somewhat into the anatomical de-

tails of the osseous envelope which incloses the encephalic mass of those animals. The reader can not but observe how greatly the field of cerebral physiology expands, and that to be at all comprehensive, Phrenology, or the study of the functions of the cerebral nervous system, demands a general knowledge of anatomy and zoology. The more Phrenology is cultivated, the more it is viewed in a broad and philosophical manner, that is to say, in connection with the great series of vertebrate animals, the more will it command the respect of true savants.

Eight bones enter into the composition of the skull of the quadrumana, as into that of man. And although there exists a relation between them with reference to number and situation, there are, however, very remarkable differences in form, which are easy to perceive. The accompanying illustrations, in themselves, offer opportunities for comparison, and so avoid the introduction into our text of an infinite number of little details.

FRONTAL BONE OF THE SAJOU APE.

On comparing the frontal bone of this ape (Fig. 66) with that of man (Fig. 67) both being seen from their outer surface, one is struck at once with the development of the latter, although it is but two-thirds of the natural size of the average frontal bone in the European race, while that of the ape is shown of full size. The regions, 1, 1 (Fig. 68), in the ape are but little expanded in the middle part and slightly depressed upon the margins. In man, on the contrary, these same parts are ten times more developed above, upon the sides, and in front. This is the same with the regions marked 2, 2. While their middle part may be well-pronounced in the ape, it is, however, very much less expanded than in man; besides, the surface, marked 3, 3, is almost nothing in the sajou; that indicated by 6, and placed above the orbital border, also shows a striking contrast between the ape and man. This whole surface is narrow in the ape, but has, on the contrary, a remarkable development in man. The middle part of this region

in the ape is depressed and rounded; in man it is oblong, full, and extends more or less forward and outward. The lateral regions offer also a striking comparison.

apertures designed for the passage of the olfactory nerves, closes a cavity which lies below.

The orbital regions offer the most

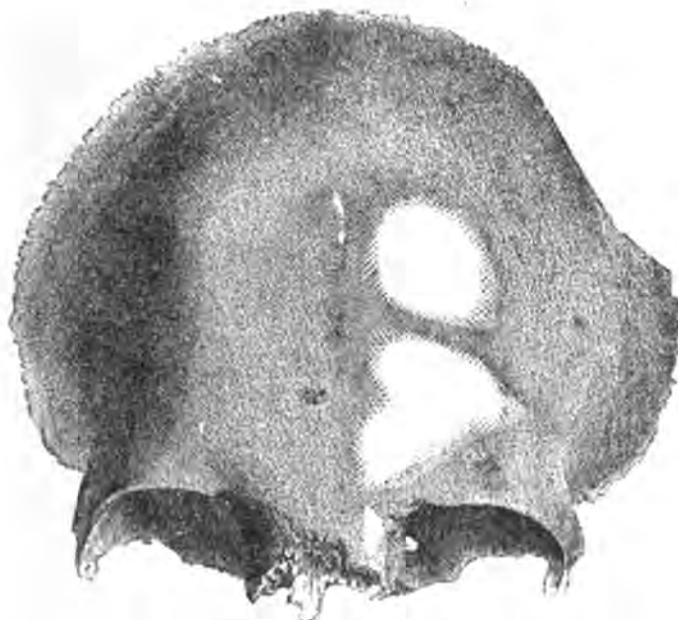


Fig. 67.—FRONTAL BONE (MAN) REDUCED. EXTERNAL SURFACE.

Two perpendiculars have been drawn upon the orbital apophyses of these bones, so that the reader can better appreciate their differences of structure. In the ape the perpendiculars, A, B, are not interrupted by the lateral parts of the frontal bone, while in man (see Fig. 57 April number) the frontal bone extends out very much beyond them. These two perpendiculars exhibit still better the narrowness of the superior region of the ape's frontal bone.

Seen by its cerebral surface (Fig. 69) the frontal of the ape shows, as in man, impressions of the cerebral convolutions; we do not discover in the center and below, as in the human, a hollow receiving the part of the ethmoidal bone known as the crista galli. We shall see later that this is owing to the fact that the ethmoid is very little developed in the ape; the part of this bone corresponding to the ethmoidal cellules in man, is wanting. A small vertical plate, having some

striking differences of all in the conformation of the frontals of man and the ape (compare Figs. 70 and 57, 6, 7, 9, 10, 11). Not only is the whole

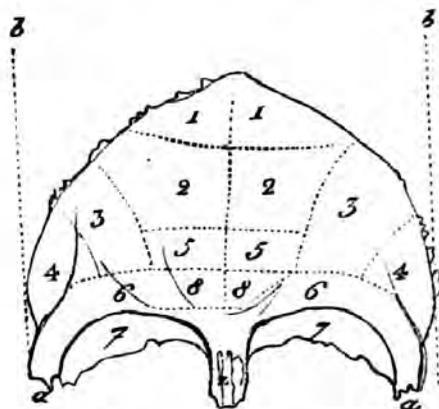


Fig. 68.—FRONTAL BONE OF APE. OUTLINE.

orbital surface more extended in man, but still more depressed from top to bottom. We shall see later what are the

physiological deductions to be drawn from this difference in organization.

The frontal bone of the ape articulates with the same bones that have been mentioned in the case of man; only its lower



Fig. 69.—FRONTAL BONE OF APE. INNER SURFACE.

border having no hollowing, there are fewer points of contact with the ethmoid.

In twelve heads of monkeys well matured the separation between the two tables of the frontal, or the frontal sinus,

was not found, as in man. The skin which covers the frontal bone in apes is provided with hair, in certain species.

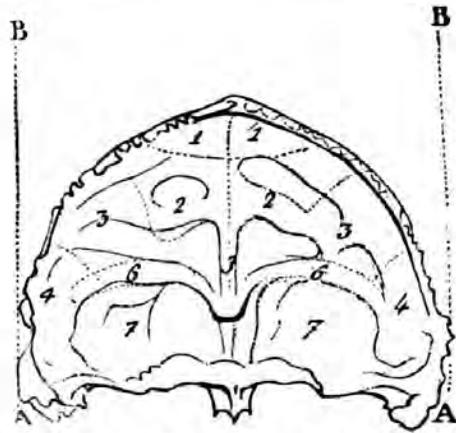
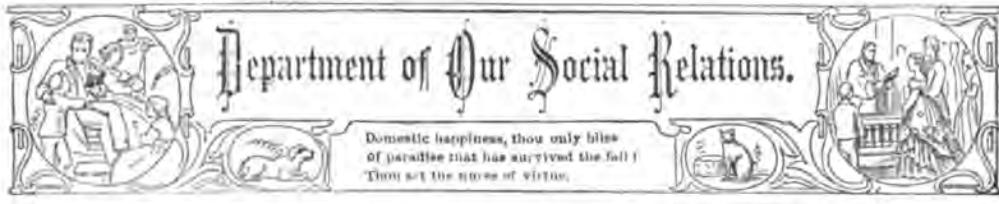


Fig. 70.—FRONTAL BONE OF APE. INNER SURFACE—OUTLINE.

so thick that it is impossible to estimate fairly the development of this bone simply by the eye.



BEER AND CIDER CRUSADES.

FROM crusading the rum-sellers the women have gone on to crusading the drink. They found in the course of that first impulsive onset that there were two elements opposed to them, the love of the drink itself in the drinkers, and the love of money that leads men to appeal to this love of drink for the sake of gain. This latter element is personified in the rum-seller.

This personage I do not feel called upon to apologize for or to defend in the slightest degree. If he has no other way of making his living, he might as well starve. The world would be better off without him, and he receive but a taste

of the starvation meted out to the families of many of his victims. Thousands have quitted the employment at the sacrifice of both business and property, and been the better for it. Scarcely any words are too strong to depict the meanness of him who makes gain of his neighbors' vices. But that does not excuse the vices, nor do away with them. Our ultimate aim is to do away with the vice of intemperance, and first of all with that form of it that finds its indulgence in the use of alcoholic drinks. Men could not sell if no one wished to buy.

Some years ago, when I first heard of Orient, the place on Long Island referred

to in the article on "A New Lyceum" (see PHRENOLOGICAL JOURNAL for November, 1879), I heard also the following incident: The rum-sellers in neighboring towns looked with longing eyes upon this thrifty community, where no liquors were sold, and discussed the possibility of once more getting a footing for their business in the village. At last, one more enterprising than the rest laid a wager that he would open a store for liquor there, and sell it too; and accordingly he fitted up and stocked a store, and kept it open for six days, but he did not sell a single glass. And why not? Because no one wished to buy. I believe as a matter of fact that the story was not true. The people were too intelligent and too wide-awake to allow a rum-seller any such foothold, but the principle is evident for all that. The most perverse rum-seller could not sell if the people would not buy, and here the people, almost to a man, certainly did not wish to buy. Very likely an open rum-shop even in such a place could be made a school of vice, and some one or more be found sooner or later who would drink and be drunken. But the small patronage it would get certainly would not pay at first. There must be some demand before it would be worth trying. On the other hand, if the demand were large it would certainly be met. That is precisely what makes the difference between Orient and London. John Bright says that in the present state of public opinion, if the police of London should undertake to enforce the best prohibitory law ever made, and close the gin-palaces, the whole city would rise in an overwhelming riot in less than twenty-four hours. That is simply because such a closing would be opposed to the will of the vast majority—who like the gin and the beer, and will have them. No doubt the brewers and the gin-house keepers would do their share, but the riot would rise if they did not lift a finger.

What then? Shall we have no law on the subject? Certainly, it is well to have it. But in order to have such a law effective, we must have a majority who

love such a law; who abide by it; who enforce it. Nay, more; we must have a majority who love Temperance well enough and who are wise enough to make the law help them in their work; for the law is not the end: it is only one of the helps to enable us all to lead temperate lives, and also to get rid of the results of the dram-drinking of our neighbors.

How shall we do it?

Get the people to understand the nature and effects of alcoholic drinks, and to be conscientious enough to act up to their knowledge.

What measures shall we take?

There are many which can be made available. Just here has been one great cause of failure. People ask: "What is *the* remedy for intemperance?" and are, perhaps, ready to catch at anything. But when they find it does not do *all* the work, they pronounce it worthless. They do not seem to reflect that an evil which permeates every part of the social structure, and develops itself in a thousand forms, and intrenches itself in all the habits of the people, will necessarily require a great variety in the remedies. As well ask what sword will take off the head of the hydra when it has a hundred heads, and while one is enveloped in brass and another in steel, which would turn any ordinary weapon, others may be of gutta-percha, which would try the keenest Damascus blades, and still others of flame, that springs up as fast as it is cut off, or of liquid which closes behind the blade as it passes through, and leaves not a trace behind.

But we are talking riddles. Let us come to facts. It is a great mistake to suppose that because all the efforts that have been made hitherto have not succeeded in clearing intemperance out of the land, therefore they are a failure. It is an immense gain that, whereas in the commencement of this century everybody drank, now there are large numbers of people who never drink; whereas then, total abstaining had scarcely ever been heard of, and subsequently endured any

amount of ridicule, now it is in high repute, and gaining every day; whereas, for a long time people have been bewitched with the idea that Washingtonianism would "do it," or secret societies would "do it," or prohibition "do it," or praying in the streets would "do it," now the prevalent feeling is that somehow it *will be done*, and all sorts of people are setting about it "tooth and nail," in the full belief that every little helps, and that every man, woman, and child is responsible for doing as much as he can, and by every method that presents itself. It is simply amazing to see the agencies that are brought to bear. Every course of lectures must have one lecture at least on temperance. Every minister must preach on it once a year, and some as often as once a month. Every paper must have its temperance items or story, often its temperance column; while many of the leading papers and magazines which formerly scarce ever mentioned the subject, now have their articles and editorials upon its various phases. Temperance papers are multiplying, and some of them living. Temperance literature is coming so much into demand, that at last the Temperance Publication House pays its way in its department of publication.

There is, perhaps, no better proof of the fact that so great a variety of methods are in order for the prosecution of temperance work than the Minutes of some of the Christian Women's Temperance Unions, either local, State, or national. In the National Union, at its last session in Indianapolis, no less than twenty-seven committees were appointed for as many different forms of aggressive work, and there might easily have been a larger number. A few of the names of these will be suggestive: "Juvenile Work," "Temperance Literature," "Temperance Bible-readings," "Reformatories for Women and Girls," "Schools and Colleges," "Sunday-school Work," "On Inducing Corporations and Employers to require total abstinence of their Employés," "On Influencing the Press,"

"On Relation of Intemperance to Pauperism and Crime," "Extending our Organization in the South," "Friendly Inns," "Prison and Jail Work," "On Unfermented Wine at Communion," "Work among Sailors," "Relations of Intemperance to Sabbath Desecration," etc., etc., and these all mean aggressive work. An immense deal of work in all these lines has hitherto been carried on without one paid officer. We find here an active and most efficient organization composed entirely of women, many of them wealthy, influential, capable, and enterprising, loving this cause with all their hearts, and devoting to it the time and the means which many other women devote to dress and society, the most of whom ten years ago had never had a thought or a wish for active temperance work. Indeed, up to the time of the crusade very few women of set purpose had ever taken any more active part in temperance work than to play "right and left hand supporters," or visit the "Sons," or recite a "piece," or sing a duet.

Some idea of the thoroughness with which they now do things may be gained from the fact, that the Committee on "Influencing the Press" have within the last two years obtained the introduction of temperance matter into 8,000 periodicals, and that the local Union of one of the largest publishing cities in the United States has set its mark of attainment that no periodical shall go out in that city without some article or item for temperance. The literature work generally is systematized by committees in local, State, and National Unions, which co-operate with each other; the Committee of the National Union publishing such tracts, leaflets, and hand-bills as their special methods of work seem to demand, and keeping them before the people. Their further supplies are drawn from the ample shelves of the National Temperance Society and Publication House, which also does their publishing.

In their hands tract distribution is assuming a new aspect. These documents,

with rather a "goody, goody" reputation, are prepared and circulated with a definite purpose, and are expected to produce tangible results. For example, those who have watched developments of late years, know that the use of beer in this country is rapidly increasing. This is due partly to the influx of German immigrants, and partly to the sagacity of liquor-dealers, who recognizing beer as an excellent educational medium in their line, have made special efforts to cry it up; to proclaim its wholesomeness; to advertise it at centennial fairs and other places of popular resort; to obtain and publish the favorable opinions of physicians; and to advertise it in other ways. All this is promoted by the "Brewers' Association," which has shown much enterprise; and the result is that the beer interest now has invested an immense amount of capital, which, of course, wields proportional influence in high and low places. Now the method of the temperance women is, wherever you find the enemy to take deliberate aim at him, and shoot him if you can. They have found an enemy in this beer, and they have taken aim at it. They think if they could make people see just what this beer is, how it is made, and how expensive, how worthless, how filthy, how debasing, and how deceitful it is, its use would greatly decrease. They have accordingly published hand-bills on the subject—some twenty or more of them—and "more to follow." The first describes the objects and methods of this "Crusade against Beer," another tells what it is, one what it costs, and another how little you get for it. Beer as "Food," as "Medicine," as the "Cause of Crime," as a "Drink for women, for children, for workingmen, and for Christians," as a "Poison," and as a "Liar," come within the range of these topics. Each one is treated very briefly, of course, for it fills only one side of a hand-bill.

The method of using them is to distribute No. 1 as widely as possible, so as to let the people know what is coming, and this is mostly done in audiences

—in large temperance meetings, if possible—where attention is also called to the subject.

In some cases ministers have preached on the subject, and called attention to the distribution. Items are put into the papers, and discussions are promoted. Successive numbers of the series are distributed, one kind at a time, and as widely as possible, advantage being taken of any local incident to help the interest. Lectures on the subject are sometimes procured. Leaflets are given out to the children of the Sunday-schools, tracts and pamphlets are procured for the more thoughtful, and books on the subject to loan, and, perhaps, to be placed in the libraries.

Of course, in most places the interest has not yet led on to all these methods. In many cases only a few hand-bills of each kind have been sent for by some one who sees the advantage in this method, and this almost anybody can do, as they sell at the ridiculously low figure of ten cents a hundred (thirteen cents post-paid). But in many cases they have been given out in towns and cities by the thousand, and the work goes on with increasing interest. The number already used sums up hundreds of thousands.

A similar method also has been commenced with cider, which is as great a curse in many country places as beer is in towns and cities. But this movement has not proceeded so far. Only a few tracts and leaflets and illustrated tracts for children have been published as yet, though these are largely called for. A call which was made a few months since for *facts* on the cider question, has been generously responded to, and the material will be worked up into popular documents soon.

Doubtless this to many looks like small work. So it is; and for this very reason many can compass it who could not undertake larger methods. Besides, the beginnings of sin are also small, and we must manage to stop them off, to *prevent* them. This is the only real hope of effective work for temperance, which at

its best must not only reform drunkards, but prevent the making of them, for then only shall we become a temperate people. If by such methods as these the truth can be brought to every man's door, if he can be made to see what abominations there are in those so-called innocent or wholesome drinks, beer and cider, a great point will have been gained.

We do not intend to intimate that the women are alone in doing this kind of work, though I think they are doing by far the most of it. But this topical method of distribution which they began to push about three years ago, is fast becoming the prevailing method with all kinds of workers. It makes the distribution a thing of some merit, a thing that can be talked about, because it brings some idea definitely to the front and pushes it. It sends a forcible article into every man's house in such a shape that he will be even more likely to keep it and re-read it than if it were in the newspaper. Moreover, his neighbor has received the same, and he can talk with

him about it. If it were given out to an audience as they were leaving the house, something could be said about it or about what is in it, that would make every man wish to read it, and that could not be done if the tracts were not all alike. Moreover, no one feels insulted by it because it is not personal; every one gets a copy of the same.

Small work, again! Yes, it is the nicety of these details that makes the tract the skillful weapon which is likely to restore it to more than its early efficacy, and illustrate in a new method the power of ideas, an essential element in Temperance work.

Certain it is, that if we can "crusade" cider and beer and wine with sufficient energy to drive them from the field and keep them out, we shall have conquered our worst enemies, and whisky and brandy will follow them. Very few in these days begin to drink on the stronger liquors. This idea is the underlying principle in the beer and cider crusades.

JULIA COLMAN.

CARELESSNESS OF ONE, PROFIT TO ANOTHER.

IT is amazing to consider the extent to which losses are incurred on the one hand, and sales and occupation afforded, on the other hand, by the inexcusable carelessness and wastefulness of people who know better and ought to do better. The fastening of a well-bucket is deranged, or a hoop is loose, but the thoughtless man or woman never notices the trouble until the bucket is dropped in the well or the bottom is out. Then time is lost, the family is put to inconvenience, and perhaps a neighbor gets a job of work and the pay for it. The gate-latch is out of order; no attention is paid to it; the hogs or cows get in; the yard is rooted up; the shrubbery is destroyed; the gardener is employed, and the nurseryman has an order. A tire is loose on the wheel; the wood is swiftly wearing away, a little care would set the matter right; no pains are taken; soon on the road a wheel is crushed, and the wheelwright

has some employment. A shingle is out of place on the roof; one nail would mend the trouble; that nail isn't driven; the rain steals in, and soon the plasterer is called to use trowel and brush. A bridle rein is weak; a bit is worn; nobody thinks of examining either; a horse is drawn to one side, or a horse runs away; a vehicle is broken; a carriage-maker or blacksmith is profited, and perhaps a surgeon has a profitable professional engagement.

The water of a well is impure; those who use it complain, no proper steps are taken; the family have serious sickness; the druggist sells his medicines, and the doctor gets his fees. In the same way the cellar is foul; the mephitic gases escape through the floors; the blood is poisoned; the fever rages; some suffer; some die; the physician has a harvest, and even the undertaker and sexton find employment. So of many—very many other things.—*Rural New-Yorker.*

LABOR AND SOCIAL CO-OPERATION IN FRANCE.

THOSE who have read the PHRENOLOGICAL JOURNAL during the past five or six years have seen an occasional allusion to the co-operative undertaking of M. Godin, at Guise, France, and may have wished to know more about it. Some data having recently been furnished us, most of which is from an account of

vital powers. The organization indicates harmony combined with strength; the face is quiet, but has in it a settled, steady appearance. The head, measured from the opening of the ear to the root of the nose, is long; there is a massive forehead representing all the perceptive powers abundantly developed for talent in the



the undertaking, published by M. Godin himself, we are enabled to present an outline of what has proved a most successful experiment.

First, a few remarks are proper with respect to the man who conceived and wrought so grand an undertaking. From the portrait we judge him to be about 55 years of age, about medium height and weight, with a large brain and excellent

realm of practical detail, the acquirement of scientific knowledge, and the ability to comprehend affairs.

The upper part of the forehead is broad, high, and ample, indicating a tendency to look into the why and wherefore, and there is a special length and fullness of the whole forehead.

In the first place there is immense perceptive power, the ability to gather

knowledge, and hold facts and phenomena in such solution, or in such clarity, that every fact has its full weight in the fabric of ideas.

The center of the forehead, half-way from the hair to the root of the nose, is very much rounded and full, showing not only capital memory of facts, but also the ability to avail himself of his knowledge on the instant. The upper part of the forehead shows Comparison which criticises, discriminates, analyzes, and differentiates; while the outer part of the upper forehead shows Causality enough to combine his facts and practical knowledge, and thus produce harmony of intellectual force.

The height of the top-head indicates Benevolence and Faith. He is calculated to inspire confidence in the minds of others, and is well qualified to call out the best traits and dispositions of those with whom he comes in contact. He impresses people with the idea of his integrity and goodness.

He is firm, determined, and steadfast. He has the power of Constructiveness and of Ideality, the first giving mechanical power, and the talent to understand combinations; the second giving imagination, creative fancy, and ability to realize his ideal before he reaches it, and to forestall facts and events. His Language appears to be fairly developed, but he has more knowledge than power of colloquial expression. He is eminently a man of practical judgment, and able to reduce his ideas to practical results.

Some of the principles upon which his grand effort was founded are briefly: The science of well-being rests not on imaginary conception, but on a knowledge of the needs of human life. The laws of being are inherent in the human species. It is not necessary to form profound theories concerning these, as they are discoverable through observation.

The difference between the condition of the poor man and that of the rich consists mainly in the ability of the latter to apply these laws in his home and in his daily life. For the wealthy, food is

wholesome and plentiful, clothing cheap and elegant; while the dwelling is convenient and agreeable. For him cares are made easy by servants.

For poverty the reverse of this obtains. Left to his own resources, the poor man is miserable, his dwelling is unhealthful and unattractive, his children neglected.

With a view to providing for the poor artisan the more important and necessary conveniences and privileges of the rich, the "Familistère" or co-operative home was organized, and in it hundreds of families of workingmen obtain a degree of salubrity, cleanliness, and comfort in their homes and educational advantages, which to them, if separate and "each for himself," were impossible. "Not being able to turn the cottage or hut of each workingman into a palace," said M. Godin, "we have sought to place the abode of the worker in a palace. The Familistère is in fact nothing else. It is the Palace of Work, the Social Palace of the future."

The location selected is the valley of the Oise, adjoining the inhabited portion of Guise; so that the Familistère forms at present a new quarter of that town. The long front of the building faces the town to the extent of 590½ feet (180 metres); The left wing looks upon the gardens and the buildings of the factory, in which the male members of the Familistère principally labor; the right on the gardens and wooded slopes which bound the valley. Back of the buildings are the meadows of the Oise with large trees planted along the windings of the river. The Familistère and its dependencies cover about 18 hectares, or 44½ acres. The grounds of the home proper cover about 14¼ acres, which, for two-thirds of their extent, are surrounded by the winding Oise.

The building is three stories in height; the halls being paved with cement, and so arranged with corridors as to bring all parts of the building into free communication. The cellars are constructed on the surface of the ground, and the approaches filled up so as to raise the level

of the ground floor about 8.2 feet above the meadow land. The foundations are massive, and the cellars floored with a strong concrete to guard against dampness. In them are vaults used for storing fruits, vegetables, etc., required by the occupants. The height of the ceiling of the rooms on the ground and first floors is 10.3 feet; on the second floor 9.3 feet; on the third floor 8.5 feet; the partition walls are 4.3 inches thick, and all built of brick. The principal stairs are circular, constructed of stone for durability and safety. The rooms are double: on one side looking into the halls, on the other over the country. The floors, both of apartments and galleries, are tiled, which is favorable to both cleanliness and security against fire.

In the Familistère are 1,500 persons. They can visit each other, carry on their domestic occupations, provide for their wants, all under covered halls, without thought of the weather, and without having to travel more than 425 feet. This facility of relations contributes to make the "Social Palace" a habitation adapted to raise the morals of the population. The school has its place directly alongside of the dwelling, while the scientifically arranged conveniences of the palace relieve the housekeeper from a hundred burdens which an isolated dwelling imposes. There husband and wife have leisure for using the journals and books which a library easily acquired makes available to all.

Education and instruction form here seven divisions, each having its own staff of managers and teachers, its own rooms, and appropriate apparatus. First, there is the nursery; second, the baby-school; third, the infant school; fourth, the lowest or third school, for pupils from six to eight; fifth, the middle or second school, for pupils from eight to ten; sixth, the upper or third school, for pupils from ten to thirteen; seventh, the higher classes, for the unusually intelligent.

Another department constitutes the apprenticeship, or the introduction of the

youth to the industrial sphere of the association. It is an interesting item to notice that the entire cost of these schools for the 360 children instructed in these different classes is from \$3,800 to \$4,000 a year. Corporeal punishment is forbidden. Moral influences and privation of pleasures constitute the discipline.

The gardens furnish the children a perpetual field of enjoyment, and, at the same time, of mental and physical development. Groups of pupils under the head gardener are instructed in cultivating plots of ground. They are led to form groups among themselves, and carry out the directions of the gardener, and small rewards are given to those who show special aptitude and industry.

Once a year there is a "Festival of Labor," so called, in which the workmen in the factories take part. This occurs in May, when, amid general festivity, prizes of merit are awarded. Once a year, in September, there is also a "Festival of Childhood," when prizes are awarded to the children. On this occasion the work of the children is publicly exhibited. Every class, from the baby-school to the higher classes, assembles to receive in public the rewards gained by their conduct, their work, and their progress during the year. It would be exceedingly interesting to detail the organization of each branch of the Familistère, but space forbids.

From the financial report published by M. Godin we learn that the cost of the ground and buildings of the Familistère was £40,000, say \$200,000, and adding to this the outlay for different services, or \$16,000, we have a grand total of \$216,000.

The customary rents for suites of two or three rooms are 8 or 10 francs per month, or \$2.50 at the most. The rooms which look upon the town rent at 2 centimes (half a cent) more. The revenue from this source amounts to about 8 per cent. on the capital expended, from which it appears that the Familistère, as an investment by itself, yields a good return for the capital employed.

The members discharge among themselves the services of baker, butcher, grocer, milkman, tailor, etc. Those who exercise these vocations receive compensation. The aim in administering these branches of supply has been chiefly to make life easy and not too expensive. Whereas a shrewd attention to the economical management of their shops would yield them far more profit.

Among themselves the members carry on a system of charitable inspection; they have regular committees appointed for the following charges: First, contributions and grants; second, medical services and assistance; third, medicaments, nursing, etc. In this way the utmost of care and attention are secured for those who are sick. Of course so large an association has its own physicians and nurses, and a very complete set of apparatus—hydropathic, medicinal, and surgical—in appropriate rooms. Abandonment and misfortune are not possible at the Familistère. The slightest suffering is ascertained at once and relieved if possible, and the invalided worker receives a pension from a fund during his illness.

The moral condition of this great family may be inferred from M. Godin's own statement that "from its formation in 1859 to the publication of his work in 1874 there was but one police case."

The Festivals of Labor and of the Children are held in the grand central hall of the building. This has a glass roof, and here 3,000 persons can move about with ease. Each festival usually lasts two days, and is distinguished by general rejoicings.

At the May festival in 1879, twenty years after the foundations of the Familistère were laid, M. Godin congratulated his co-operators on the complete and permanent success of the undertaking. Among other things he said: "To associate capital and labor was the great task imposed upon our modern society. Everywhere the working classes aspire to receive those guarantees for the future of which they stand in need. Words suffice no more; acts are needed. Now these acts show themselves here in all their reality. The articles that I have prepared, combined with the special preparations of the mutual associations already in operation among us, form together the most complete whole hitherto conceived of practical rules for securing to the workers a share in the advantages created by labor and industry. That you may cooperate in this work I invited you last year to form groups or committees, unions, and councils, whose object is to introduce the representation of labor into the administration of the association. . . ."

"As the contract of association is defined, I have hopes, my friends, that you will feel yourselves masters of your future, and that under the empire of the confidence which will animate you, the zeal, economy, and activity which you will bring to promote the prosperity of the association, will double in your favor the dividends that have been paid to you. Let those who already have confidence in the future be fortified in their hopes, for conviction gives to men the strength indispensable for keeping up to the level of the work we desire to accomplish."

A SOCIETY FOR GUIDING CHILDREN.

BLINTON is a very pleasant place. Some say it is a suburb of Utopia. Be that as it may, we have here what I have never heard of as existing anywhere else. Having read the *JOURNAL* for some time, I judge that its readers like to know of what is good, pure, and helpful, and therefore send this brief and imper-

fect account of the society whose name stands at the head of this article.

It became a necessity, from the fact that the men of Blinton nearly all do business in an adjacent city, and the children, especially the boys, were left in absolute idleness when out of school, until they became an unbearable nui-

sance, which had to be abated in some way. They were running about the streets, throwing stones at each other, at the lamp-posts, or any convenient object, tormenting cats and dogs, making rude remarks to or about passers-by, and often quarreling violently among themselves.

At last, two or three of the thoughtful fathers and mothers began to think this state of things might be changed without such frequent resorts to severe punishment and reprimand as were becoming necessary. They said:

"Satan finds some mischief still
For idle hands to do."

And one mother, whose boy was fourteen years old, and girl twelve, discharged her hired girl and resolutely set them to the task of doing the housework.

Again these thoughtful fathers and mothers spoke, saying: "'In union there is strength,' therefore let us unite. Farmers, mechanics, teachers, ministers, doctors, merchants—almost all trades, occupations, and professions, have associations and meetings for the interchange of views and ideas regarding the best methods to be followed in the advancement of their enterprises; and manifestly great help is derived from them. Now, why should we who are engaged in a vocation above all these—that of fitting men and women for the life that now is and that which is to come—struggle on alone and independent, each gaining nothing from the other?"

These few were earnest men and women. They talked to others till the society was organized with twenty members, representing fourteen or fifteen families. In some instances, both father and mother joined; in others, only one. Constitution and by-laws were framed. Weekly meetings were held at the members' houses. Some families who were not blessed with an abundance of this world's (dry) goods, though they had many children, seemed at first to feel a delicacy about going to the good houses; but finding that all classes were treated with equal respect, this soon wore off.

Other families at first refused to join,

because "they knew how to bring up their children without having the neighbors tell them."

Still the society grew and prospered. The meetings increased in interest. Questions of all sorts were propounded, and the liveliest of debates followed. Floggers and anti-floggers could not agree on the course to be pursued, when two or three boys belonging to members of the society threw stones at an unoccupied building till every pane of glass was broken out. The flogger flogged his boy, and the others were kept at home for a week. I think it was from this beginning that at last came the law that the children should be kept on their own grounds unless accompanied by some grown-up person. This was intolerable for the youngsters, so we had to pass "an act in addition to an act," as the legislators say. This act provided that one man and one woman should, each afternoon of every pleasant day, take the children out for a ramble on their return from school. On Saturdays they should go the whole afternoon if the children so desired.

It was hard work to get this resolution through, and its passage caused the withdrawal of many of the members. They ultimately returned, however, not being able to resist the entreaties of their children to be allowed to join in the afternoon rambles.

At the time this last-mentioned law was passed, nearly every family in the neighborhood was represented in our society. An amendment was soon added, which required two men and two women to accompany the children, as the task of seeing that a hundred children behave respectably when let loose in the fields and woods is no light one. The names were arranged alphabetically, and taken in turn. It would do your soul good to see pompous, stern, old Money-Bags, who, before joining this society, hardly knew his own by name, walking along in that great crowd of children, side by side with the village blacksmith or cobbler.

When some of the men said, "We can not leave our business to attend to such nonsense as that;" some of the women said: "Just count up the *matinées* you have attended in the past year, and the excursions you have been on." And when some of the women said, "We are not able to tramp to the woods, skating-pond, or wherever else those children will want to go," some of the men retorted: "Take off your corsets and long skirts, then the tramp will do you good."

One who has never known or thought of such an arrangement can not imagine the good that has resulted from it. It has awakened in the parents a sense of the responsibility of their position, that fashion-books and political excitement are powerless to counteract. Two men who were drunken, profane, and idle, were persuaded to attend the meetings. They have reformed, and now work steadily. They were in the meeting when the question of how to keep our boys from drunkenness was discussed, and such an impression was made on them, that for over a year they have been strictly temperate. I think taking the children out to walk cured them of their profane habits. When their turn came to go with the children, a tax was levied to pay them for their time. It was also done in the case of some of the other members who did not feel able to lose the time from their work.

Some of the wealthy members begged to be allowed to furnish a substitute when their turn came, but no substitution was allowed. The majority answered, in such cases: "We want you and the children to become acquainted with each other, therefore no substitution shall be granted except in case of sickness."

If, in their going out and coming in, any of the children do not obey the "guides," they must stay at home the next afternoon, unless they can get a two-thirds vote of their comrades, declaring their "guide" too strict.

Time would fail me to tell of all the good this society has accomplished. Many of the children, both rich and poor, who

were formerly idle, are now learning trades, first having their heads examined by a good phrenologist to help us ascertain for what they were best fitted. As to distinctions created by money, it has proved a greater leveler than death. The children are healthier, happier, and better behaved than formerly. Many of the men have forsaken their club-rooms, and put the money they formerly spent there into a gymnasium. This was suggested by a question of one of the parents, handed in for discussion: "How shall I keep my children from swinging on the doors and gates?"

"Give them a good lickin'," said one of the floggers; but the anti-floggers said: "Give them something better to swing on;" and out of that grew the gymnasium, which is a source of unending delight on days when the weather compels shelter. One of the members has given the society the use of three acres of land, centrally located. On this is a long building, in part of which is the gymnasium. It also contains quite an extensive library, considerable mathematical, chemical, and astronomical apparatus, a number of stuffed birds, geological specimens, and other things, which members of the society have presented according to each one's taste.

The society is now about two and a half years old, and has done much, yea, very much, toward promoting kindly feeling, good morals, and industry in both parents and children.

Will not some other good town go and do likewise?

JOSEPHINE JACKSON.

THE SELF-MADE MAN.—The so-called "self-made man" is generally of this sort, of whom some wag has said that one good thing you can affirm of him, and that is that he worships his Creator. The self-made man, having had little learning and less training, mistakes a novelty for a profound truth and builds a philosophy on his discovery, when to more educated minds his novelty is an exploded theory or a misapprehended

fact. He vaunts himself before the community, and has, unfortunately, power to lead other simpletons astray, the great

public being remarkably incompetent to judge of the merits of their teachers.—*Howard Crosby.*

BITS OF NATURAL HISTORY FROM THE LOW COUNTRY OF SOUTH CAROLINA.

PEOPLE "to the manner born," always speak of the "up-country" and "low-country" as very distinct and dissimilar portions of the State of South Carolina. The "low-country" borders on the sea; it is the land of the live-oak and the rice-field; the up-country is undulating, then hilly, then mountainous, and is far less homogeneous in its products and people. They have gone into manufacturing *up* there since the war; and besides the cotton they raise for market, make wines and brandies. The up-country towns abound in schools and colleges, and there is not so much class distinction. The "low-country," with its treasures of "Sea Island" cotton and "true Carolina rice," was the Eldorado of the State in antebellum times; but everything *artificial* is now reversed, the richest are the poorest, and the aristocracy of our State are reduced to labor!—did I say reduced? I meant to say *elevated*, for I do maintain, despite the prejudices to which I was born, that labor, whether physical, moral or mental, is honorable and should be honored.

This "low-country" of South Carolina, of which our delightful old city, Charleston, is the metropolis and focus, has many natural peculiarities. The flat face of the country is *wrinkled* with innumerable streams of dark water, so clear, that looking through its opalesque, translucent current, the pebbles and mosses underneath appear transfigured with glittering tints and colors. You drive for miles sometimes through stately pine forests—trees in whose eternally green, tall tops the wind sighs, and sobs, and sighs like the deep murmur of the sea. The ground under these trees is always brown with the fallen pine leaves, and a delicious, resinous odor pervades the air

around. On these tall, "long-leaf pines," you rarely see the gray moss for which the "low-country" is renowned. But, leaving the pine-forest you come upon an oak thicket, and then you will see the "Sabine pine" or cedar pine, with foliage very like a spruce-tree, and the bark of its trunk like a cedar. And this species of pine will be beautifully draped with moss.

Here is the native home of the live-oak, the willow-oak, and the magnolia. The former generally attains an immense size, and its bending branches almost sweep the ground. The *tillandsia* is its inseparable parasite, and its festoons in-fold the trees like graceful veils of silver mist; but, unfortunately, the places *so beautified* are invariably unhealthy, whereas the sandy pine-barrens are remarkably free from malarious affections.

An habitué of this region is the alligator, familiarly spoken of by the natives as "the 'gator." The great Saurian is a hideous object, as his loathsome, dusty-dark body appears on a log, in still pools or lakes. He is a dull, ungainly creature, loving to sun himself in slimy sleep. So profound is his lethargic repose, that the hunters often approach near enough to throw a noose over his head before he awakes. The alligator lives on fish or any live animal that he sees a chance of capturing, by a blow from his tail. He goes into regular winter quarters at the coming of cold weather, hibernating in caves or dens under the banks of water-courses, which he scratches out with his feet, breaking through the roots of the largest trees with his long, sharp teeth.

The female lays her eggs in a pile of dirt, two to three feet high, in an open, sunny place near the water-side. She sometimes deposits thirty or forty eggs,

covers them carefully with dirt, and gives herself no further concern, except to see that the earth around them is kept *moist*. Heat and humidity bring the young ones into existence. The whine of a puppy powerfully attracts an alligator, being similar to the cry of its young; and it is so fond of pig-meat that the squeal of a pig carried by a darkey has been known to draw the great Saurian from his watery haunts and lead him to go vaulting awkwardly, but rapidly over plowed ground in pursuit. A full-grown alligator is ten or eleven feet long, oftener not more than six or seven, but looks twice that when seen swimming about in the water. When hibernating, he will distend his ridgy hide, with black lightwood knots, or anything that is handy to get at.

The gopher, another animal peculiar to the "low-country," is related to the terrapin or turtle family, as far as the general conformation of its body goes, but is quite different in his habits. He lives on the sand ridges, and does not affect the water as his more aristocratic relatives do. He is purely herbivorous

and entirely harmless, not even attempting to bite his tormentors—the children, to whom, when caught, he is often given as a playfellow. The boys and girls enjoy riding on his back, and even strong men, whom he readily bears up, sometimes like the novelty of being conveyed about in a standing posture by the uncouth creatures. The largest gophers are nearly two feet long, and fifteen inches from side to side. They are eagerly hunted by the negroes, who esteem them very toothsome in stews and soups. For a residence he digs a hole in the sand, diverging from a straight line after going a short distance, so as to form a triangle at the lower extremity of his hole. He is very destructive to corn and peas when he gets into a field, breaking off and devouring the tender tops and buds.

The "salamander" is found just over in Georgia, across the Savannah River—will *not* live on the South Carolina side. It is something like a ground-squirrel, and has a "pocket," formed by a fold of skin, in which it carries the dirt it uses in constructing its burrow.

MRS. VIRGINIA DURANT COVINGTON.

WORD ANOMALIES IN ENGLISH.

A PRETTY deer is dear to me,
A hare with downy hair;
I love a hart with all my heart,
But barely bear a bear.
'Tis plain that no one takes a plane
To have a pair of pears,
A rake, though, often takes a rake
To tear away the tares.
All rays raise thyme, time raises all;
And through the whole hole wears,
A wit in writing "right" may write
It "wright" and still be wrong.
For "write" and "rite" are neither "right,"
And don't to write belong.
Beer often brings a bier to man,
Coughing a coffin brings,
And too much ale will make us all
As well as other things.
The person lies who says he lies
When he is but reclining,
And when consumptive folks decline,
They all decline declining.
A quail don't quail before a storm,
A bough will bow before it;
We can not rein the rain at all,

No earthly powers reign o'er it.
The dyer dies awhile, then dies;
To dye he's always trying,
Untill upon his dying bed
He thinks no more of dyeing.
A son of Mars mars many a sun;
All deys must have their days,
And every knight should pray each night
To Him who weighs his ways.
'Tis meet that man should mete out meat
To feed misfortune's son;
The fair should fare on love alone,
Else one can not be won.
A lass, alas! is something false;
Of faults a maid is made;
Her waist is but a barren waste—
Though stayed, she is not staid.
The springs spring forth in Spring, and shoots
Shoot forward one and all;
Though summer kills the flowers, it leaves
The leaves to fall in fall.
I would a story here commence,
But you might find it stale,
So let's suppose that we have reached
The tail end of our tale.

THE YOUNG FOLKS OF CHERRY AVENUE.

CHAPTER V.

A MISCHIEVOUS BOY AND A CONSEQUENCE.

“SEE here, mamma, will you please to take this hook out of my finger?” asked Tal on entering the sunny room where his mother sat sewing.

“Certainly, my dear boy. Why, it has penetrated quite beneath the nail. I shall hurt you a little in getting it out.”

Taking the wounded finger in one hand, and working the hook with the other, Mrs. Manley soon succeeded in extracting the sharp point.

“Thank you, mamma. It stings though!”

“I’ve no doubt that it does. Now, let me squeeze out some of the blood, and then put a piece of sticking-plaster on. Tell me how it happened.”

“I was sitting on a post, with the fish-line in my hand, and Edie came behind and gave me a little push, and I fell down, and somehow the hook stuck in my finger.”

“That was naughty of Edith.”

“Well, mamma, she was only in fun, and didn’t see the hook in my hand.”

“She didn’t mean to hurt you, I’m sure, but it was very thoughtless on her part.”

Edith’s dancing step was heard in the hall at this moment, and then she burst into the room with—

“Is it bad, mamma?”

“No; not very serious, Edith; but you might have injured Tal in such a way as to put his life in danger.”

“I was only in fun. Tal was sitting up there on the post so snug and nice, I wanted to scare him a little. That’s all. I didn’t think of hurting him at all.”

“Never mind, Edie, I’ll be all right in a minute; soon as mamma’s finished putting on this plaster. Where’s Paulie, mamma?”

“Gone to the grocery with Grace.”

“Hope you’ll have some raspberries for supper, mamma. Won’t you, mamma?” asked Edith.

“Perhaps. At any rate, you will have

your share at the breakfast-table to-morrow morning.”

“Oh, they’re so nice for supper. I like them best then,” persisted the girl.

“They are better for you at the morning meal, my child,” said Mrs. Manley.

“Edie likes ‘em at any time. And I guess they’re best to her any time she can get ‘em,” remarked Tal, as his mother tied a bit of thread around his finger to help keep the plaster in place.

“Well, if you’re ready now come along, for the girls must be waiting,” said Edith, tripping out of the room.

“Thank you, mamma, for patching me up so nicely, and here’s some pay for it,” said Tal, warmly kissing his mother.

“I’m very well satisfied with the fee, my boy, and if you go into the boat be careful you don’t upset.”

“I shall, mamma. Good-bye.”

Joining Edith on the lawn, the two ran briskly down the road, and found Sophie and Lizzie waiting.

The mill was about three-quarters of a mile distant, and situated in a picturesque nook. Originally its site had been thickly wooded, and now the pond which stretched away above the dam for fully three hundred yards was skirted with trees, while the mill buildings stood near the center of a clearing which, year by year, extended southward, as the town grew in that direction. Most of the residents in this wooded quarter had been wise enough to save all the trees they could, instead of cutting them down before building their houses, and then planting saplings, which would require many years ere they could reach a sturdy growth and furnish grateful shade. The result of this prudence was that the streets were well lined, and the house-plots decorated with large and vigorous trees. In summer the older portion of the town presented a charming appearance; the rich and heavy foliage of the maples embowering the cot-

tages, and contrasting with the variety of painting which the houses displayed. As maples greatly exceeded other forest-trees in the neighborhood the town had been named Mapleville, and no one had ever been known to question its appropriateness.

On their way to the mill the young people were met by Truman Burr, a boy of whom mention has been already made. He was two years older than Tal, and much larger and stronger. His conduct was off-hand and rude, and nothing else seemed to delight him so much as pulling about and throwing down smaller boys, and playing other rough tricks upon them. Toward girls he was rude too, taking delight in jerking off their bonnets, pulling their ears, and otherwise teasing them. On this account he was greatly disliked by the girls of the Avenue, and when he appeared even Lizzie exclaimed, in an undertone :

"There's that horrid Truman Burr!"

"Yes, and I do believe," said Edith, without regard to her tone, "he'll hitch on to us, and we don't want him."

If Truman heard these remarks they did not disturb him at all, for when he came up he said :

"Hello, goin' to the mill?"

"Yes," replied Tal.

"Guess I'll go 'long."

The girls fell back by themselves, leaving Tal by the side of Truman, and whispered to one another; Sophie and Lizzie saying that they might as well go home, because the intruder would spoil their pleasure, while Edith angrily insisted that they had a right to go where they pleased without his following them, and it was her father's mill, and she would go at once to him when they got there, and ask him to send Truman about his business.

"The gals don't want me, do they, old fel?" said he, jerking Tal's arm, and laughing roughly.

Tal shook his head.

"Well, who cares: guess I can get along without 'em. They needn't go, if they choose; you and me 'll have all the fun to ourselves—so."

"But I want them to go, Truman, because I invited them this very day; and it wouldn't be right or nice to turn them off," answered Tal.

"Well, they act so offish and stuck-up when a fellow's near 'em, and don't want to have anything to do with him."

"Now, you know why, just as well as I do, Tru."

"No, I don't. Take my oath, I don't. What is it?"

"Because you tease them so much."

"Well, it's only in fun, anyhow."

"Yes, I know you don't mean anything but fun; but you're too rough. You pull 'em about, and hit 'em pretty hard sometimes—just as if they were boys—when you ought to know that girls aren't as tough as boys."

"Huh, huh, huh," laughed Truman. "Gals aint as tough as boys—hey! You'd ought to be in our house once; Kit and Tip would soon show you what play is. The way they jerk me round sometimes! why, what I do aint nothin'."

"Yes, but your sisters are big, strong girls, and they're used to such fun; but Sophic, Lizzie, and my sister aren't."

"You're a regular parson, Tal. I'll swear, if you aint. That feller in school, to-day, ought to've told you to take up the profession. 'Spect to see you in Miller's place 'fore long."

"Now, Tru, don't talk that way. It isn't at all nice."

"Huh, Mr. Parson," cried Truman, "none of your gammon; my talk's just as good as that Shanghai's from New York." Saying this, he caught Tal's straw hat from his head and ran down the road a little way with it.

"Please to give me my hat," shouted Tal. Truman answered with a coarse laugh, and crowding the hat over his own, which was rather the worse for two or three months' hard usage, capered about in a very tantalizing way.

"I wouldn't run after him, Tal, if I were you," said Sophie, indignantly.

"He'll break your hat all to pieces, the horrid boy," said Edith; "and only last

week Gracie put that new blue ribbon on it for you."

"Let's go home," said Lizzie.

"We might just as well; because we won't have any fun if Truman sticks to us."

"Oh, let's go on," said Tal, coaxingly. "I guess he won't spoil our fun. You know none of the nice boys and girls like to play with him; and they show they don't, and that's the reason he acts so rough, I'm sure."

"You are the only one who takes his

This rough treatment of his nice pearl braid nettled him a little, in spite of good resolutions, for Tal was quite neat in his dress, and was particularly choice of his hats, and he shouted:

"Don't do that, Tru, you'll tear it." At the same time running down to where Truman was.

The boy laughed in his mocking way, and said:

"Here it is, take it," and as Tal reached out for it, Truman tossed it into the air again, and this time, caught by the light



HOW THE FENCE BROKE DOWN.

part, and I just hate him," emphasized Edith.

"Well, that's the reason he acts so," pleaded Tal. "I'm sure Mrs. Burr is a real lady, and I like her; and she told me one day that she was very sorry that Truman wasn't liked by the children on the Avenue, and if I didn't play some with him he'd go with the bad boys over by the cotton mill all the time."

"Just see what he's doing with your hat," exclaimed Sophie; for Truman was now throwing up the hat into the branches of a large maple, with the apparent design of giving Tal a job to get it.

breeze, it was carried over the fence, which inclosed an orchard.

Tal sprang upon the fence and was over in a twinkling. Truman followed him, but Tal's superior agility enabled him to seize the hat first, and turning to his tormentor, said:

"Now, Tru, behave yourself, and let's go along peaceably."

"All right," returned Truman.

Tal jumped upon the fence to get into the road again, and had one leg over, when Truman's mischievous nature couldn't resist the opportunity for plaguing Tal further by seizing the other leg, and pull-

ing it so forcibly that Tal could not withdraw it. The fence was old, the posts much decayed, and to keep them upright the owner of the orchard had piled stones around them, to the height of a foot or so. Tal, balancing himself on the top rail, struggled to get free, and as he did so, the fence swayed to and fro.

"Let go," he screamed, "the fence is coming down."

"Who cares," replied Truman; "let it come down." At the same time giving the leg he held a violent pull.

Sure enough it came down, for one of the posts snapped off near the ground, and rails and Tal came down together. Truman turned to escape, but was not quick enough, for the broken post struck him on one side, knocking him over, so that Tal and the rails fell across his body.

While this struggle on the fence had been going on, the girls had drawn near, and when the post gave way, and Tal went crushing down, they darted forward with a cry of anxiety.

"Oh, Tal, are you hurt?" screamed Edith.

"No, not a bit," answered Tal, who had sprung to his feet the instant almost the rails had touched ground, "but I'm afraid Truman is."

"I believe this old rail's hurt my foot," said that worthy, struggling to get up.

"Just wait a bit till I lift 'em up; don't you see your foot's got under 'em, so you can't very well get up?"

And Tal endeavored to raise the broken section of fence, but found his strength unequal to it.

"We'll help you, Tal," cried Sophie, flying to his side, Lizzie and Edith following.

"Well, let's all take hold near this post, and then I guess we'll raise it up. Quick, now. Ready!"

They all tugged together, and up went post and rails.

"A little more, girls. There! Now, hold a minute while I fix the stones, and see if the rails are in their places. There, it looks almost as good as it did before. My, how strong you all are."

As soon as he had been released from the trap he had made for himself, Truman got up, but found that his foot and ankle were so bruised and lame that he could scarcely walk, so he sat down on a large stone, looking ruefully enough.

"I shouldn't wonder if the poor boy is very much hurt," said Lizzie.

"How is it, old fellow?" asked Tal, putting a hand kindly upon the boy's shoulder.

"I just feel kind of used up, my foot aches so," replied Truman.

"Never mind, it'll be all right in a little while."

"It's not half what I deserve, anyhow, trying to spoil your fun, Tal Manley, when you're such a good feller to me. Just you go on now and leave me."

"Can't you walk? Try."

Truman got up and hobbled about, but evidently the effort cost him a good deal of pain.

"I shouldn't wonder if his ankle is sprained," said Sophie.

"No, 'taint as bad as that, 'cause if it was I wouldn't walk at all," said Truman, with emphasis, adding: "I want you all to go on about your business. I'll get home somehow."

"We'll help you, Truman, home," offered Tal.

"No, you needn't. Now go, if you want to please me. I tell you it's nothing but a bruise, and I'll get along well enough after a while."

He then sat down on the stone again. Lizzie whispered:

"We can stop at his mother's and tell her about it anyway."

"Yes," replied Tal, and then speaking out he said:

"Well, let's go on, girls, as he won't have anybody help him."

The party then passed on down the road, and was out of Truman's hearing, when Edith broke out:

"We've got rid of him, and I'm glad he's hurt, for he deserves it, and more too."

"Edith Manley," exclaimed Sophie, "you are real unkind in talking that

way, for who knows that he isn't hurt very badly?"

"Well, I don't care; he's always putting himself in the way and spoiling our fun, and seems to enjoy it. I just think he ought to be punished."

"Don't the Bible say, 'Be kind to your enemies'?" asked Lizzie, softly, "and I'm sure Truman showed that he isn't all bad."

"Yes, Edie," said Tal, taking up the defense of their late tormentor, "didn't he say it served him right for teasing us? Tru is a better boy than most folks think, and I really believe he'd act a great deal better if you girls would treat him kindly. He does a good many things only in fun, and doesn't mean to be bad."

"There comes Mr. Tracy," interrupted Sophie. "Let's tell him about Truman, and perhaps he'll take him home in his wagon."

"Oh, yes, that's a good idea," replied Tal, and when the good-natured store-keeper came up, he stopped at their call, and on being told that Truman had hurt his foot, so that he couldn't walk without pain, said that he'd "see to him."

With this assurance Mr. Tracy drove away, and the young people, released now from their intention to go half a mile or so out of their way to acquaint Mrs. Burr with the accident, went on rapidly toward the mill. They found Joe at work trimming up logs for the saw, and Mr. Manley gave him leave to take the children out upon the pond. So Joe rowed them to and fro upon the quiet sheet of clear water. Tal concluded that his sore finger would make it inconvenient for him to fish, and contented himself instead with hunting through the high bushes on the banks of the pond and race for blackberries. He found a few handfuls and divided them with his companions.

The time slipped away while they were enjoying themselves in the water, and the stoppage of the mill-wheel suddenly apprised them of the fact that it was six o'clock, and that they must return home. Joe brought them to land, and with many a "thank you," for the "delightful sail" he'd given them, the girls, with Tal in the advance, skipped briskly up the hill.

CLARE.

BE COURTEOUS.—When the Duke of Wellington was sick, the last thing he took was a little tea. On his servant's handing it to him in a saucer, and asking him if he would have it, the Duke replied, "Yes, if you please." These were his last words. How much kindness and courtesy is expressed by them! He who had commanded the greatest armies in Europe, and had long used the tone of authority, did not despise or overlook the small courtesies of life. Ah, how many boys do! What a rude tone of command they often use to their little brothers and sisters, and sometimes to their mothers! This is ill-bred and unchristian, and shows a coarse nature and a hard heart. In all your home talk remember, "If you please." Among your playmates don't forget "If you please." To all who wait upon or serve you believe that "If you please" will make you better served than all the cross or ordering words in the whole dictionary. Don't forget three little words, "If you please."

WHICH LOVED BEST?

"I love you, mother," said little John;
Then forgetting his work, his cap went on,
And he was off to the garden swing,
And left her the water and wood to bring.

"I love you, mother," said Rosy Nell,
"I love you better than tongue can tell."
Then she teased and pouted full half a day,
Till her mother rejoiced when she left to play.

"I love you, mother," said little Fan,
"To-day I'll help you all I can;
How glad I am school doesn't keep!"
So she rocked the babe till it fell asleep.

Then, stepping softly, she brought the broom
And swept the floor and tidied the room;
Busy and happy all day was she,
Helpful and happy as child could be.

"I love you, mother," again they said—
Three little children going to bed.
How do you think that mother guessed
Which of them loved her best?



"COLDS;" HOW CAUSED AND HOW TREATED.

A "COLD," as it is commonly called, is an inflammation of throat or nasal passages, or of both. Sometimes this inflammation involves the upper respiratory tract—the larynx and trachea. A common "cold" is usually attended with a hoarse throat, a dullness in the head, and a slight degree of feverishness.

Causes.—Usually the exciting cause is the sudden exposure of the body, or some part of it, to a lower temperature or a colder atmosphere, or a sudden transition from heat to cold. In this condition the body suddenly and rapidly imparts its heat to the surrounding air, in accordance with the law governing the relative condition of bodies as to heat and cold. This change to a colder temperature causes a contraction of the capillary vessels of the skin and superficial tissues, which results in a diminution of the activity of respiration and external circulation. When this takes place an excess of the circulating fluid, blood, is forced upon the internal structures and organs, and a certain amount of congestion is the result. The soft tissues of the throat and nasal passages are the structures that are most commonly affected with inflammation, as a result of sudden change of temperature. The bronchial tubes, lungs, kidneys, brain, bowels, or delicate tissues of the joints may be the organs seriously affected with inflamma-

tion. The severity of these diseases depends upon several conditions :

1. The condition of the blood and tissues.
2. The integrity of the vital functions.
3. The suddenness, degree, and extent of the exposure to a colder atmosphere. If the tissues are ill-nourished, and the blood contains an excess of effete and carbonaceous matters, the individual is liable to have this disease, known as a "cold," upon the slightest exposure. If the vital functions are imperfectly performed, especially that of respiration, the organism is predisposed to this disease. If we recognize these several conditions of the system we can explain why persons exposed to the same external influences are not similarly affected—why one person "catches cold" and another does not.

One whose blood is foul may have a fever; one whose joints are obstructed with earthy or saline matters may have rheumatism; one whose bowels have been constipated may have dysentery or diarrhœa; one whose liver has long been torpid may have some form of malarial disease; one who is predisposed to pulmonary affections may have bronchitis or pneumonia. But if the various vital organs are in a fair condition, and the exposure to cold is slight, the result will only amount to a "common cold."

Ill-ventilated rooms, and especially

sleeping apartments, are conditions that favor throat and lung disorders. Scrofulous persons are more likely to have "colds" than those free from such constitutional taint. Persons of sedentary habits are more commonly afflicted with "colds" than those whose occupation keeps them out in the open air. Unequal exposure of the body to cold is one of the most frequent causes of colds. Over-eating is of itself the sole cause of many persons being so easily affected by changes of temperature.

Overwork, whether physical or mental, the use of hot drinks and hot food, emotional excitement, disappointments, and depressed and anxious conditions of the mind, may figure as causes of "colds," by their direct or indirect influence upon the bodily functions.

Prevention.—First of all, avoid any sudden change of temperature; especially when in a warm room or comfortable apartment do not go out into the open air without putting on more clothing, unless to engage in active exercise. Going from a heated room in a state of perspiration out into the cold air without a sufficient addition of clothing will almost always induce a severe "cold." After active exercise, when the warmth of the body is augmented, care should be taken not to allow it to too suddenly change to the normal condition of heat, by going to or remaining in a warm room, or putting on more clothing. Never sit down in a cool place. Never sit down upon the cold, damp earth in spring or autumn. Avoid the use of all spicy condiments and highly-seasoned foods. Avoid eating more food than can well be digested and assimilated. *Never* take any quack nostrums or drugs of any kind. Animal foods of all kinds should be used in moderation; if used at all. Care should be taken in regard to the quality as well as the quantity of flesh meats, milk, and butter used. Flesh meats should not constitute any more than one-quarter or one-fifth of the amount of food eaten when the mixed diet is adopted.

No doubt the American people use too

much animal food. However, it will be a long time before many in this country will be induced to diminish to any great extent the quantity of animal products they now consume.

Equable clothing is an efficient preventive of common colds as well as other diseases. It is important to protect the feet and lower limbs from damp and cold. Avoid imperfect aeration of the blood by appropriate chest and respiratory exercises, as well as breathing pure and fresh air. The proper use of the bath is an excellent preventive. Excessive and too frequent bathing is injurious to health. A warm, tepid, or cool bath once or twice a week, or even daily, for some persons, may be of service, provided it is taken in a comfortably warm room, and never soon after a meal. Hot-air and vapor baths alone, or combined with electricity, are excellent preventive measures when properly used. The electro-vapor bath is a modern contrivance of much utility as a hygienic measure, as well as a valuable therapeutic apparatus. Much sweating is to be avoided in the use of baths.

Treatment.—The proper treatment of a cold is very simple and efficient when judiciously managed. Any intelligent member of the family should be able to apply it successfully. Home treatment, or no treatment at all, is the usual practice in this disease. The physician is seldom called to treat a "common cold." Many resort to taking nostrums or drugs of some kind when suffering an attack. It is well to begin the treatment in season, when after any exposure there is chilliness, with clammy feet and a hot head. Take a good, warm foot-bath for about fifteen minutes, and then a few minutes in colder water, or pour cool water over the feet before wiping them. Wipe dry. Wet the head in cool water before taking the foot-bath. Take a glass of hot lemonade, or warm water flavored with some fruit juice, and go to bed for a few hours, or all night if it is evening. A warm full-bath or sitz-bath may be employed instead of the foot-bath alone. The full-bath is well suited to babies and children.

Abstinence from food for twenty-four or thirty-six hours should be the rule. This is all-important, and is sufficient of itself, in many cases, to give relief.

If, at the expiration of a day or two of such treatment, there still remains a hoarse throat, with feverishness, and coughing, with or without expectoration, a modified, but more thorough form of treatment should be given.

If the bowels are constipated, evacuate their contents by the water method. Eat but very little food for a few days—say a baked apple and thin porridge or gruel

twice a day. Some pleasantly flavored fruit may be taken in moderate quantities. Lemonade, containing but little sugar, and soft water, may be drunk *ad libitum*. Rest, and sleep as much as possible. Take a warm bath daily. The foot-bath, combined with the sitz-bath, wet-sheet pack, or full-bath, are alike suitable. After the bath it is well to lie down on a couch or go to bed and keep warm.

A few days of such treatment will generally cure the patient.

J. G. STAIR, M.D.

MILK AS FOOD.--No. 1.

REV. O. F. V.—DEAR SIR: A recent inquiry from another source calls to mind a promise, made you long since, to write on the value of cow's milk as food for human adults. It is a very prevalent idea that milk from healthy and well-kept cows occupies the first rank for such use. "Since milk is the first thing provided for us by the Creator, is it not the best thing?" is often thought a query to which a negative answer can not be given.

If a human infant and a calf were identical in organization and in requirements, and the human infant continued the same in these particulars while developing into full manhood or womanhood, such a question might not be so easily met and answered. But the human child has a simple stomach, a single sack or pouch, adapted only to the use of the finer and more concentrated kinds of food. The calf has a compound stomach, consisting of four sacks or pouches adapted to the use of coarse herbage, but not to such food as men and women require. This being the case, we can not safely reason from analogy in settling the value of milk as food, for the analogy does not exist. Nor does the case improve as age advances. Nature's law is universal in its application to mammals, no matter what their dietetic character may be. Milk is the diet provided for the infant; the milk of the mother for

the infant of its kind. But as the secretion differs greatly in different animals, it is by no means safe to conclude that what is proper or necessary for a young animal of one kind is equally well adapted to the young of all other kinds. An examination of the analyses appended will show that the milk of the cow, in its constituent alimentary principles, differs widely from the milk of the human mother. Every nurse who has attempted to bring up a child on "the bottle" has experienced some of the difficulties and dangers following the substitution of such nourishment for that which is by nature adapted to its necessities. Even when the constituents are brought into nearer conformity to the formula represented in the analysis by the addition of water and sugar, infants rarely do very well on cow's milk. The organs of the mother are fitted and designed for the elaboration of nutriment adapted to the infant of her kind. But the albumen, casein, sugar, etc., in the milk of one class of animals differ widely from the same constituents in the milk of another class. This difference is not merely one of proportions, but is quite as much one of quality. Hence if we could by any methods of manipulation reduce other milk to the formula desired as to relative quantities, our success would be but partial. Theory and experience,

therefore, concur in the conclusion that cow's milk, while it may be the best available food, is not the best food for human infants.

As the young mammal of any kind advances in age and in development, its digestive organs undergo changes fitting it for a change of nutrient material. This change is complete when the teeth are fully developed and fitted for the mastication of solid food.

The lacteal secretion is then abandoned and the food of the parent animal adopted. If the young of the parent stock be disinclined to make the change, it is compelled by an inevitable law to submit to the order of nature. Why should not this law apply to the young of the human race as well? It does so far as the use of the mother's milk is concerned, and the law is recognized by all classes and conditions, and in every part of the world. But by force of habit, and of reasoning from habits generally prevalent, the use of milk from other animals is adopted and continued through life by a large part of the human race. It would be hardly fair to say people suppose that, in the development of its organs, the child progresses from its nature as a human infant through a stage of longer or shorter duration, in which its adaptations and its necessities are analogous to those of the calf. And yet would it not be a difficult matter to say why a child should continue the use of milk—why it should abandon the mother's milk for milk of a cow at that period of development when all other young and growing animals, following a manifest law of nature, discontinue the use of their primary food entirely? Why should it stand alone the only exception to an otherwise universal law?

Wm. Henry Cumming, M.D., "Food for Babies," pp. 58, 59, gives the composition of milk as follows: In one thousand parts of cow's milk there are of

Butter,	38.59	parts.
Casein,	40.75	"
Sugar,	53.97	"
Water,	866.69	"
<hr/>		
1,000.00		

while in a thousand parts of human milk there are of

Butter,	20.76	parts.
Casein,	14.34	"
Sugar,	75.02	"
Water,	889.88	"
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1,000.00		

An examination of these tables will show that cow's milk contains nearly three times as much cheese as is found in human milk; nearly twice as much butter, and only about two-thirds as much sugar.

By using richer milk from the top of the vessel when the cream is partially raised, or strippings, as the last of each milking is called, the proportion of butter is greater. Assuming it to be 54 parts in a thousand, the addition of water and sugar as indicated in the formula below brings the proportions very nearly to those of human milk:

Butter,	54	Butter,	54
Casein,	38	Casein,	38
Sugar,	52 + 142	Sugar,	194
Water,	856 + 1,458	Water,	2,314
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1,000 + 1,600		2,600	

Dividing this by 2.6 we have

Butter,	20.77
Casein,	14.61
Sugar,	74.62
Water,	890.00
<hr/>	
1,000.00	

To express this in its simplest form: Add to a given quantity of such rich milk one and four-fifths times as much pure water and one-seventh as much pure white sugar. Thus prepared it is doubtless the best available substitute for the mother's milk where that is wanting. It may be added also that in many cases the lacteal secretion of a diseased mother, however plentiful it may be, is unfit to be used at all. This, however, does not justify the inference that milk, with or without such preparation, is well adapted to the use of persons more advanced in life. The proof of this, if it is capable of proof, must depend upon other conditions than the relative proportion of the constituent principles in different kinds of milk.

J. S. GALLOWAY, M.D.

A GENTLEMAN OF COLOR ON BROWN BREAD.

AN English paper, *Evans' Journal*, contains the following scold by an indignant "black man":

"I nebber could understandify why I always get out ob temper ober dis white bread question, but I do. When I tink how de people ar 'frauded in dis matter, something seems to burn up widin me wid all de furnace-power ob a ton o' coals. It makes me wonder what I'm made of. When dis poor old nig wasn't much bigger dan a good-size nob o' coal, some one taught him dat man was made ob dust. Since den I've found out dere are a great many kinds ob dust, and darefore a great many kinds ob men; and I hab come to de 'clusion de kind dat I'm made ob must be coal dust, and dat's why I get so redhot sometimes, in fact always, when I see folks being cheated.

"'Half a loaf is better dan none,' as de proverb-mongers say. Guess dey mean half a quartern loaf. Ob course it is, but half a quarter of half-and-half, according to de tippler, is better still.

"Seems to me dat most people hab only half a loaf, when nature meant dem to have a whole one. Dey hab de white half, dat is nearly all starch, and all de odder part is giben to de rabbits and pigs. De good ole book says, 'Look not on de wine when it is red;' and I wish it said, 'Look not on de bread when it is white,' for de Englishman is worse den cheated when he eats bread de same color as himself. Say dat darkness am light, disease am health, write a big book to prove dat happiness and pain are bofe de same, but for goodness' sake, for breakfast's sake, for dinner's sake, for de sake of ebbery meal in de day, don't call a white loaf de 'staff of life,' because it is a fib dat can nebber come true.

"My heart is full of sorrowment when I see a poor woman go into a shop and put down good money for bad bread. I often meet dem in de morning wid a half-quartern fib peeping out from under dair shawls, beliebing, poor tings, dat dey are taking home to dair little ones a two-

pound chip off de 'staff of life.' It's nothing ob de kind. If bread had always been white, it would nebber hab been called a staff, but a broken stick.

"Dare are thirteen minerals in de human body, and dey are all packed away in dat lubly little loaf called a grain ob wheat. Dey are all in dat same little loaf, for good old Mother Nature hid dem dere wid her own kind hands. Den let no one in future steal anyting from dis odd little bread-basket, which our Father has so richly stored wid physical blessings.

"'Give us dis day our daily bread,' is a prayer dat lubing Father God and good old Mother Nature are always answering. Go into de cornfield, pick an ear, rub it in your hands, and out will roll into your palm a dozen lubly little golden loaves, all baked by de sun; and de learned men say dat each one contains all dat is wanted to feed de body. Den how dare we to trow any ob it aside? What an insult to 'our Father,' to tell Him, by our refusal ob de staff of life *perfect*, as He sends it, dat we know better dan He who made us, and dat His great gift is better for us after certain parts hab been taken away dan it would be if we ate it all. Dis goes aginst de *grain* awfully. Don't go to de 'Harvest Festival,' and tank God for His bounty and goodness, if you mean to go home and eat white bread direkly arter, because dat am insulting God and your own health too. If you hab yet to learn how to use His gifts to your own good and His glory, go and learn to be wiser at once.

"It costs de farmer many pounds for manures of different kinds dat de wheat may be perfec; and arter money, hard work, and nature hab done all dair work in de most perfec manner, de miller takes dis bootiful golden grain all to pieces, unpacks all the marv'lous 'gredients wid which it am stored, and actu'lly has de wickedness to take some ob it away and trow it to de pigs and rabbits, and other poor relations, when nature sent it all for us. Some one ought to

put dat miller into anudder shop. Dere is one kept by Government, where dey got a mill worked by de feet—dat's where he ought to go, for we can't 'ford to be treated in dis way. Nature sends us all, and he only gives us half. Dis game ob openin' other people's letters, taking out all de stamps, and givin' 'em back de white paper, ain't right nohow. In some tings it don't matter whedder we're cheated or not. Your hand will be jus as good and useful for all honest work if dat ring on your finger is arter all only worth forpence, though you paid twenty poun' for it. De smallest act ob kind-

ness dat hand may bestow on de poor God will bless, even if dere is no ring dare at all.

"Dare! I've said what I tink ob such willful unwiseness, and I'm willin' to len' my pen to any one who'll use it on de same topic. Let us foller up de subjec, right to de berry door ob ebbery baker in de land. Come, genlmen ob de press, whose turn is it? Don't let dis poor, untutorvated ole nigger hab de ink-bottle all to hissself ober dis vital question. I shall be roun' dis way again next year, and if I find de matter hab been allowed to drop, I shall out wid my pen and pick it up agin.

HARD READING.

WHY not hard reading as well as hard drinking? If we call those hard drinkers who imbibe anything and everything that will stimulate, why not call those hard readers who are ruining eyesight, health, character, and often sacrificing the means of support for the sake of mental excitement?

Now that the opponents of tipping are thoroughly organized, fully equipped, and on the march, we wish some one would originate a crushing crusade against this other species of intemperance. In most instances the hard readers themselves are hardly responsible for their failing. They are at first the victims of carelessness, ignorance, or circumstances; and the passion for mental excitement grows whether they grow or not, and strengthens more rapidly than physical fiber ever did. A child whose diet in summer consists mainly of cucumbers and cake, and in winter of suet puddings, crullers, and mince pies, is not to be blamed for the diseased stomach that rejects wholesome, unflavored food, and mild, natural drinks.

It is as natural for an intelligent child, born in a civilized land, to want to read, as it is for a bird to want to fly. As a rule, when a child has acquired the rudiments of education, reading is as great a necessity as sleeping, running, or eating. Many children would rather read than

eat. The mind is growing more rapidly than the body. This expanding mind must be fed. If the mother does not attend to its diet, Satan will. Mothers are frequently too busy with their frills, tucks, or trimmings; their pies, puddings, and sweetmeats, or, perhaps, their own hard reading, to give a dozen thoughts a year to what their children's minds are so readily absorbing.

"Oh, run off and play, or take a book or paper and read, and don't bother me," is too often the fretful command of the mother. How much better that she say: "Bring your book, my dear, and read to me. Perhaps we can both learn something new to-day."

The something new may be to the mother a grace, or a defect in the manner or in the mind of her child; but even a flaw discovered, with love and patience standing ready to erase or redeem it, is better than the discovery of a continent or a star. Oh, it is a glorious thing to help to form a mind! There is no power in the universe so God-like as that. And to debase a soul, nothing else so Satanic. How we shut our eyes, and turn our backs, and stop our ears to the responsibilities the Creator lays upon us when He gives little ones and youth into our keeping!

"The children ask for bread and no

man breaketh it unto them." A whole loaf may sometimes be dropped to or thrown at them, but it is not like the broken bread; and so often they are left to feed on offal and crave husks! Since life is so short, and so much at its close is still unlearned, how can we allow its precious hours to be thus wasted? And what shall we say of those wiser persons who *prefer*, before the habit has fairly gained the mastery over them, to cram their minds with unreal sentiment and sugared poison? The poison must be diluted and sweetened a little at first in order to satisfy the conscience of an omnivorous reader who has arrived at "the age of discretion;" and this is the way in which it is often done: "The Rev. Dr. Speecher and the Hon. Allright Haul, and Prof. Theologio Bowler, and C. A. Splurge, D.D., all write for this paper. They are well-known, public-spirited, Christian men. If the paper were not strictly good these men would not indorse it with their names and assist it with their talents."

Next to intoxicating liquors this debauchery in reading is the most prolific source of crime; and it is the pernicious fountain from which flow all social evils, great and small. The habitual reading of trashy, sensational serials creates an abnormal taste for the unreal; this incites a love for gossip and slander. Wicked and mysterious tales must be kept afloat, no matter at what cost. We are not speaking now of licentious literature; but of the kind of reading openly indulged in by hundreds of families in the few small towns with which we are acquainted; of such journals as one may see any day in the hands of our young men and women, our boys and girls. They are taken openly into school-rooms, and read in parlors, on cars, and in ferry-boats; and it is heart-sickening to witness the eagerness with which they are claimed at post-office, news-stand, or bookstore on the day of their anticipated appearance.

We do not say that any one of these unnatural weekly tales are hurtful—tak-

ing each one separately, they are probably no more than foolish; but when even "the thought of foolishness is sin" (Prov. xxiv. 9), can we too seriously warn against this written folly?

We do not assert that any of these tales are impure; but we do *know* that the constant perusal of such literature is decidedly injurious to body, mind, and spirit, and that it is eminently fitted to unfit its lovers for usefulness in this life, and for the chance of happiness in the life to come. But, conceding that the time spent in reading them is not sinfully squandered, let us take these papers and pamphlets in the aggregate, divide the time lost to good reading by the amount of profit gleaned from them, and what do we find? Then, there are the duties neglected; the flimsy performance of helpful tasks gradually learned; the stealthy and deceitful habits that must spring from the taking in of such mental food; the spirit of distrust or rashness thereby engendered; and the feverish dislike to beautiful commonplaces. All these and more must be set down as minus. There are always unknown quantities, too; and these are oftentimes heavy and terrible.

All over our land we hear lamentation and weeping; Rachel weeping for her children, and refusing to be comforted because they are not what she had reason to hope they would be. Whom shall we blame? Not the slaughtered children. Not the enervated youth. Not altogether the poor, blind mothers. Not the senseless sword, nor yet the brutal hand that wields that sword. Whom, then, shall we blame? Our thinkers, the Christian press, the clergy. They are responsible. Their cries against it have been neither long enough, nor strong enough, nor persistent enough. And they need to do something more than raise their voices against it.

They must *redeem* it. Nature abhors a vacuum; so does grace; so should practical religion. Take away the evil and keep it away by filling its place with good and keeping it filled. Be generous about

it. Let the measure be heaped up, pressed down, and falling over.

And this heaping measure of good food needs to be tastefully divided. Broken bread, not a whole uncut loaf. Mothers know how much sooner a cake or pie or pudding disappears when "cut

into" than does the unbroken article. Let us use common-sense as well as piety in our little acts of Christian helpfulness. Christ was known to His disciples through the breaking of bread. Let us be known to the world as His followers by the same simple sign. JESSIE MACGREGOR.

REMEDIES FOR COLD FEET.

I AM an old man; and from early boyhood, all through life, have been troubled, more or less, with cold feet. Many times, during summer and autumn, when the weather has been lowery and chilly, feet and ankles have been so exceedingly pained with cold, that they could not be rendered at all comfortable until they had been thoroughly warmed by a fire, and then dressed with thick woolen socks. During my younger days I made numerous *unsuccessful* efforts to inure my feet to the cold weather by persisting in wearing cotton socks; but, as the cold weather increased, my ankles would become so lame that I could scarcely walk.

Shoes and boots quite too small for my feet often caused cold feet, by obstructing the circulation of the blood. Larger boots and shoes that fitted the natural conformation of the feet prevented cold feet from *that* source. But, when cold feet and cold ankles were attributable to *unequal circulation* of the blood, other remedies were employed. All through life there have been periods when my feet and ankles could not be rendered comfortable, by warming them, even for a long time, before a moderate or a strong fire. At such times I have often gone out in the snow barefoot, bathed them, or walked back and forth in the snow, or pumped cold water on them, until the skin was red as a boy's hands when he is making snowballs. After such severe exposure to cold the parts were wiped and rubbed dry and warmed by the fire. This usually was done just before going to bed. After such treatment feet and ankles were always as

warm, until the morning, as could be desired. If bathed in snow or cold water during the day, after they were warmed and covered with woolen socks, they would continue warm. Yet many times my feet and ankles are *painfully* cold now, so that they really *ache*, and even a fire will not warm them. But by elevating them on a high table or desk as high as my head, they will soon become all of a *glow* with warmth. The day that I penned this article, although the weather was mild, with summer skies hanging over us, my feet and ankles were painfully cold until I elevated them on the desk higher than my head. In less than ten minutes they fairly *burned* with glowing heat, and remained warm during the entire day. I have never known *this* remedy to fail, and I have suggested the practice to certain literary friends, who have adopted it with satisfactory success.

The true philosophy of this remedy consists in the fact that the circulation of the *warm* blood is not equal. When vitality is at a low ebb, and one is employing all his available energies at thinking, reading, or writing, the feet and ankles, being so far from the source of heat, do not receive a proper supply, for the reason that the *colder* blood does not flow perpendicularly back to the heart so quickly as it does when the feet are elevated higher than the heart. Many times when I am writing, feet and ankles are so painful that it is difficult to use the pen freely, until the feet have been elevated as high as they can be held without producing an uncomfortable position of the body.

Many times when riding in a sleigh, I

have kept my feet comfortable, without boots, simply protecting them with the lap-robe or horse blanket, but I had been careful to warm them just before starting. Many years ago,

"When I was young and life was new,"

I frequently removed my boots and wrapped them in a horse blanket, and rode with warm feet, sometimes ten, twenty, and as far as twenty-five miles on a load of lumber, without suffering at all with cold feet.

SERENO EDWARDS TODD.

NOTES IN SCIENCE AND AGRICULTURE.

American Silk Manufacture.—In his considerable volume on this subject, Mr. Wyckoff treats the matter in a very interesting way. He shows conclusively that American manufacturers are obliged to use the best raw silk as a simple measure of economy. The cost for labor in this country is so high that all the foreign manipulations, by which poor raw material is made to look like good when in the thread or fabric, are too expensive to practice in this country. In other words, the extra cost of the best raw silk is less than the cost of the labor required to "doctor up" the poor. Then, too, the best raw silk works well in machinery, and fabrics can be made rapidly, while the poor is continually breaking and the machinery has to be stopped to tie the ends. Thus time is lost and less work is done by the machine in a day.

In all styles of silk goods, American enterprise and machinery are winning their way. The manufacturers began a few years ago with some simple lines of manufacture. They have progressed to such an extent, that nearly all kinds of silk goods are produced of unrivaled excellence. It is estimated that from a fourth to a third of the plain silks, and a much larger proportion of the brocade silks which are consumed in this country, are now made here. The production of figured dress silks has attained large development within a very few years. The designs are mostly original, and no mere description can do justice to the beauty and variety of these fabrics. In producing grenadines and satins, the improvements have been equally striking. Ribbons of the most elaborate designs and most perfect finish are now made in this country by power looms, and they have superseded the foreign hand-made ribbons, being so superior that French makers compliment us by imitating American tickets, trade-marks, and designs. The finest silk laces are also made upon American machines. In short, the American silk manufacturing industry may be fairly regarded as thoroughly American in its character and methods, and highly creditable to those who are pushing it forward.

How to Split Paper.—It is one of the most remarkable properties of paper that it can be split into two or even three parts, however thin the sheet. We have seen a leaf of the *Illustrated News* thus divided into three parts, or three thin leaves. One consisted of the surface on which the engravings are print-

ed; another was the side containing the letterpress, and a perfectly blank piece on each side was the paper that lay between. Many people who have not seen this done might think it impossible; yet it is not only possible, but extremely easy, as we shall show.

Get a piece of plate glass and place it on a sheet of paper; then let the latter be thoroughly soaked. With care and a little dexterity, the sheet can be split by the top surface being removed. But the best plan is to paste a piece of cloth or strong paper to each side of the paper to be split. When dry, violently, and without hesitation, pull the two pieces asunder, when part of the sheet will be found to have adhered to one and part to the other. Soften the paste in water, and the pieces can be easily removed from the cloth.

The process is generally demonstrated as a matter of curiosity, yet it can be utilized in various ways. If we want to paste in a scrapbook a newspaper article printed on both sides of the paper, and possess only one copy, it is very convenient to know how to detach the one side from the other. The paper, when split, as may be imagined, is more transparent than it was before being subjected to the operation, and the printing ink is somewhat duller; otherwise, the two pieces present the appearance of the original, if again brought together. Some time ago the information of how to do this splitting was advertised to be sold for a considerable sum. We now impart it to all our readers gratuitously.—*B. and O. Printer and Stationer.*

Percussion-Locks.—The percussion-lock, it appears, was invented by an English clergyman, Rev. Mr. Forsyth, in the year 1807. In the year 1500 all fire-arms were fired by a lighted match carried in the hand. About 1510 the match-box was introduced, which was so far an improvement that the lighted match was attached to the gun. But a shower of rain was still an effectual damper of the hottest fight. Soon after, the wheel-lock was invented, which produced ignition by the rapid revolution of a steel wheel against an inflammable substance. This lock was in use during the wars of the Commonwealth. The well-known flint-lock was introduced about the year 1692, and was in universal use down to the battle of Waterloo. The percussion-lock, for many years after its invention, was only employed in the slaughter of birds and beasts.

The Type-Writer, and its Uses.

—We frequently receive letters from friends and others, making inquiry in regard to the usefulness, economy, and the difficulties attending the use of the Type-Writer, and if it really is, in practice, what is claimed for it in circulars and advertisements? To all such inquiries, we say, squarely, we have tested it and like it, and have come to feel that we could not do without it.

Three inventions in the last forty years have done much more for literature than the world knows, or even dreams of. The first is the development of Phonographic Reporting, which gathers up, as they fall, the best sayings of the ablest men. The second is Telegraphy, which daily diffuses all that is worth repeating to the "uttermost parts of the earth;" and the third is the Type-Writer, which enables one to do the work of three, and relieves us from the wearisome and monotonous drudgery of using the pen. In bookkeeping the pen will continue to be used; but in editorial work, in making manuscripts for books, in the writing of sermons, in correspondence, negotiations, and registration of deeds, and especially in copying court proceedings, the type-writer is not only a great

in constant use. In preparing matter for publication in the JOURNAL, in writing books, in our business correspondence, and especially in all written descriptions of character, dicta-



THE TYPE-WRITER.

tions are made to shorthand writers, and they rapidly copy their notes in print on the typewriter, saving all the slow and weary drudgery of writing out everything with the pen.

This is a representation of the work done on the Type-Writer, and is like that which we use in our Phrenological Descriptions of Character. It has the merit of being easily read by persons not used to the pen-writing of strangers. Children whose delineations of character are thus produced are delighted with it.

FAC-SIMILE OF WORK BY TYPE-WRITER.

saving of time and expense, but a welcome release from that nerve-wearing and nerve-shattering labor of pen-writing.

We have had five years experience in the use of the type-writer, and now have two of them

The machine, No. 2, represented by the engraving, is 15 inches long, 15 inches wide, and 11 inches high, and weighs 23 pounds.

It is not difficult to learn to operate it. In a week a person will learn to write faster than

he can by hand; in a month, twice as fast; and in three months three times as fast, and there will not be half the weariness which attends pen-writing. Besides, it takes less than half as much paper, and this saves on voluminous matter one-half the postage.

A Correspondent of the *Rural New-Yorker* writes: "Tell your readers to put one pint of salt and one pint of soft soap (it ought to be farmer's soap) to ten gallons of water, and use it on currants and gooseberries. I'll warrant them a full crop. Put plenty of ashes—coal or wood—around the roots to increase the size of the berries."

A Glacier in Colorado.—A gentleman who has traversed the mountains in the vicinity of Leadville, and penetrated almost every one of their secret recesses, informed the *Leadville Herald* that there is within twenty-five miles of this city one of the most interesting curiosities of nature—a veritable glacier, presenting all the characteristics of the glaciers of Switzerland, both in magnitude and motion, its progress being gradually down the gulch. The scene of this curiosity is located in the Mosquito range, about fifteen miles north of the pass. The traveler states that he first discovered it about three years ago, when out on a prospecting tour. It was then nearly a mile in length, and at the bottom of the gulch presented a sheer precipice of ice not less than one hundred and fifty feet in height. Later in the season the place was visited again, when it was found that the great mass of ice had melted, until at its face it was not more than one hundred feet high, the loss from the surface reducing its length to about half a mile. Again, early in the following year, the place was visited, and the glacier was found to have regained its bulk, showing that the accumulation of ice and snow during the winter was about one-third its gross bulk.

The rocks on the sides of this immense mass of ice show the marks of attrition, proving beyond all controversy that the glacier is in motion. The earth at the foot of the glacier, heaved up in great masses, shows that it is gradually moving down the gulch into the valley. During the summer a large stream of water flows from the face of the ice cliff. The glacier, as it progresses out of the deep gorge in which it was formed, may slowly melt away, so that it will not last for many years. It is out of the way of ordinary travel, and the route to the scene is exceedingly difficult.

Close Planting of Fruit Trees.—We are satisfied that trees are a protection to each other, hence we practice planting out our apple trees two rods apart, and peaches half-way between, each way. The apples are a great protection to the peaches, especially from severe winds when fruit is ripening, and from cold, piercing blasts of winter. One of the finest young apple orchards we ever saw was in Northern Indiana—the trees being only one rod apart, and just coming into bearing. They had been kept headed in well,

but were getting so large when we saw them as to grow their limbs together. We asked the grower what his object was in planting so closely, and he said that it was to break the piercing winds and give protection to each other while young. He expected soon to thin them out, so as to leave the trees two rods apart. They had already yielded enough fruit to many times over-pay for cost of trees and work, and besides, he would get a nice lot of fire-wood. We shall certainly set peach trees hereafter close together, at least not more than fifteen feet apart, and keep them well headed back, and as trees get old, have other orchards thickly planted coming on to take their place, for it is the young peach orchards that yield the finest fruit.—*Purdy's Fruit Recorder.*

The Antiquity of Glass.—The oldest specimen of pure glass bearing anything like a date, is a little molded lion's head, bearing the name of an Egyptian king of the eleventh dynasty, in the Slade collection at the British Museum. That is to say, at a period which may be moderately placed as more than 2,000 years B.C., glass was not only made, but made with a skill which shows that the art was nothing new. The invention of glazing pottery with a film or varnish of glass is so old, that among the fragments which bear inscriptions of the early Egyptian monarchs, are beads possibly of the first dynasty. Of later glass, there are numerous examples, such as the bead found at Thebes, which has the name of Queen Hatasoo or Hashep, of the eighteenth dynasty. Of the same period are vases and goblets and many fragments. It can not be doubted that the story prepared by Pliny, which assigns the credit of the invention to the Phœnicians, is so far true that these adventurous merchants brought specimens to other countries from Egypt. Dr. Schliemann found disks of glass in the excavations at Mycenæ, though Homer does not mention it as a substance known to him. That the modern art of the glass-blower was known long before, is certain, from representations among the pictures on the walls of a tomb at Bent Hassan, of the twelfth Egyptian dynasty; but a much older picture, which probably represented the same manufacture, is among the half-obliterated scenes in a chamber of a tomb of Thy, at Shakkara, and dates from the time of the fifth dynasty, a time so remote that it is not possible, in spite of the assiduous researches of many Egyptologists, to give a date in years.

Fertility of the Earth.—Not only are most countries not adequately peopled, but none are thoroughly cultivated. England is said to have the best tilled soil in the world. There the average yield of wheat per acre is twenty-six bushels. In France and the United States, with just as good soil and climate, the yield is only thirteen bushels per acre. So it is a moderate statement to say the United States can easily double their production of wheat without using any more land, simply by more thorough cultivation.

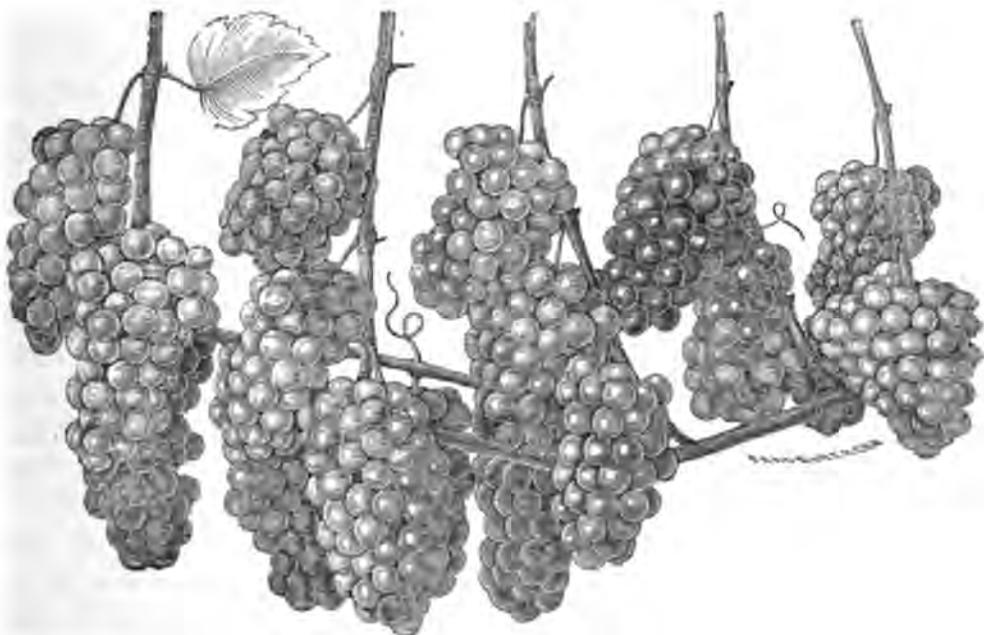
The great evil of American agriculture is "too large farms." Many a man could take half the land he now tries to cultivate, and by investing a little in brain culture, could produce just as much as he now does from the whole, and be a great deal better off. Of course there is plenty of room here, so that men can afford to have hundreds and thousands of acres, but the time will come when it can not be afforded; when as a nation we can not afford to let one man scratch about over several thousand acres, monopolizing the soil while others are without means of support; when the public welfare will demand that the soil be made to produce all it can, and it will seem to be best for a man to possess only so much as he can properly use.

Scientific farming—that is, the adaptation of the crop to the soil—will greatly increase

years' selection, 1,190. After four years' selection, 2,145. Thus making the power of production fifty times as great by this means.

REV. L. H. SQUIRES.

The Prentiss Grape.—The accompanying illustration shows with considerable accuracy the appearance of a branch containing several clusters of the new white grape produced by J. W. Prentiss, of Pultney, N. Y. It is a seedling of the Isabella, and described thus: The bunch is large, not often shouldered, and compact; the berry medium to large, of a yellowish green, and sometimes with a rosy tint on the side next to the sun. The skin is thick, but very firm; flesh tender, sweet, melting, juicy, with a very pleasant and musky aroma; free from foxiness. There is little if any pulp; the seeds are few and small,



THE PRENTISS GRAPE, FROM A BRANCH EXHIBITED IN 1879.

production. Astonishing results have been obtained. Liebig, the great chemist, made some experiments with the following results: A plot of ground yielded fifteen pounds of grain. With right fertilizers it yielded thirty-six pounds. A field yielded seventeen tons of turnips. With guano it gave thirty-one tons. He said that in one district in Germany, by the use of phosphate of lime, the provender for cattle was increased as much as if the area of land had been doubled.

Selection of seed is a matter of importance. Hallett selected two ears of wheat, and by selecting from each year's harvest only the best seed for planting, in five years' time he doubled the length of the ears produced. The number of ears from a grain was increased from ten to fifty-two, and of the grains in an ear from 47 to 123. The average increase from a grain was about fifty-fold. His best grain produced the first year 688. After two

and very similar to the Rebecca in quality, but the vine is a more vigorous grower, and its foliage very distinct from the Rebecca, resembling rather the Diana or Isabella, and showing its native origin. The vine is a good grower, and very productive, inclined to overbear, and the clusters should be thinned unless pruned close; but the vine is hardy, and the buds uninjured with the thermometer 15° to 20° below zero. This grape is an excellent keeper, and was exhibited at the Western New York Agricultural Society, at Rochester, January 22d, 1879, in perfect condition. It ripens about the same time as the Concord. The fruit has sold in New York markets for the past five years, wholesale, in quantities of 500 to 1000 lbs., at 18 @ 25 cents per lb., when Concord was selling at 5 @ 6 cents, and Delawares at 8 @ 10 cents. Vines of this grape will be offered for sale this fall for delivery in the spring.



MRS. C. FOWLER WELLS, *Proprietor.*

H. S. DRAYTON, A.M., *Editor.* N. SIZER, *Associate.*

NEW YORK,
MAY, 1880.

CO-OPERATION.

THE article on the Co-operative Association at Guise, France, in this number, is a fine illustration of what may be secured to workingmen in their homes, through the intelligent combination of capital and labor. We are not "communistic" in opinion according to the generally received notion of the meaning of "communistic," but we are very earnestly in favor of *co-operation*. Men, rich and poor, set themselves apart, live in houses walled and fenced off from others, and thus in comparative isolation, fancy that they are "independent," and endeavor to draw from that assumption some crumbs of personal satisfaction. It is but a selfish feeling at the best, for "no man liveth to himself alone." To be sure, a rich man may provide his family with all the purchasable means of happiness. He may have his brown-stone mansion elegantly furnished from garret to cellar; there may be nurses for his children and waiting-maids for his wife. He may have carriages and liveried servants, and whatever else there is of com-

fort and luxury in the esteem of society he may be ready to provide, caring little for the expense. But consider the man himself. Is he happy in the possession of the large establishment he calls home? Do not the cares and anxiety with which its management burden him, deepen the lines upon his brow, and make his sleep less refreshing? Has he not the demeanor of one who is wearing out mind and body in the effort to keep up an appearance of having and enjoying all the "good things" of life? Speak to him of co-operation for social and family ends, and he listens to you as if you were the agent of a charity enterprise. He, forsooth, in anything co-operative would only be a "giver." What would there be for *him* to receive? Mutuality of interest; the sympathy of others; the moral support of numbers; the aid afforded by intelligence and friendship at a moment when hirelings and attendants only serve to confuse and embarrass; relief from cares and expenditures in many ways—all these he knows not of, and can not appreciate.

Why do so many entertain the error that co-operation applies only to the poor? Is it not clear that for a harmonious society there must be a general association of interest? To have co-operative unions of the poor only is to foment and perpetuate bitterness and enmity between two classes. We have evidences of this tendency in the Trades' Unions. Men can not divest themselves of their responsibility to others. Yet we have the spectacle of men who have grown rich in their dealings with their fellows, shutting themselves away from them, and disdaining friendly recognition. This is Christian conduct! No, it

is heathenish, for Christianity enjoins fellowship, sympathy, mutual helpfulness, and suggests no proviso concerning the modern exclusiveness created by wealth.

If poor workmen, as shown by the Guise experiment, can do so much for the comfort and happiness of their children, their wives, and themselves, by merely associating under a system which employs for all the economy and discretion which the wisest household might exercise, to say nothing of the power for saving in matters of necessity a large fund possesses, what might not be expected if the rich and learned unselfishly joined with the poor in a grand endeavor to promote the common welfare?

There are needs common to high and low; the needs of food, raiment, shelter, education. Health is as much the right of the poor man as of the rich, then both should have similar hygienic facilities. By co-operation all these needs may be secured, and that, too, in perfection. The workman of the Familistère at Guise, possesses apparatus and conveniences for the pleasure and training of his children, which cost him, individually, but a trifle. Yet, scarcely one rich man in a thousand could alone command them.

We believe in the family relation as a divinely appointed institution for man. And we believe also that settlements, villages, towns, etc., should be made up of families whose heads—fathers and mothers—are united for mutual helpfulness in the moral and intellectual life, as well as in matters of worldly interest. With such a condition society would be purified from most of the vice and immorality which now abound in it, and would be solidly prosperous and happy, having the first essential of true human happiness, physical and mental integrity.

PRACTICAL ENCOURAGEMENT.

COMMUNICATIONS to the editor which favor his work in general terms are acceptable enough, and supply a degree of encouragement. Such letters are frequent. But now and then one is received from an earnest and considerate subscriber, which bears in its lines a deal of strength and magnetism; we might say inspiration. In no department of life are so many hindrances and annoyances to be met with, as in that sphere of journalism which relates to the promulgation of reformatory truth. Those who conduct serial publications belonging to this class, are compelled to advocate radical principles, and the enunciation of these naturally comes into diametrical opposition to the conservatism and prejudices of the masses. We use "masses" in the large sense, including the educated and the well-to-do. The upper classes, indeed, give the reformer the most trouble, for the reason that it is among them that he finds the largest share of opposition. Take the average of society, people who are ranked under the general title of middle-class. New theories, especially those which have a practical turn, are more readily received by them. Unfortunately, this fact is well understood by the mountebank and quack, the charlatan and knave. It is, nevertheless, a happy fact, because new and important truths finding recognition from them in the beginning, are enabled gradually to work their way to the general acceptance of men, and the result is social advancement. Truths which relate to human nature, particularly, being accepted by the average mind, help to extend its powers. In fine, to raise its standard of capability. The grade of intelligence in European and Ameri-

can populations to-day is much higher than it was a hundred years ago, and mainly through the receptive facility of the middle-class mind. But it was our intention to introduce some paragraphs from a letter recently received—one that comes very close to our inner sympathies. Not that it shows high culture, great mental ability, but because it is a frank, clear expression of personal feeling and experience. The writer, a lady, residing in California, says:

"I have been a pioneer in my way nearly all my life, and it is not short, and I find it takes a good deal of argument to persuade some people to notice a thing which is most important for them to know; but when once they become interested, they wonder why these things have not been taught before.

"A poor, sick man called on me not long since, and asked me to tell him what ailed him. I said, You have not obeyed the injunction, 'Man, know thyself.' 'Well,' said he, 'who is at fault? My physicians have given me plenty of drugs, but not one ever asked me to know myself; now, please to tell me how shall I learn this great lesson?' I loaned him a PHRENOLOGICAL JOURNAL, and the book on the Temperaments.

"He read and returned them, asking where he could get them. I ordered the book for him, and he is a subscriber for the JOURNAL; telling me that he is sixty years of age, and that he is just beginning to learn.

"I can not describe, but you must know, from your own experience, the pleasure that only a solitary instance of this kind gives one; yet this is not a solitary instance. Still progress is slow when I count what little I have done to benefit the human family, and yet, very wonderful, when I look back upon the years that your works have been published, and the great amount of good they have done."

This letter, superficially viewed, may be thought unimportant; examined

closely, it is seen that it comes from a co-worker; one whose convictions are intensified by observation and labor. She is doing good from the love of helping others, and the effort she makes costs her comparatively little strength, for she does not find it necessary, like most people, to go out of her own channel of life, yet her work for humanity is none the less powerfully helpful.

NOTE.—A very interesting sketch of the career of M. Godin, the founder of the Guise Co-operative Association, has been contributed by Mrs. Augusta Bristol. Being received too late for this number of the PHRENOLOGICAL, it will appear in the next (June) number.

THE EDINBURGH PHRENOLOGICAL MUSEUM.

WE have received a letter from the English phrenologist and author, Mr. Nicholas Morgan, in which he takes occasion to point us to an error in the article on "Phrenology in Scotland," published in the November number of last year. Mr. Morgan writes: "In this (the said article) you unwittingly do Mr. Alexander Stewart, late Curator of the Phrenological Museum, injustice. In referring to the appointment of a new Curator you say, 'The very neat arrangement and classification of the materials which probably came into his hands a mere conglomeration, do him much credit.' Now, the assumption that the materials of the museum were in a state of great disorder and formed 'a mere conglomeration' is incorrect, and the supposition that they were, to which you have given publicity, does, as I have said, the late Curator injustice, which I think you will

be glad to have an opportunity to correct and render all the reparation in your power."

As our statement, which is said to be unjust to Mr. Stewart, was made in this department of the PHRENOLOGICAL, it is fitting that the *amende honorable*, so far as it can be made, should also have place here. We were led by statements which were made to us that previous to the removal of the Edinburgh collection to its present handsome quarters it had lain for years in a room of the medical department of the University of Edinburgh, where it was rarely visited and received little or no attention, especially from the general public; that the present Curator had shown much taste and scientific capability in arranging the specimens in the new hall, and was very highly commended by the trustees. In the complete absence of any information concerning the old Curator, and in view of the comparative obscurity in which the collection had been kept, our inference was that little pains had been taken to arrange it in a

systematic or scientific manner, and this was our meaning in the statement quoted by Mr. Morgan.

This inference was, it now appears, rather hastily drawn, and we are indebted to the author of "The Skull and the Brain" for its correction, and also for a paragraph in reference to the character of the old Curator, viz: "Mr. Stewart was appointed Curator by the late Mr. George Combe and his fellow-trustees, and held the office for twenty-five years, and performed the duties in a very efficient manner. Mr. Combe, on several occasions, complimented him for the excellent way in which he had attended to the museum, and the assiduous attention he had given to the keeping of the materials in good order. In fact, Mr. Combe told Mr. Stewart that 'he was by far the best Curator the trustees had ever had.' As a further proof, if one more is required, that Mr. Stewart satisfied the trustees, I may inform you that when he retired he was awarded a pretty good annuity by the trustees."



"He that questioneth much shall learn much"—*Bacon*.

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. But one question at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of an early consideration.

IF AN INQUIRY FAIL TO RECEIVE ATTENTION within two months, the correspondent should repeat it; if not then published, the inquirer may conclude that an answer is withheld, for good reasons, by the editor.

WE CAN NOT UNDERTAKE TO RETURN UNAVAILABLE contributions unless the necessary postage is provided by the writers. IN ALL CASES, persons who communicate with us through the post-office should, if they expect a reply, inclose the return postage, or what is better, a prepaid envelope, with their full address. Anonymous letters will not be considered.

QUESTIONS OF A PERSONAL CHARACTER.—E. E. S. and many others.—We must re-

pent what is said at the head of this department: That questions of a personal nature will be answered by letter, if the inquirer incloses the necessary stamp to prepay postage. There are many, doubtless, who have communicated with this office concerning diseases with which they are afflicted, and matters of personal business or domestic concern, who have been waiting in vain for replies, simply because they omitted to send with their letters the requisite postage-stamps for the desired answer. We are willing to give our time and thought to the preparation of a brief letter in each case, and to throw in paper and envelope, but the stamp, good friends, must be provided.

MIND AND SPIRIT.—*Question*: Is the mind of man and the spirit of man the same? If the same, is it immortal?

Answer: We are inclined to think, with many ancient and modern writers, that a difference exists between the mind and the spirit; that it is the latter which lies behind the forces of the brain, giving them the manifestation known as mind. The question of immortality you must settle for yourself, with the best light which you can procure from religious and metaphysical sources.

SNEEZING—W. E. N.—Sneezing is occasioned by a clogging up of the capillaries in the nasal membrane, and a partial obstruction of the nasal passages; in which case a sense of irritation is produced which results in sneezing. This is a sort of crisis which tends to restore the function of the excretory vessels, by relieving them of the congestion.

FACIAL ANGLE.—H. S. J.—A hundred years or more ago, an ethnologist by the name of Camper introduced a method by which he claimed to determine the intellectual grade of a race. It was by measuring the angle which a line drawn from the anterior edge of the upper jaw to the prominence of the forehead makes with a horizontal line drawn through the opening of the ear. For instance, it was found that such an angle in the "Caucasian" bordered on ninety degrees, while in the "African" it ran back seventy. This idea was proven to be faulty in many cases; as it did not make allowance for the possible development of the brain in connection with a projecting jaw. It has been found, however, within a few years past that vertebrate animals conform to a law of graduation which may be briefly stated thus: That according to the degree of intelligence is the relation of the spine to the plane of the face. For instance, in the serpent, scarcely any angle is discernible, for the line of the spine is about parallel with the plane of the face. Ascending in the scale of development, the plane of the face becomes inclined to the plane of the spine, and the angle grows larger and larger until we reach the horse and elephant, when it is at right angles. When man is reached, a sweep of 180 degrees appears to have been made; for the face, which in the serpent is in correspondence with the outer side of the spinal column in man, is reversed, and parallel with the interior side of the spine. You will find this matter fully discussed in the PHRENOLOGICAL JOURNAL for July, 1874.

VISITING-CARD MESSAGES.—*Question*: Will the editor please to give several friends a table of the messages which visiting cards are made to convey by simply turning down corners.

Answer: This comparatively new wrinkle in fashionable society is briefly unfolded thus:

Turning over the upper right corner of a card, implies a visit; turning the lower right corner,

Adieu; turning the upper left corner, Congratulation; turning the lower left corner, Condolence; turning the entire left end, Call on the family. The letters P. P. C., on card, signify "Pay parting call;" and the old R. S. V. P. is Please answer.

BIBLICAL QUOTATIONS.—*Question*: Where can I find the passage of Scripture which runs, "The time shall come when there shall be no more an infant of days," etc.?—It probably is not convenient for you to refer to a concordance, otherwise you would have found that the passage referred to occurs in the 65th chapter of Isaiah, at the 20th verse: "There shall be no more thence an infant of days, nor an old man that hath not filled his days, for the child shall die an hundred years old."

HUMAN NATURE.—*Question*: Can the faculty of human nature be excessively developed in a person so as to need restraining?

Answer: This faculty in itself can not be deemed harmful to the mind, although when very strong and without the balancing influence, or compensation of other faculties (for instance, where it is strong and the intellect is weak, and there is a small degree of Caution and Conscientiousness), its impressions might lead to conduct on the part of its owner which would embarrass him. Such a man would be likely to act in accordance with his first judgment, and though that judgment would generally be correct, the results in many cases would be unhappy, especially where his impressions related to people with whom he came in contact, whose character was not correct and honorable. Where Conscientiousness is strong and active, it tends to render one severe in judgment, censorious, especially if Benevolence and other moral organs are moderate in activity. In such a combination it is well to bring into exercise the intellect and consider the practical side of conduct.

SOCIAL IMPRESSIONS.—*Question*: How is it to be accounted for that among different persons whom we meet, there are some to whom we become strongly attached; others, the very sight of whom is loathsome, and the more we see of them, the more repulsive they are?

Answer: The human organization is in some respects a magnet, with its qualities of attraction and repulsion, one of these qualities being in predominance. You know that like poles repel, and unlike poles attract; so when a person having the positive quality of organization meets a person having an excess of the negative quality, there is a mutual attraction or a complementing of interest. This is, however, but a fanciful way of accounting for the phenomena which nearly everybody recognizes who has much to do with the world. Organization is at the bottom of the matter. People who are strongly marked in

character, who have what are called strong feelings, are those who are most affected by impressions. One having large Adhesiveness is usually favorably impressed by strangers having a similar endowment. The principle of like affiliating with like, applies here, and it has thus a scientific basis. People with large Benevolence take kindly to those who have large Benevolence. In general those having large moral faculties impress others favorably; while those endowed in a contrary way produce a coldness wherever they move, repelling the genial and generous. We instinctively appreciate a warm-hearted, cheery man or woman, while the cold, negative, and austere do not commend themselves to our friendship.

SPIRITUALISM.—D. J. E.—Your recent letter censures us in rather strong terms for editorial conduct, of which we do not feel at all guilty. We are not aware that we have given in any place good warrant for your inference.

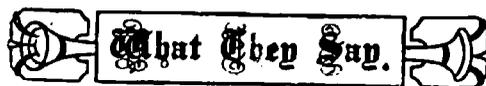
LADY JUSTICE.—E. F.—The office of a Judge requires that one should possess the full rights and privileges of a citizen. In those regions where women are permitted to vote, like Wyoming, for instance, all civil offices are open to them; but in the Eastern States, where the old customs prevail, it would be quite impossible for a woman to secure such a place. It was only after much struggling that the right of pleading before the courts was obtained by women; but it does not follow by any means because a lady has secured the privilege of acting the part of an advocate, that she shall be permitted to exercise the functions of the judiciary. The office of Judge, especially the lower grades, of which that of justice of the peace is one, is elective in most States.

VIRGINIA.—J. W. L.—Virginia is one of the Southern States which offers great advantages in the way of soil and climate. The region traversed by the Shenandoah is deemed by some to be the most desirable section of the State, but as Virginia covers a large area, there are regions in all parts of it which are very attractive. Perhaps some of our readers could give more particular information.

PAIN IN THE LEFT LUNG.—W. C.—The trouble you speak of may be due to indigestion. One of the unpleasant accompaniments of this very common malady is flatulence, or the production of gas in the stomach and intestines, because the food is not half digested and ferments; this gas finds its way upward into the thoracic region and occasions more or less pain. Many people suffer from flatulence in this way and think they have diseased lungs or heart trouble. In your case a personal examination

would be necessary to determine the actual state of affairs. We would advise you to submit your case to a good physician.

Several ANSWERS must be deferred to the next number.



Communications are invited on any topic of interest; the writer's personal views, and facts from his experience bearing on our subjects, being preferred.

HUMAN LIFE.—As numerous as are the individuals of the human race, are the ideas as to what constitutes a true human life. Surely no other subject is worthy so deep consideration as this problem of human life—what it was, what it is, and what it will be. Is it something of so little importance that it can be wasted with impunity? or is it something so vast, and grand, and beautiful, that it should be our highest pleasure to perfect?

With heart and soul we answer, No, to the first question and Yes to the last. Our minds need to be *larger* to comprehend all that is contained in these two words. But we know that there are noble, pure, aspiring lives; that there are low, gross, animal lives; and that there are *wrecked* lives.

Surely God, the All-Father, did not design that the beautiful human life which He created should ever be base and degraded—should ever be *wrecked*!

Nay; but somehow in this strange world of ours many of us have lost sight of the true object of living—lost sight, also, of the fact that his life is but one stage of the immortal soul's progressive existence—and we are living our lives *wrong*.

We live wrong physically. All the universe is governed by laws framed by the Divine Mind; nor is man exempt. Mind, the spirit, *the man* in this stage of its existence, occupies, in order to carry out the purposes of its creation, a physical body, and is as surely subject to law as the worlds which revolve through illimitable space in their appointed orbits.

We can scarcely imagine the confusion that would result should the earth forget its law of motion; yet almost every day we violate the laws which govern our physical being! What wonder, then, that "ill-health is the rule, rather than the exception?" or that mind, partaking of the abnormal condition of its dwelling-place, should be diseased also?

Is not this living our lives wrong?

The laws of mind apply not only to it as a whole; but, as the laws of a State apply to

each citizen, so the laws of mind apply to each of its several faculties; yet how often we disregard these laws of mind, and allow some one or more of the lower range of faculties to assume control of all the others! Can we wonder that unhappiness is the result? Is not *this* living our lives wrong?

What we need, then, in order to live our lives right, is a true philosophy of living—a philosophy based upon a knowledge of mind and the laws that govern it.

And it is by no means impossible for us to earn this philosophy that shall guide our lives aright to the goal of human hopes—Happiness. Mind is everywhere, and God has endowed us with faculties whereby we can learn of it, in the present life at least.

Then let us investigate this subject; let us walk no more in darkness, but in the light of mental science.

Thus may the good that is, more or less, in every human life grow and expand, until mind is free, unhampered, pure—the reflection of its God.

JAMES FERRIGO.

"DIET FOR LEANNESS AND FATNESS."

—Some thoughts on the above subject which was discussed in answer to "S. A. S.," in the January number, may convey a little instruction to the readers of the JOURNAL. In animal life there is a constant building up, to supply the continuous break-down of tissue. The use of this break-down has not been taken into account, as performing any important part in the functions of life-action. The general impression is, that the break-down of tissue is to furnish a place for the build-up process, but this is a mistaken idea. In animal life we see that there is matter for the tissues of the body, and energy or force that gives consciousness, susceptibility, and power to think and act. This energy, then, is of primary importance; from whence is it derived?

If we would have heat, which is a force, we have but to disintegrate organized matter, as the consuming of wood or coal, and we have it. The faster it is destroyed by oxygen uniting with it, the greater the amount of apparent heat. In the growth of all organized matter, as wood, we have an expenditure of heat or force. The involution and evolution balance each other. This is the universal law of matter and force.

The matter of our tissues has a mechanical use, it being the medium through which the vital forces act, to perform all the acts of active life. This is obvious to every one, but from whence do we derive this force that dictates, rules, and governs all these actions?

It is in the break-down of tissue. As wood is consumed to produce heat, so are the tissues consumed to produce animal heat, and also the

vital force. Now if the expenditure of energy is greater than the normal build-up will supply, then the break-down action must be still more active, in order that the supply may be as near the amount demanded as possible, and leanness of person is the result.

Nervous persons are proverbially lean in flesh, while fleshy persons are almost always the reverse. If a person desires to be fleshy, he should not only use proper food to furnish matter for the build-up of tissue, but he should *conserve* his vital force, and thereby *diminish* the break-down activity. Nervousness and fretfulness expend abnormally vital force, thereby depleting the tissues, in imitation of the spendthrift, who is not only out of funds, but mortgages his estate to procure more. Conserve the natural forces by living a cheerful, happy life, and thereby restore the balance in the build-up and take-down; then you will be as fleshy as your temperament will allow.

J. F. SANBORN, M.D.

Tabor, Iowa.

TO HYGIENISTS.—We have received the following appeal from a source which is trustworthy, and as it concerns a matter in which all have a deep interest, the dissemination of hygienic information among the people and the promotion of medical reform, we willingly give it space:

With the death of Dr. Trall the Hygelo-Therapeutic College ceased its operations, but its cause and the truths it taught are still dear in the hearts of many who were so favored as to attend its invaluable lectures. We are growing old and gray and others are rising to fill our places. Our alma mater is no more. Where shall those young students be educated, that they may promulgate the true principles of healing? To this end, let a correspondence be begun by those who hold those truths dear to their hearts, and let us see if ways and means can not be devised and the best talent brought to bear, Phoenix-like, to organize a new college that shall carry on this great work. Let every friend of hygienic truth respond to this call, stating what aid they may be able to give, if it is only their sympathy and good wishes, that by comparing ideas this end may be attained.

Those that desire a reply will inclose a stamp to prepay the postage. Respectfully,

J. F. SANBORN, M.D., or

Mrs. M. E. Cox, M.D., Tabor, Iowa.

MORE ABOUT CHILL AND FEVER OBSERVATIONS.—Our Southern correspondent, whose views on chill and fever were criticised in the February number, returns thus manfully to the charge: "Chill and fever does not now assume the same phases it did thirty or forty years ago, nor does it appear to follow bad air, or malaria, as he defines it, but, on the contrary,

there are places in high, dry, piny woods, where formerly chills were not known, but now are quite common. Again, we see the creoles, who formerly were exempt, now have the disease as others, and the full black as well. Yet, again, we see families of all kinds—Irish, negro, and English—living in the most malarial section and not having the chills. Eight years before the war not one case of chills was ever known in the old town of Fernandina; now it is very common all summer and winter.

"I think friend S. very much mistakes when he supposes that lean meat does not tend to produce sickness in warm climates. He will surely find, if he will but look closely, that all animal matter must change rapidly after death in warm countries, and to eat such food does predispose the eater to many kinds of disease to which grain and fruits would not. The amount of flesh food consumed in the South now is far greater than formerly, and this I think the main cause of the extensive spread of chill and fever.

"To define malaria without knowing what it is, and to call it bad when our Creator called all things good; and to try to apologize for eating animal food in warm climates, is but a faint attempt at wisdom. I am satisfied by ten years' observation, that had we eaten a plenty of fruits, and grains, and vegetables, and ignored the animal as food, we would find but few, if any, cases of chill and fever in the entire South. With other reasonable care, of course, such as pure water, an open, airy house, and cleanly habits, the entire point would be gained. The old idea that rice-lands were unhealthy to the white man and not to the negro, has proved untrue; on the other hand, it is found the white man can live there better than the negro.

"Let one fill the system with flesh meat and sleep in a confined atmosphere, where the effluvia of his body can not well escape, he will be apt to have a fever in a warm climate, or a headache in a cold one. To define things correctly, and to go no further than we have good proof, would no doubt advance the cause of truth.

"OLIVER TAYLOR."

TEMPERED TOGETHER.—It is beautifully astonishing to note carefully the contradictory features, the ultra extremes of the same mind, and how all is "tempered together in one personality. But personality which serves the purpose for mind that the bone-structure does for the animal system, is, at times, so "loose-jointed" that the same person acting in the opposite extremes of his nature at different times, acts as if he were two different individuals.

Thus we find a scold to be the kindest person in the world; a person of large Self-esteem the most condescending; a selfish person makes the largest gifts; and so on, as long as people remain natural. But a miser is a pervert. So is

the egotist, and so is the extreme scold. Each has gotten outside the limit of the natural. They have grown ratty. Their minds have ceased, to a greater or less extent, to rebound to the opposite extreme. The natural mind does not run in ruts. It plays between its extremes. The circulation thrown from the heart to the extremes, returns quickly to the heart again. So the mind, moved from a state of rest, returns to equilibrium, or, if the rebound is sufficient, to the opposite extreme. People have somehow gotten to be wiser than the Creator, and consider it weak to vacillate. True, changing the mind may be weakness, as any other natural fact may become perverted and be a weakness, but the power of the mind to change its course of action is salutary, and shows the wisdom of Him who planned the human mind.

It seems strange sometimes why there is not more insanity in the world, considering the violent action of minds in their extremes. But, doubtless, this law of balance, which provides for every extreme of mind its opposite extreme, is the greatest natural preventive of insanity. It is a universal law that extremes rebound to extremes, and that excitement at one extreme causes a rebound to the other. Yet the rebound is largely controllable by the will. But the will may keep the strain upon one point and hinder reaction, until the mind gives way and insanity is the result. So, also, when the mind goes out in any extreme beyond the power of the will to recall it, it is abnormal—insane. God has given each mind all the power it can stand. If a mind presumes against His wisdom and breaks its bounds, it assumes consequences, and suffers them.

ELIZA J. STEPHEN.

OPINIONS.

J. S. M. says in a postscript: "I was a subscriber for the PHRENOLOGICAL JOURNAL for 1879, and would rather lose my salary for one month than be deprived of the JOURNAL for 1880; in fact, the information received from single numbers of this valuable JOURNAL is worth more than two dollars to me.

"I would not take five dollars for the 'Temperaments' and be without it."

MR. J. W. R., of Hampton, Iowa, in his letter of renewal for 1880, says: "One year ago I commenced as a subscriber to your publication, and in that seemingly short year I have obtained more real intellectual and moral benefit than in any one of the previous nineteen years of my life."

RALPH ROGERS, of Tennessee, writes: "I appreciate the JOURNAL so very highly that the loss of one number is like the loss of one of the members of my family. Indeed, it is a dear member of my literary family."

THE REV. A. M., of Fulton County, Ill., writes: "I would not be without the knowledge gained through your publication for one hundred times what it costs me. It has saved me in a few years ten times what I have paid for it. I find Phrenology very useful in my profession as a minister, even with the little I know of it. It has long been a desire of mine to take a course in the Institute. I should like to prepare myself in Phrenology, Hygiene, etc. To preach the Gospel and heal the sick is a blessed privilege

CLARK BROWN, of New York, writes: "I hope some day to have a library of your works. Webster was once asked what was the greatest thought of his life. He answered, 'My responsibility!' Your works make me feel that I have a deep responsibility. I wish to meet it, so study Phrenology."

PERSONAL.

OLE BULL, the violinist, appears to be happily settled in his domestic relations. He lives in Cambridge, Mass.

MR. R. SEELEY, of Bethel, Conn., now seventy-two years old, is said to have been blind for fifty-eight years, and to own five houses, one store, a coal yard, eleven acres of land, and a livery stable, the results of the sale of candy which he began to make with one pint of molasses. We wonder how much toothache and stomach-ache among little people he is responsible for!

MR. E. C. BENEDICT, one of the Regents, and now Chancellor of the Board of Regents of the State of New York, is eighty years of age, but still in active service, only last summer going to London as a delegate to the International Law Conference, and to Basle, in Switzerland, to represent the United States Evangelical Alliance.

SAMUEL R. LOWERY, a colored man, president of an industrial academy at Huntsville, Alabama, was admitted to practice before the United States Supreme Court lately. The motion for his admission was made by Mrs. Belva A. Lockwood, of Washington, who was recently admitted to practice in the same court. Mr. Lowery is the fifth colored lawyer who has been admitted to practice in the Supreme Court.

WISDOM.

"Think truly, and thy thought
Shall be a fruitful seed."

RIDICULE dishonors more than dishonor.—*La Rochefoucauld.*

WHAT sculpture is to a block of marble, education is to a human soul.

WHAT we gain in experience is not worth what we lose in illusion.—*J. Petit-Sena.*

LET no man presume to give advice to others that has not first given good counsel to himself.

THE way for a man to secure himself from wickedness is to withdraw from the examples of it.

MANY persons miss their vocations in life because their bodies do not happen to fit their souls.

I ENVY no man who knows more than myself, but pity them that know less.—*Sir Thomas Brown.*

A FRIENDSHIP that makes the least noise is very often the most useful; for which reason we should prefer a prudent friend to a zealous one.

HAVE the courage to show your respect for honesty in whatever guise it appears, and your contempt for dishonesty and duplicity by whomsoever exhibited.

WE can not live on probabilities. The faith in which we can live bravely and die in peace must be a certainty, so far as it professes to be a faith at all, or it is nothing.—*Froude.*

LEISURE is time for doing something useful; this leisure the diligent man will obtain, but the lazy man never; so that, as Poor Richard says, a life of leisure and a life of laziness are two things.—*Franklin.*

YOU find yourself refreshed by the presence of cheerful people. Why not make earnest effort to confer that pleasure on others? You will find half the battle is gained if you never allow yourself to say anything gloomy.

MIRTH.

"A little nonsense now and then
Is relished by the wisest men."

A MAN can't help being born a Smith, but he can relieve the monotony of it by prefixing the names of Algernon St. Lawrence to it.

"HAVE you a mother-in-law?" asked a man of a desolate-looking person. "No," he replied; "but I have a father in jail."

"WHY," the boy asked, "do you blow down the muzzle of your gun?" "To see," replied the man, "if it is—" And just then he discovered that it was.

A CHILD who was watching a regiment march past, with a brass band at its head, said to his mother, "How pretty! But what are the men for who do not play the music?"

"WHO brayed there?" asked a member of the Canadian House of Commons of the persons who were trying by interruption to silence him. "It was an echo," retorted a voice.

"HOW does the new cow answer?" asked one man of another who had lately purchased a

cow. "I really can't say," he replied, "for I've never asked her any questions."

DR. JOHNSON, when asked to give his opinion on the production of a lady, who told him "that, when he had finished that, she had other irons in the fire," "Madam, put this with your other irons."

A SUFFERER called on a fashionable doctor for advice. "Try change of air," was the prescription. The sufferer was a special correspondent who had just completed professional journeys extending over seventeen thousand miles within eight months!

FELICIA was gliding down Tremont street, in Boston, the other afternoon, with a Derby hat on, and carrying her hands in the pockets of her long ulster, when a horrid boy ran up and said, "Say, miss, if yer had a cigar now, you'd be all right, wouldn't yer?"

"How far is it to Tub Creek?" asked a traveler of a Dutch woman. "Only shoost a little ways." "Is it four, six, eight, or ten miles?" impatiently asked the stranger. "Yes, I dinks it is," serenely replied the unmoved gatekeeper.

"I SUPPOSE," said a punning lady to a sailor whom she saw holding the rudder of a boat, as she was sauntering on the seashore, "I suppose that your favorite tree is the 'elm.'" "Yes, madam," he responded, "and I see that your favorite is the beach."

HE entered a car door. When the brakeman came inside and took a key out of his pocket, unlocked the stove, put in some wood, and locked the door again, he asked him what he locked the stove door for. The brakeman shut his left eye, and said he locked the door so the fire couldn't go out.

COUNTRY PRACTITIONER (surprised at the visit of a notorious quack and pill-vender).—"Well, what brings you here?" *Quack* (evidently suffering from disturbed peristaltic action).—"Well, sir, the fact is I feel rather queer, and—" *Country Practitioner*.—"Then why don't you take one of your 'pearls of health?' *Quack*.—"That's just it, sir! I think I've swallowed one—by mistake."—*Punch*.

A PASSER-BY puts his head in at the window of the shop where an honest cobbler is working, never thinking of evil, and says, cheerly:

"Well, my friend, how many thieves are there in this street without counting you?"

"What!" yells the cobbler, "without counting me?"

"Well, then," says his imperturbable questioner, "how many are there counting you?"



In this department we give short reviews of such New Books as publishers see fit to send us. In these reviews we seek to treat author and publisher satisfactorily and justly, and also to furnish our readers with such information as shall enable them to form an opinion of the desirability of any particular volume for personal use. It is our wish to notice the better class of books issuing from the press, and we invite publishers to favor us with their recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

HEALING BY LAYING ON OF HANDS. By James Mack. 16mo, pp. 384. Boston: Colby & Rich.

The history of a magnetic physician, which in its course contains a variety of incidental information concerning the nature of the treatment by magnetism; how it affects different persons and different diseases; who have shown great power of healing by the touch in past and present times, and the methods of different healers. Mr. Mack's career as a healer is mainly confined to England; and, as in the case of others, his testimonials show the possession of wonderful powers. The book, although exhibiting many of the characteristics of personal advertising, is much more interesting to the general reader than any other book of its class which we have read.

THE CURSE AND THE CUP. By Julia McNair Wright, author of "Firebrands." "Nothing to Drink," etc. 16mo, pp. 96. Cloth, price 40 cts.

A DAY WITH A DEMON. By Julia McNair Wright. 16mo, pp. 96. Cloth, price 40 cts.

These new stories on Temperance subjects have just been published by the National Temperance Society and Publication House, New York; they are well suited to juvenile readers.

AMID THE SHADOWS. By Mary F. Marten, author of "Rosa Leighton, or In His Strength." 16mo, pp. 412. Cloth, price \$1.25. New York: National Temperance Society and Publication House.

We read "Rosa Leighton" and liked it, deeming it an excellent book for its destined work—an aid in the cause of philanthropy and temperance. So we welcome this product of the same pen. It is founded upon fact, and "some of the incidents are a faithful record of what has actually occurred." The pictures which are presented to the reader, of how a mechanic's cheery home may be ruined by the fall of a drunken mother, through ill-advised prescriptions of alcoholic beverages while nursing her children, and also of the peril to young men which lurks in the homes of the wealthy, where wine is a common beverage, are very absorbing in interest and most impressive in character. The volume

embodies also a powerful plea for the early adoption of a religious life.

CAMP AND CABIN: Sketches of Life and Travel in the West. By Rosster W. Raymond, late United States Commissioner of Mining Statistics, etc. 18mo, pp. 243. Price \$1. New York: Fords, Howard & Hulbert.

A collection of sketches heretofore printed in different periodicals by the author, and descriptive of scenery and human character as observed and studied by him personally. The Far West engrosses the book, with the exception of "The Widow Baker," which is a New England story. The reader who has traveled in the mining districts of the Rocky Mountains, seen the wonderful valley of the Yellowstone, and coursed through the diversified country of Washington Territory, will enjoy the book, as it will bring freshly and sharply to mind the sturdy, grotesque people of the frontier town and mining camp, and the grand features of mountain, canyon, and river. In "Agamemnon" we find Mr. Raymond at his best, with a humor which is well-nigh as taking as *Lover's* in "Handy Andy."

PUBLICATIONS RECEIVED.

LE TECHNOLOGISTE. Archives of the Progress of French and Foreign Industry. Late numbers received.

THE SUNDAY LIBRARY. Volume one, number four, contains the life of Rev. T. DeWitt Talmage, D.D., with a history of the Brooklyn Tabernacle. Price, 15 cents.

MIND AND MATTER. A new candidate for the consideration of the reading public, devoted to the discussion of psychological and spiritualistic topics. Published in Philadelphia.

THE NORTH AMERICAN REVIEW. Late numbers are devoted mainly to the discussion of the questions of the hour, "The Third Term" and "Irish Land Difficulties" being among the more prominent.

TWENTY-FIRST ANNUAL REPORT of the Chicago Home for the Friendless for the year 1879. A good work this appears to be, and vigorously prosecuted. The building occupied is a very handsome one, at 11 Wabash Avenue.

TENTH CENSUS OF THE UNITED STATES. Return upon Fruit-Growing and Orchards, also Production and Distribution of Cereals of the United States. Mr. J. R. Dodge, special agent of the Census Office, issues the above for the purpose of securing statistics in those branches of agriculture which are mentioned.

REPORT OF THE SPECIAL COMMITTEE of the Chamber of Commerce of the City of New York on Railroad Transportation, as to the results of recent legislative investigation of railroad management in this city. We trust this effort to

render the methods of transportation consistent, uniform, and impartial will succeed.

NOTES ON THE PEDIGREE of Her Most Serene Highness Ann Groom, Duchess of Mantua and Montferrat, in Italy, Heiress to the Line of Palaeologi, or Last Emperors of Constantinople, Countess of Lennox, etc., etc., etc., and of her son, His Highness Charles Ottley Groom Napier, Prince of Mantua and Montferrat, etc., etc., etc. Compiled from public and private documents by the late John Riddle, Advocate of Edinburgh, assisted by others. London: published for private circulation. By which it appears that the duchess is descended from three hundred emperors, kings, and princes, and carries in her single person general relationship to the existing royal houses, etc.

APPLETON'S RAILWAY AND STEAM NAVIGATION GUIDE.—Current numbers of this excellent handbook for the traveler have been received. Besides the time tables there are usually several pages filled with information of value to all sorts of people. Mr. Thomas' long experience in conducting this guide enables him to supply just such information as the traveling public requires.

WIDE AWAKE, the illustrated magazine for children published in Boston, is certainly well calculated to amuse its readers, and there is in every number something of an instructive sort. The illustrations are executed in the best style.

THE NATIONAL QUARTERLY REVIEW for January contains an unusually interesting list of topics, viz: "The Rise and Fall of the Bonapartes," "The Management of the Indians," "The English Classics," "The Hygiene of Water," "The Working Classes of Europe," "The Nebular Hypothesis," "Interstate Extradition," "The New Eastern Question," "A Southerner's Estimate of the Life and Character of Stephen A. Douglas," "Reviews," and "Criticisms." The articles are as a whole written with care and in a spirit of candor and present comprehensive views of the subjects considered.

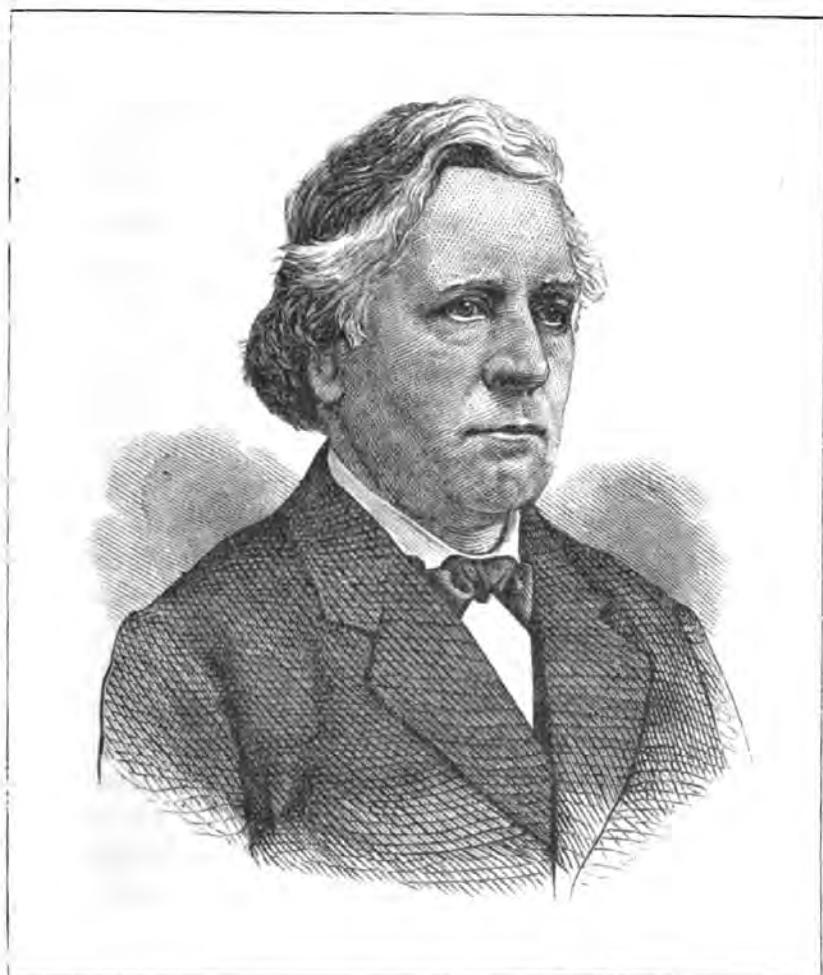
CIVILIZATION: is its Influence Natural or Supernatural? An Inquiry by a Wayfarer in search of the Truth. Printed for the author by Charles H. Marot, Publisher, of Philadelphia. A well-written pamphlet this, in which the author earnestly supports the side of religion as against evolution and liberalism. In one place he says: "Christianity is a substantial reality; evolution a thing of the imagination and a dream." He does not, however, take the extreme view of Darwinism as a system necessarily of infidelity and atheism. He regards true civilization as "impossible without the direction of that Infinite Intelligence which is expressed through Christ as the embodied Creator."

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[WHOLE No. 499.



ROBERT COLLYER.

MR. COLLYER is a large, strong, healthy man; his face will impress the reader with the idea of constitutional vigor, as well as determination and resolution. He is large in body, broad and deep in chest, hearty, zealous, earnest, and strong. He often speaks publicly, and with apparent pride, of having been trained to blacksmithing. He has the bodily strength and courage which served

to make him a success in that direction, and bringing such constitutional vigor to the pulpit, and with it that strong common-sense which belongs to his nature, and a kind of blunt courage that enables him to say what he thinks proper to say before a congregation, he strikes right home at the truth as he understands it.

The writer has seen him but once, ten years ago, in his pulpit in Chicago. The opening prayer was most remarkable. Every sentence seemed an honest outburst of human want and hearty confidence in the Father, and he talked to God as if he were well acquainted with Him, not as if he were standing at a great distance and using "regulation" language, but as friend to friend. As near as we can remember, the prayer closed in this way: "And finally, our Father, when we are done with the struggles and labors, the hopes and fears of this life, take us to Thyself, and make the best of us."

Mr. Collyer has an intellect remarkable for its power of being direct. His large percepts give him a quick sense of things and qualities. His memory enables him to hold the knowledge he has acquired, and to have a perfect command of his experiences; whatever has happened to him, or occurred within his range of knowledge, is available at all times; hence he can enrich his discourse with those autobiographical statements which give vividness to truth.

His Comparison is remarkably strong; being larger than Causality, it gives prominence to the center of the forehead, and a peculiar appositeness to his illustrations. Though he can not be called a flowery man, there is such fertility in statement and wealth of illustration that the hearer is kept interested.

His judgment of character is rarely

equaled; he understands men in the abstract, and when he meets a stranger, he seems to look him through, knows how good or bad he is, how much can be made of him—whether he is proper material for improvement.

He is sometimes led by his generous impulses to do more for persons than they deserve, and thus becomes their burden-bearer. It is sometimes said of a person, he is too honest, too confiding, too tender-hearted, people abuse his confidence—this may to some extent be applied to him. He does not look for evil in men; he looks for the good; hence he sometimes disregards his clear impressions of their true character.

His Language is uncommonly large; he has a singular power in the use of words, and his thoughts being specially clear, and his purposes direct, he has nothing to conceal, and therefore he selects plain words of Saxon origin, in which to clothe his thoughts. We have counted as many as eighty words of one syllable in a hundred words in his writing. He rarely uses "words of learned length and thundering sound;" never hides dullness behind long words, but lets the light come streaming through in small, short, curt words. His style as a speaker impresses the listener with the idea that he wants to say all that is true of a subject, and to say it in as few words as is possible, words as direct and open and clear as Language permits.

His Benevolence is evidently strong; from the root of the nose upward the head is high; the organ of Benevolence being located just under the hair in the front part of the top-head, shows ample development, and accounts for his genial sympathy, and that broad philanthropy which characterizes all his work.

He is not an imitator; copies no man. He tries to act up to his convictions, and to use the right word in the right place, without "softening the truth or smoothing his tongue," or trying to glide into the habits and usages of other people, except when the line of truth, as he understands it, lies in that direction.

His head is broad from side to side, showing manly courage, force of character, power to grapple with difficulty, and make his mark wherever he moves.

He is strong in his opposition, but seeks to avoid contention, and frequently carries himself in such a way as to win opponents over to his side without an argument, and without any manifestation of opposition on his part. The impression which he makes upon an opponent is, that there is really not so much difference between himself and Mr. Collyer as he had supposed, and that though they may not harmonize in theory, they will seem to agree very well in practical matters, and the man will separate from him with a feeling that he likes Robert Collyer anyway, and wishes he belonged to his party. He has a great, generous, good-natured way of trying to find out which way the grain runs in men's constitutions, and he will at least make a man like him, if he does not like his doctrine.

He has strong Friendship, and is able to awaken friendship in others; people may admire his talents, and his way of treating subjects; but beyond and superior to all this, people have a personal regard for the man: they believe him honest, sincere, a true friend, as open as midday; if they don't like what he teaches, they have this consolation, that there is nothing concealed, that the strongest points are stated.

He is fond of children, and young peo-

ple are his partisans; common people are not afraid of him, especially children, and while men regard him as a stronghold, and a great helper in emergencies, the weak and the young, and the timid and the diffident somehow feel that there is no occasion to be afraid of him; they come to him as to a friend and ask his advice, and lean against him, and he bears their responsibilities and their troubles bravely.

He takes his intellect from his mother, also his sympathies and affections; and the stalwart strength, the determination, the pride, and the force belonging to him, is from his father. He is intuitive in his intellect, catches his best view of truth instantly, and is able to present it without hesitation or delay. He would be a royal witness on the stand, would remember the facts, and would dare to state them, and would do it with such clarity and directness as to convince everybody of his sincerity and his truthfulness.

He has a strong degree of Hope and reverence, anticipates much, trusts much. His Faith is not very strongly marked; hence he seeks to seize upon the great cardinal truths, and does not mince and nibble with the vague and uncertain side of subjects. He does not hunt for mystery, but hunts for open truth.

He has mechanical judgment, a fair degree of financial capacity, and a tendency to take hold of life earnestly, directly, sincerely, heartily, and bravely. s.

This eminent representative of the Unitarian pulpit is well known as the "blacksmith preacher," having when a young man spent twelve years at the forge and anvil. It is said that a gentleman once stopped his horse near a smithy in a Yorkshire village. On entering it,

he hardly arrested the attention of a boy who seemed to be absorbed in the work of blowing the bellows. Closer observation revealed the presence of a book, placed on a shelf near the lad's head—with its pages kept open by two bits of iron. Each time he brought down the bellows or released it, he appeared to catch a sentence from the book.

That boy was Robert Collyer, who was born December 8, 1823, at Keighley, a village in Yorkshire, England. His father was an uneducated blacksmith, though regarded one of the best workmen at the forge in Yorkshire. In 1844, while working at his trade, without warning, he fell dead.

Robert was sent to school quite early in his childhood and remained four years, and this was all the schooling he ever had. He quickly learned to read, and soon became thoroughly conversant with the few books owned by his parents, viz: the Bible, "The Young Man's Companion," "Pilgrim's Progress," and "Robinson Crusoe." His father was then living at Fewstone Parish, where the children of the poor worked in the linen factories, and from eight or nine to fourteen Robert's life was spent in this way.

Then he left the linen factory and was apprenticed to a blacksmith of Ilkley; and to the twelve years spent at the Ilkley forge, he doubtless owes a strength of lungs and a robust frame, exceedingly rare in the clerical profession. In a recent address he alluded to his health as "brutal." While at Ilkley all the money he could save was invested in books, which he kept on a shelf in the smithy; and as he blew the bellows he kept an open volume before him, and snatched now and then a sentence, as has been described. He made many a good horse-shoe, a feat of which he is still proud, and during that apprenticeship his future was decided.

In 1847, influenced by the Rev. H. H. Bland, now of Montreal, Canada, who at that time made a deep impression on the Yorkshire men, Mr. Collyer was converted to Methodism, and in the following year,

while still wielding the hammer at Ilkley on week days, he attended the neighboring Methodist chapels on Sundays. His first experience in preaching was gained in this manner, at the same time he continued his studies assiduously, and gradually prepared himself for his life-work as a minister.

In 1850 he concluded to emigrate to America, and it was on the 11th of May that he landed in this country accompanied by his wife, and a week later went to work at his trade in Shoemakertown, Pa. Having brought letters from England introducing him to the Philadelphia Conference, he was granted a license as a local preacher. At Shoemakertown, as at Ilkley, he pursued his trade as a smith on work-days, and on Sundays exhorted in the little chapels wherever he could find an audience.

It was customary then for local preachers to support themselves mainly, and for the ten years he thus labored, what salary he received from the Conference amounted, as he has himself said, to "one almanac, various little household necessaries, and ten dollars in money."

During the latter part of his blacksmith life he became acquainted with Lucretia Mott and Dr. Furness, and found that certain views in theology which he had acquired were similar to theirs. Dr. Furness invited him to preach in his pulpit, and by doing so Mr. Collyer incurred the charge of heresy, which was made in January, 1859, against him, and the Conference refused to renew his license as a preacher. However, in February of the same year he was commended by Dr. Furness to the First Unitarian Society of Chicago, which was without a minister. He went to Chicago and was invited to supply the pulpit the first Sunday after his arrival. The church was then disturbed by political differences, and some thirty or forty of the members withdrew, who invited Mr. Collyer to become their preacher. Thus the Second Unitarian Society of Chicago was formed, and grew so rapidly that a new edifice was built, which has been known widely as Unity

Church, the congregation becoming one of the largest and most flourishing in the North-west.

Mr. Collyer was regarded one of the features of the great Lake city, and inseparably identified with Unity Church. But after twenty years of hard work in connection with that society, he hesitatingly decided to accept the urgent invitation of the Church of the Messiah in New York city, and last summer he removed hither to enter upon the new connection. It will be remembered that the late Dr. Osgood, previous to his withdrawal from Unitarianism, graced the pulpit of this church with his eloquent and scholarly presence for many years.

While Mr. Collyer was settled in Chicago an interesting incident occurred :

One of his parishioners happened to visit Ilkley, the birth-place of his pastor. That little English village had grown to be a considerable town. Low, thatched houses had made way before fine mansions, and the smithy in which the boy scholar had worked and studied still ex-

isted, but the day of its disappearance was very near. The visitor inspected with some interest an old anvil standing in the shop.

"How long has that anvil been here?" he asked of the proprietor.

"Why," said the blacksmith, "it must have been here nigh thirty or forty year."

"Well," said the gentleman, "I will give you twice as much for it as will buy you a new one."

"Certainly" replied the puzzled smith, "but I would like to know what you want with this anvil."

"I will tell you. There was formerly an apprentice in this shop who used to work on it. That boy has now become a prominent man. Thousands love and honor him as a friend and a teacher, and I wish to carry this anvil with me to America, as a memorial of the humble beginning of his life."

The bargain was completed, and the anvil is now carefully preserved by the society of Unity Church.

SELF-CONCEIT AND SELF-ESTEEM.

NOTHING is more generally disliked, or more instinctively resented, than self-conceit in another. The self-conceited person is vain, and vanity always conveys the idea of aggressiveness in small things. Complacent with his own position, proud of his own performances, and absorbed in his own plans, the self-conceited man often awakens the indignation, and sometimes excites the contempt, of those who are in his company. In his talk, himself plays the largest part. He can not help always putting himself to the front. If he have ever really accomplished anything meritorious, he tells it over and over, until its original lustre is lost. He frequently possesses excellent qualities, but the conspicuous flaw in his character neutralizes their goodness, and they are apt to be overlooked.

Strangely enough, self-conceit is much

more tolerable and much more easily pardoned in a man than in a woman. Whatever else she may possess, we demand of woman a certain coyness, a modest reserve, a dignified withdrawal of her claims; and, lacking these, her charms are little worth. The violet, the rose, the lily, the heliotrope, the mignonette, all beautiful, are all fragrant, and their perfume is as dearly loved as are their exquisite shapes and their dainty coloring. The dahlia and the sunflower have their admirers too; but they are few.

Self-esteem is very different from self-conceit. Esteem implies judgment, and presupposes belief in one's powers and abilities. The person destitute of self-esteem goes out to life's battles poorly equipped. There is a modest confidence in one's intentions, and in one's talents, without which it is well-nigh impossible

to attain success in any enterprise. The first should be repressed in children, and its earliest signs watched for and subdued, while the second should be cultivated and encouraged. How unhappy is the timorous, diffident, doubting soul, who is deficient in self-esteem, who underrates his advantages, fails to perceive his opportunities, and goes limping through the world as if he were apologizing to everybody he met for being in it at all.

Allied to self-esteem is self-respect. Thoreau said well, with that straightfor-

ward common-sense which distinguished him, that a man could afford to lose the respect of his comrades and kinsmen if he could but continue to respect himself. There is truth in this. What we are to our fellow-men, we are not always in God's sight; but there come to us all honest hours, hours of meditation, hours of keen insight, and stern examination, when only God is near. If, then, we can respect ourselves in moments of contrition and penitence—but of trust and hope—we are happy indeed.

GIFTS OF HEALING.

"Fetter strong madness with a silken thread,
Cure ache with air, and agony with words."

THE imposition of hands for the purpose of performing miraculous cures has been practiced from time immemorial, and faith in a psychical power possessed by certain privileged persons is old as the world. Chaldee and Brahmin, pagan and Christian, have alike believed in the virtue of a touch, and whether we go with the blind man to the healing hand of *Vespasian*, or press the hem of the *Christ-robe*, with the trembling daughter of *Judea*, we touch a vesture of historic fact infolding a body of divine truth eternal as the ages. Through confusion of creeds, the strife of tongues, the crush and crowd of earnest seekers after a supreme revelation, we are pressed against a succession of recurring facts which push us almost unconsciously toward their absolute and governing law. Beginning with the hieroglyphics of the far East we find the earliest records of this "miraculous gift" on monuments of pagan deities, where the god is often represented with outstretched hands (bending over the sleeping form of some sick suppliant), rays darting from each finger-end—evidently a rude representation of the "magnetic aura" or "od emanation" of the modern healer—while the soothing application of what are now called "passes" was certainly practiced at a very remote period. *Celsus*, a Roman

physician, states that the old Greek father of physic, *Asclepiades*, practiced light friction as a means of inducing sleep in insanity, and adds, "by too much friction there is danger of producing lethargy." *Hippocrates* used this method as a means of modifying the condition of diseased organs, and it is well known that *Phyerus*, king of *Epirus*, cured disordered spleens by touching the affected part with the big toe of his right foot, claiming for his reward the white cock sacrificed to *Æsculapius*. Later on *Apollonius* effected a considerable number of cures by means in which magnetism seems to have had a share, and *Vespasian* was equally induced to assume the part of a thaumaturgist. Of this emperor it is reported that he restored sight to a blind man by moistening his eyes with saliva, and to a lame man the use of his feet by treading hard upon them.

"It is not art which makes thee excel," said *Plato*, "but a divine power which moves thee, such as is in the stone which *Euripides* named the magnet, and some call the *Heraclian stone*, which attracts iron rings."

This idea seems to hold in itself a germ of the faith which has since struck such deep root in the palaces of modern kingdoms, a faith in the divine right of kings to cure all manner of diseases by a touch

of the royal person. From the high north, where King Olave, the saint, performed the ceremony of the imposition of hands, it was carried to England, France, and even the courts of Germany. In Hapsburg the goitre was so often removed by the touch of royal hands that the complaint came to be called the "king's evil." In France each monarch, on ascending the throne, received at the consecration the secret of the *modus operandi*, and the sacred formula, for here also the spoken word went hand in hand with the magic touch. Here, again, they essayed to "cure ache with air, and agony with words," uttering the ancient phrase, "*Le roi te touche, Dieu te guérisset.*"

Plutarch speaks of magnetic cures by touching with the feet, while Plautus exclaims, "What if I were to touch him at intervals so that he should fall asleep!" On the foundation stones of every religious faith are recorded the miracles of healing. The "gift" of the ancient Jew is the heritage of the modern Gentile, and the divine right of kings walks our democratic streets to-day in the person of the magnetic healer, who is consulted or derided according to the individual faith of our skeptical age. Most intelligent persons admit that these miracles, so called, are performed through the agency of magnetism; but they have little idea of the *modus operandi*, and can give no reason for the faith that is in them. Many who would apply electricity from a battery to a diseased organ, would laugh at the idea of submitting to the touch of the human hand; and any effect produced at a distance, by the simple action of a magnetic pass, would be considered a humbug of jugglery. Men of science have been slow to recognize the curative properties of the magnetic agent, although, from time immemorial, certain enigmatical phenomena have been observed, which were produced by the magnet on certain patients, and especially on somnambulists. In the last century, and probably earlier, it was discovered that similar effects could be obtained without the magnet, and with the hands alone.

It was not possible (says Von Reichenbach) in the state of knowledge hitherto attained, to discover any sure connection between the power of the magnet and the analogous one of the human hand or foot. The consequence was that all natural philosophers laid aside or neglected the subject, and did not admit it to a place among the physical sciences. For eleven hundred years the Chinese have believed in an inherent power possessed by every human being called *yu-yang*, which is identical with an universal *yu-yang*. According to this view each person endowed with the proper ability can diffuse a portion of it over others so as to heal their infirmities. This *yu-yang* is but another term for the "etherium" or "vital air" of the Greeks, to which the poet refers in the expression, "cure ache with air," while the same potent breath blows through the mists enshrouding our modern philosophy, powerful as of old, with the od-force of von Reichenbach, the magnetism of Mesmer, the physical electricity of Du Bois Reymond, until it reaches the laboratory of Prof. Faraday, who concludes that "electricity, galvanism, magnetism, etc., are but modifications, or the names for modifications, of but *one* principle in nature." Prof. Faraday having simplified the subject and brought us back to the universal "air" of the ancients, we are prepared to examine into the nature and action of the magnetic pass, and understand the natural law controlling this "gift of healing."

Let us admit there is a force powerful enough to kill a man, when sent in a stroke of lightning; that the same force may also cure a man if the shock be less severe. Can we deny that such cases are on record? They are as common as life and death. We accept them as decrees of Providence working in harmony with the laws of nature. We say, this man met his death at the hand of Heaven, or, our friend was cured by the finger of God, who sends forth His lightning to the ends of the earth; but when similar effects are produced by the

hand of a mesmerizer, we are slow to believe. It is miracle, or humbug. We watch the gardener promoting the growth of his flowers by mild shocks of electricity; we see the same flowers withered at a single stroke from a summer cloud; but we fail to see that parallel processes are continually going on in the little world within us, in that microcosm called man, and similar forces are working.

Among the first of our conservative electricians in this field was Galvani. He asserted that all animals were endowed with an inherent constitutional electricity secreted by the brain and distributed through the nervous system, the principal reservoirs being the muscles, and each muscular fiber a sort of leyden-jar. But Matteuci concludes the origin of the current to be in the muscle itself, a result of chemical action. According to Du Bois Reymond the nerves are possessed of an electro-motive force which acts in harmony with the law controlling the muscles; while still in connection with the muscles they simply play the part of an active conductor. After various experiments to determine the direction of the current, he concludes it to run from the *shoulder to the hand*.

Now that we have a powerful force at hand, and our subtle theories at our finger-ends, we are prepared to marshal our fugitive ideas and grapple with the subject.

Admitting that this force runs from the shoulder to the hand, we are beset by a host of questions: How can we prove that it escapes from the fingers, and what law controls its action at a distance? Why is the toe as effective as the hand? etc. In answer to the first query we must try a simple experiment. If we suspend a small slip of paper by a silken thread, and excite the resinous electricity in a piece of sealing-wax, and apply to the paper, it will be attracted. If we quietly approach the tips of our fingers toward it, the same effect will be produced; if we touch the paper it becomes charged, and if we shortly afterward point our hands toward it, it will turn

round as if repulsed. Here we have our force evidently escaping from the finger, and acting at a distance upon an opposite body; but to clearly understand the mode of escape and manner of action, we must apprehend what is termed, in electrical parlance, the "law of points." Observing the general dictum that "electricity is attracted to and flows from a point," we are prepared to hear Prof. Maxwell's elucidation of this law, which brings us to the point of our vague speculations and random remarks, and furnishes the pivot upon which the whole argument in favor of magnetic healing revolves.

"When a conductor having a sharp point is electrified, this point is surrounded by particles of air charged with electricity of the same kind with its own. The effect of this charged air round the point is to relieve the air at the point itself from part of the enormous electro-motive force which it would have experienced if the conductor alone had been electrified. In fact, the surface of the electrified body is no longer pointed, because the point is enveloped by a roundness of electrified air; the surface of which, rather than that of the solid conductor, may be regarded as the outer electrical surface. If this portion of air could be kept still, the electrified body would retain its charge, but the charged particles of air, being free to move under the action of electrical force, tend to move away from the electrified body because it is charged with the same kind of electricity. The charged particles of air, therefore, tend to move off in the direction of the lines of force, and to approach those surrounding bodies which are oppositely electrified."

Hence, we conclude, there is a force generated in the human system flowing from the fingers, toes, hair, lips, and all points of the body acting upon other bodies in obedience to the "law of points," producing sudden and powerful changes in the physical structure, and sometimes working wonderful cures, erroneously called miraculous.

JULIA M. HOLMES.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER III.—Continued.

FRONTAL BONE OF THE CARNIVORA.

WE shall find in the frontal bone of carnivorous animals a character of organization very different from that which we have met with in those animals just considered. At first sight this bone in the ape may appear to possess a close



Fig. 73.—FRONTAL BONE (CAT), EXTERIOR.

analogy to that of man; but it is far from showing in some points the same development as that of certain carnivora; the dog, for example, which appears to surpass most species of the ape very much in intelligence and sagacity.*

The frontal bone of the carnivora is constantly formed of two symmetrical pieces. Their juncture usually takes place early; but there exists, however, no mean time for this union; it varies according to the species. Both parts are precisely alike. Figs. 73 and 74 represent the right frontal bone of the cat, as seen on its external surface: we note, first, that there is the interior margin marked q, q, q, q, q; on the opposite side two osseous attachments, n, n, with a hollow between them. Second, the posterior margin o, o, o, o, o, beveling outwardly and articulating with the anterior margin of the parietal bone. The letters a, a, indicate the region of the

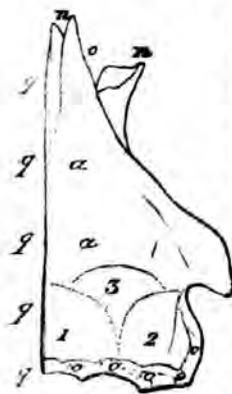


Fig. 74.—RIGHT FRONTAL BONE (CAT), OUTLINE.

* In this connection the orang-outang should be mentioned as an exception, certain acts of that animal being extremely remarkable.

frontal sinuses, which are generally well developed in the adult cat. One may have a tolerable idea of these sinuses from the examination of Fig. 41 (March No.), representing a vertical section of the fully-matured cat. It is owing to the enormous ridges exist in the lion, which occupy fully one-third of its frontal bone. In the wolf the frontal sinuses are immense. So also, in certain species of dogs, especially the mastiff, they are very much developed. Generally small species of dogs show little or nothing of these openings.



Fig. 75.—FRONTAL BONE (CAT), INNER SIDE.

Figs. 38 and 39 (March No.) represent the vertical section of the skulls of two dogs, one, Fig. 38, belonging to the mastiff species, of middle size; the other, Fig. 39, is the head of a lap-dog. The first has enormous sinuses, while in the other there exists no trace. One infers easily how impossible it would be to estimate by the exterior the development of all the cerebral parts in the first of these heads. In the martin, the pole-cat, the weasel see Figs. 42 and 43 (March No.), the frontal sinuses are small. One observes, however, in the first some openings communicating with the nasal fossæ. The numbers 1, 2, 3, Fig. 74, indi-

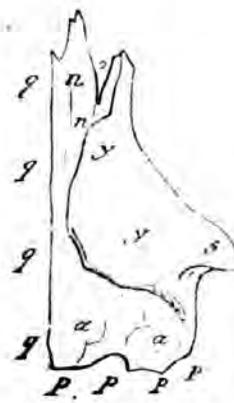


Fig. 76.—FRONTAL BONE (CAT), OUTLINE, INNER SIDE.

cate parts corresponding to the brain. The remarkable differences which these regions indicate in the carnivora and other animals show how much interest anatomy, when studied in this manner, has to offer.



Fig. 77.—FRONTAL BONE OF RABBIT. OUTER SIDE.

Seen on its lower surface, Figs. 75 and 76, the frontal bone of the cat presents the following points: First, the anterior margin which articulates with the opposite frontal, q, q, q, q. Second, a concave surface, y, y, corresponding to the eye-ball, and appendix 5, representing an external orbital apophysis, an angle or opening n, n, receiving the anterior and superior

part of the ethmoid. Third, a hollow, o, separating the two apophyses marked n, n. Fourth, a part of the cerebral surface of the frontal, a, a. The external surface of this bone in the cat is covered by its periosteum and some muscles. These, in their turn, are inclosed by the



Fig. 78.—FRONTAL BONE (RABBIT), OUTER SIDE. OUTLINE.

skin, to which they are adherent more or less loosely, by means of cellular tissue. The hair which covers the cutaneous portion of this region of the head varies greatly in texture and length, according to species.

FRONTAL BONE IN RODENTS.

The frontal bone of the rodent is double, and exhibits a very irregular shape. On the outer sides are seen a smooth surface of considerable extent and depth from front to rear (Figs. 77 and 78). That part which is indicated by 1 answers to the anterior region of the brain;

2 to the olfactory bulb; and 3 to the upper part of the ethmoidal cellules. The superior margin, o, o, o, o, o, articulates with its corresponding bone on the right side.

The anterior margin terminates on the right and left by two osseous processes, of which the external, 9, 9, 9, (Fig. 78), is the longer. It is upon this the bone proper of the nose lies, which is extremely developed in the rodent, particularly in the rabbit from which the illustration is taken. The exterior border contributes to the formation of the orbital arch, k, k, k, k.

The posterior border, d, d, d, which is of a notched pattern, articulates with the adjoining parietal, and with a small part of the temporal, at x. Observed by its inner side the frontal bone (Figs. 79 and 80) exhibits, first, a smooth surface, m, in contact with the brain, from which it is only separated by the dura-mater; second, a bony plate forming the interior and lower region of the orbit v, v, v, v, v; between this plate and the orbital apophysis a hollow, 8; before the bony plate a slightly uneven surface, e, e, e, e, e, in contact with the ethmoidal cellules, which is lined in the fresh state by the pituitary membrane.

No frontal sinuses are found in the rabbit, hare, squirrel, marmot, beaver—animals belonging to the family of rodents. They are, however, very considerable in the porcupine, which belongs to the same class. The class of animals which possess the largest frontal sinuses is that of the ruminants. The ele-



Fig. 79.—FRONTAL BONE (RABBIT). INNER SURFACE.



Fig. 80.—FRONTAL BONE (RABBIT). INNER SURFACE.

phant has them so greatly developed that there exists sometimes ten or eleven inches of space between the two bony tables.

FRONTAL BONE OF BIRDS.

The frontal bone in birds (Figs. 81 and 82) is likewise composed of two pieces, which unite very early. Its external surface is ordinarily smooth; but in some species,



Fig. 81. — FRONTAL BONE OF CROW. OUTER SIDE.

for instance the guinea-fowl, a kind of process is observed situated in the middle and anterior part of the skull, its base occupying nearly the half of that surface. In some species the external surface of the frontal is covered, at that part which forms the external obitar region, by a granular body having close relation to

the tissue proper of the glands. The surface of the bone adjacent to this body is ordinarily, therefore, more or less rough.

The external surface of the frontal bone is covered by a fine skin furnished with feathers. It adheres to the bone by cellular tissue more or less dense. Let us divide the external surface of this bone into four regions (Fig. 82), viz: an anterior of which the central part is marked



Fig. 82. — FRONTAL BONE OF CROW, OUTSIDE OUTLINE.

v, and three others placed behind that, 1, 2, 3. The first region has no connection with the cavity of the cranium.

Seen interiorly (Figs. 83 and 84) the frontal appears to be divided into two regions by an osseous plate forming part of the orbitar (Fig. 84) (Figs. 83 and 84) the frontal appears to be divided into two regions by an osseous plate forming part of the orbitar (Fig. 84) the frontal appears to be divided into two regions by an osseous plate forming part of the orbitar (Fig. 84)

The exterior part of this plate forms the anterior region of the orbit. The poste-

rior region, 1, 2, 3, corresponds to the encephalon. We remark some depressions in connection with the most developed parts of that organ. Like all the large bones of the cranium, the frontal in birds is composed of two plates more or less associated and provided with diploë. In some species this tissue is sufficiently developed to occasion a remarkable separation of the two plates.

For example see the skull of the owl. With the exception of a very small number of species, the whole family of birds offers the best of advantages for appreciating, by the exterior of the cranium, the development of the cerebral parts; the external plate being generally but very slightly separated from the internal.



Fig. 83. — FRONTAL BONE OF CROW. INNER SURFACE.

The frontal bone of birds articulates by its superior margin with its like, o, o, o, o, o (Fig. 84); by the posterior, p, p, p, p, with the parietal bone; by the external orbital angle, d, with the anterior angle of the tempo-

ral bone; and, finally, by its anterior margin with the inferior maxillary and the nasal x and f. It is worthy of remark here that the frontal or coronal which forms, in the human family and the ape, only one-quarter, or very nearly, of the

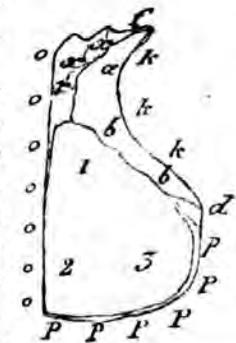


Fig. 84. — FRONTAL BONE OF CROW. INNER SURFACE. OUTLINE

extent of the cranial cavity, in the carnivora, and the rodent a quarter, or a fifth, and even a sixth part of this cavity, constitutes in birds, however, more than one-half of the bony envelope. Only after a long and profound study of forms can we have a perfect idea of the relations which exist between this bone and the functions of the organs which it covers.

OF THE PARIETAL BONE OF THE APE.

If there exists apparently a great analogy in form and structure between the parietal bone of man and that of

contact with its internal development; but after we have tried upon the parietal of the sajou the same divisions which we have marked upon that of man, we shall see that this bone has but little more ex-

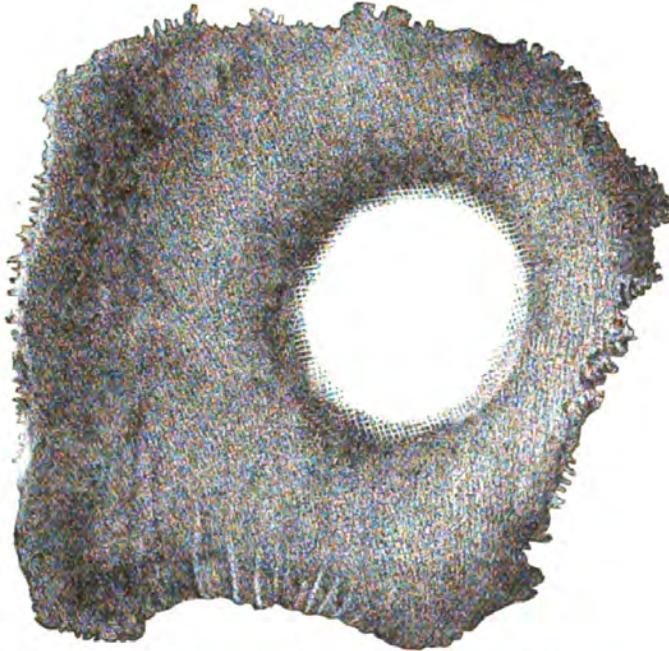


Fig. 85.—RIGHT PARIETAL IN MAN, EXTERIOR SURFACE, (REDUCED).

the quadrumana (Figs. 85 and 86), we find indeed a very striking difference between them. In the matter of extent its form, in man, is quadrilateral, its margins articulate with the same bones, and it is composed of two plates containing between them the

tent than one of the divisions in the same bone in the latter; for example, that marked 5, the eight remaining give consequently the whole excess of surface in man, (see Fig. 60, April number, diagram of human parietal, which is but two-thirds of the

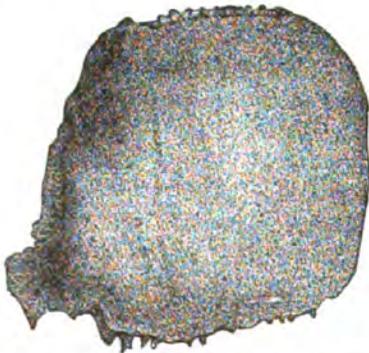


Fig. 86.—PARIETAL IN THE APE. OUTER SIDE.

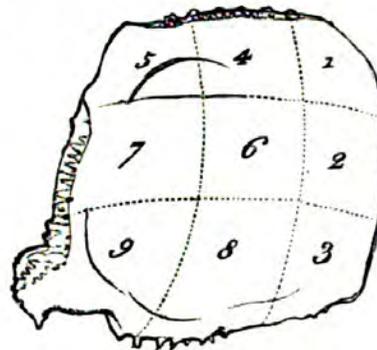


Fig. 87.—PARIETAL IN THE APE. DIAGRAM.

diploic substance. The same relations exist also between the parts which cover it exteriorly and those which are found in

natural size); whence we must conclude that certain encephalic parts which exist in the latter are wanting in the ape, and

that if there exist in the latter, as we shall demonstrate, certain cerebral organs in the parietal region having the same



Fig. 88.—*PARIETAL IN THE APE. INNER SURFACE.*

functions as those in man, they are still far from having the same degree of development.

It may be remarked here that the

works of the most distinguished anatomists, even of the present day, have been confined to descriptions of the bones which envelope the cerebro-spinal system, and a few like Mr. Huxley have traced the relations subsisting between the osseous structure of man and that of the lower animals, with more or less minuteness; but none have shown the relations comparatively existing between the parts of the cranium and the contiguous regions of the brain, besides Gall and other learned phrenologists, especially Vimont, whose great work on "Comparative Phrenology" stands quite alone as a remarkable example of scientific research and artistic accuracy. Dr. Gall was indeed the first to institute this class of investigations, but did not carry them to any great extent, his study of the human organization absorbing his time and attention.

THE PHYSIOLOGISTS AND LOCALIZED BRAIN FUNCTION

[FROM A LECTURE BY DR. JOHN LOGAN.]

DR. MICHAEL FOSTER locates the function of Amativeness in the spinal cord. Prof. Ferrier cites several pathological cases that would favor the location of the amatory propensity in the medulla oblongata and pons variolii. Others think it may be situated in the sympathetic, which sends nerves to those parts that have to do with generation. Or that it may be in some of the convolutions in the base of the brain—the temporo-sphenoidal lobe, for instance, with which the great sympathetic is directly connected. The fact is, they do not appear to know where it is. One thing, however, we do know, which is this, that men and women, wide and deep in the base and back part of the brain, with full, round necks and prominent chins—physical peculiarities that always go together—have a greater liking for the opposite sex than have those with narrow, little heads, scraggy necks, and small, receding

chins. You notice how deficient these signs are in crusty old bachelors and milk-dewed old maids. Circus performers, as a class, have the cerebellum large, and they are distinguished for two qualities—they balance themselves on nothing, and bestow their affections wherever they can.

EFFECT OF REMOVING CEREBRAL LOBES.

Remove the cerebral lobe from the frog, but leave the central ganglia, and he swims and hops and croaks as if the brain were entire. He has, however, no volition, and, unless irritated, remains stationary and inactive. The same is the case with the pigeon. He flies when thrown into the air; walks when pushed. If not disturbed, he acts as if asleep. Similar operations have been tried on rats and rabbits, with the same result. Neither will eat, though food be placed before them. Unless fed, they would, amid plenty, die of starvation.

The possession of these ganglia, though the right and left hemispheres be cut down to their surface, enables animals to perform the most complicated movements. But their movements are without aim, and are performed without the direction of the will. Here let me remind you that the lower an animal is in the scale of development, the more brain you can remove without destroying co-ordination.

FUNCTIONS OF THE CONVOLUTIONS.

The hemispheres of the brain, as I have already explained, are composed of white and gray matter, with the gray matter on the surface and dipping down into the furrows. Flourens and the older observers found it to be insensible to stimuli; that the removal of it, piece by piece or slice by slice, produced no obvious effects on the intelligence or volition of the animal. Hence, it became very common to deny any function to the convolution of the hemispheres, and to speak of the brain "acting as a whole." Dr. Michael Foster says, sarcastically, that he does not know what "acting as a whole" means. I have listened to many learned discourses, and have read many learned essays on the "brain acting as a whole," but I have never believed them. My observation on the various animal species, and on the several races of man, and my comparisons of the skulls and brains of the dead, and the heads of the living, convince me of the contrary. You, who are familiar with the literature of Phrenology, know the abuse hurled at Gall and Spurzheim for attributing to the several parts of the brain separate functions.

Though neither pathology nor experimental physiology disprove Gall and Spurzheim's theory concerning the functions of the convolutions, yet they demonstrate, beyond cavil, that at least *some* of the faculties of the *will* are exercised through those parts, for when removed, the animal has neither will nor intelligence. Then there are the many evidences of

PATHOLOGY AND GALVANISM.

In sickness, disease of the gray matter of the hemispheres produces delirium, and even convulsions, these phenomena sometimes being related to particular groups of muscles. Hitzig, Fritsch, Ferrier, and others, have shown that the application of the galvanic current to the convolutions, and to the different parts of the convolutions, gives rise to definite movements of various groups of muscles. The stimulation of one spot produces movements of the muscles of the neck; of another, the leg; of another, the arm; of another, the eyes; of another, the mouth; of another, protrusion and retraction of the lips; and so on until he has marked out eighteen centers of motion on the parietal and occipital lobes. These movements were produced even when individual convolutions were isolated from the surrounding parts of the brain. The stimulation of distinct areas produces distinct movements, while the stimulation of a large surface produces convulsions.

These experiments were performed by different physiologists in different parts of the world, and in all cases the same results were produced. The muscles responded as regularly to the stimulation of the several parts of the brain designated, as the notes of a piano respond to the striking of its keys.

WHAT DO THESE EXPERIMENTS PROVE?

Ferrier, by the removal of some of these centers, has produced paralysis of those parts of the body that respond to their stimulation. The average man would very likely infer, when the stimulation of certain parts produces motion, and their removal paralysis, that experimental evidence conclusively proves their functions; but it does not. The movements that follow the stimulation of these convolutions, and the paralysis that supervenes on their removal, prove nothing as to their functions. The experiments by which Ferrier produced paralysis were defective. He did not allow the animals to live long enough after the operations

for recovery to take place. He kept them alive but a few days. Nothnägel and Herman discovered that if the animals were kept alive long enough to recover from the shock of the operation, the symptoms of paralysis disappeared.

You know, from what I have said, that all these movements induced by the application of the battery to the external surface of the brain, have been performed on animals. These experiments really prove not that surfaces of the brain contain "tactile centers," "motor centers," "visual centers," "auditory centers," "sensory centers," or any other centers, but that it is connected by fibers with

the central ganglia, low down in the brain—those parts that carry on co-ordination of movements, in the absence of the hemispheres—and that the electric current passes along these fibers to the centers, where nerve force is stored, is sent along the motor nerves and completes the movements described. So that modern experimentalists, while they have patiently and admirably illustrated the functions of the central ganglia, and some of the functions of the cerebellum, have added nothing to our knowledge of the functions of the convolutions, except that they have proved that their possession is necessary to the exercise of the will.

POPULAR MISTAKES.

MAN is a creature of mistakes. By mistakes he learns. From the days of Tubal-Cain to the days of Alva Edison he has been inventing, improving, and learning by his blunders. The life of an individual, from childhood to manhood, epitomizes the life of the race. Theodore Parker well puts it: "By stumbling the child learns to walk. Every fall is upward."

In this sense mistakes are necessary. They are the educators of mankind. They are a part of the great plan of the almighty Designer of the universe by which man is enabled to educate himself and ascend the scale which continues upward, but never ends.

But man is an imitative being. He copies the mistakes of his ancestors. This imitative faculty of man, which he has in company with the monkey, is, to my mind, one of the strongest arguments for the Darwin hypothesis. He imitates the bad as well as the good, and perhaps the former more than the latter, just as a monkey will learn mischief faster than anything useful.

Thus he copies mistakes, and mistakes become popular. Fashions are due to this imitative faculty, though all fashions are not mistakes.

There is a prevalent idea that the world is growing weaker and wiser. While many do not believe this, they believe that we are growing wickeder and wiser. How often do we hear our fathers and mothers saying, "It wasn't so when I was young." To hear old people talk sometimes one would think that our grandfathers and grandmothers were all saints and giants, and we their degenerate offspring all devils and dwarfs.

I am happy to be able to state, and think I can prove it, that the world is growing physically, mentally, and morally stronger, wiser, and purer. There are men just as strong living to-day as there ever were. Milo carried a calf every day until it grew to be an ox. Dr. Winship commenced by lifting small weights, and adding to them daily until he could lift 3,000 pounds. Who of our grandfathers ever swam across the Straits of Dover like Capt. Webb? Weston and O'Leary can outwalk all the ancient pedestrians. Hercules could not stand up against the educated muscles of Heenan or Jem Macc. I need not say anything about our great and good men. We have men and women to-day superior to those of any past age, and a great many more of them.

Another popular mistake is, that as

men advance in civilization they depart from nature's plan. Out of this idea has grown the prevalent belief that Indians and savages and the lower classes are healthier and longer-lived than the educated Caucasian. It is contrary to all ideas of progress and not supported by facts. As though the filthy savage, who rolls in dirt, bathes his body in grease instead of water, and exposes himself to all the vicissitudes of a changeable climate, half clad, sometimes gorging himself with unhealthy food, and again starving himself for days, could be more healthy than the educated Caucasian who obeys the laws of health and practices temperance in all his daily duties. I must admit that civilization, by bringing unnatural and unhealthy fashions, does harm in many cases, and many fall victims to these unnatural customs, yet, upon the whole, there are enough sensible persons among the civilized to redeem the race, and bring the average far above that of the lower races. Civilization brings its curses as well as its blessings. When locomotives were first proposed many people objected because they said the country would be filled with smoke and dust, and animals would be frightened to death. True, the locomotive does bring smoke, and sometimes you get a cinder into your eye when you look out of the car window, and sometimes animals are scared or run over, and even persons are killed, yet who will deny that railroads are a blessing? It is said that rats were never known in Nebraska until the railroads were built into that country. Railroads bring human rats, and so do all the arts of civilization have their evil attendants. The open-air life and coarse food of the savage conduces to his health and longevity, and is in direct contrast with the close confinement and refined foods of too many civilized people.

But all civilized people do not continually breathe foul air, nor eat unhealthy food, nor, if you will allow the word, tight-lace. Savages have many diseases, and when they get sick they generally die. How is it when small-pox or any conta-

gious disease gets among them? They are taken off by the thousands; scarcely one who is attacked escapes.

Right along here is another popular mistake. It is, that wild animals are perfectly healthy, and domestic animals and those wild animals which are tamed and kept in confinement only are diseased. This is an idea that has been started by naturalists, and is generally believed among all classes of people. This is an error, as shown plainly by the researches of Prof. Vilain. He says that he dissected the carcasses of fifty lions in Algeria, and twenty of the number had diseased lungs; in some of them the lungs were almost gone, showing that consumption prevails extensively among lions. He also dissected a number of lions which had been born and reared in the zoological gardens of Paris, and found every one of them to be healthy. Why was it? The wild ones had been exposed to the drenching rains, inhaled the sand-laden air of the desert, and often gone without food for days; while the tame lions were protected and regularly fed. He also proved that wild wolves suffered with nasal catarrh, while tame ones did not. A famous hunter of India testifies that he has often seen tigers spitting blood, which so weakened them that they might be approached with impunity. Monkeys are very delicate animals, and are subject to consumption unless carefully protected. Foxes are said never to die from disease because they are as cunning and shrewd in their diet as in everything else. The buffaloes of the plains suffer with dyspepsia and heart disease. The elephant is said to be a very temperate and abstemious animal, and though he often dies in captivity, it is always from mental and not physical causes. They often die of broken hearts. They are deeply mortified by slights and insults. The Western hunter can testify also that nearly all the deer that are killed have diseased livers.

There is also a popular idea that the Indian is superior to the white man in many respects. Cooper's novels have much to say about the "noble red man,"

and even our school-books hold up the idea that the Indian is a noble character, and has been abused and down-trodden. Pope, in his "Essay on Man," says:

"Lo, the poor Indian, whose untutored mind
Sees God in clouds and hears Him in the wind."

A statement not untrue, but yet calculated to give the idea that the Indian is a very pious and religious character. If you were to go out among these dirty specimens of humanity, and remain a week or two, you would be convinced that a great deal of this talk about the "noble red man" is all "bosh." Our Government has been and is still making a mistake in treating these savages as a sort of "outdoor pensioners," or, to use a phrase intelligible to editors and showmen, putting them on the complimentary list. Just think of the immense sums of money expended every year, the only effect of which is to maintain these people in their old heathenish ways. Why not put them on an equal plane with white men, and make them obey the laws, and teach them, as we teach our children, to work and earn their bread and meat?

It is very common among ignorant people, and indeed among some not so very ignorant, to suppose that only learned men have theories. Why did it never occur to them that we theorize only upon that which we do not know, and consequently the most ignorant person theorizes, and the most and the only difference between the theories of the learned and the ignorant is that the learned man can produce more facts to support his theory than the ignorant man? Why, the ignorant man can give you a reason for everything, while the wise man is continually compelled to say, "I don't know." Prof. Tice will bring up a multitude of facts to support a certain theory of the weather, and after all is compelled to admit that he can tell very little about it; while to the common ignoramus it is all as plain as day according to his theory, which is based on a single assertion, viz: that the ground-hog comes out of his hole on a certain day, and it all depends on whether he sees his

shadow or not. There are plenty of these ground-hog believers living yet in this enlightened last fifth of the nineteenth century.

People make a great mistake about these two terms—faith and doubt. Says Lowell: "The greater faith which is to come will see God rather in the strenuous doubt than in the creed held by an infant's hand." I have heard the cry of infidel hurled at Lowell on account of this passage alone. Prof. Swing has been hurled from an orthodox pulpit because he advocated the same idea. But in the brighter light of later days it is beginning to creep into the minds of many that faith and doubt are partners, two factors which work together to produce all intellectual and moral progress. A man never invents a machine until he has doubts about the old way being the best way, and the next step is a theory of a better way, and then follows a faith in that theory, and he goes to work and the result of the working of these two is something new. And so with all improvements; there must first be doubt, then faith, and new doubts will upset the old faith and a new faith is based on a new theory, and it is followed out until it results in a new discovery. If Columbus had not doubted the existing theory of the earth, would he ever had faith in the theory that there was land on the other side? Copernicus doubted the theory that the earth was the center around which all the heavenly bodies revolved, and he had faith in the theory that the earth revolved around the sun. Galileo doubted that the earth stood still, and was persecuted for it; but Galileo was not an infidel, for he believed that the earth moved. Martin Luther doubted the propriety of the practices of the Popish Church; and looking at it from this stand-point alone, he was the greatest infidel that ever lived; but he had faith in a better way. Doubt and faith are thus the complements of each other, the Paul and Virginia that go hand in hand through the flowery vale and over the rugged rocks of all advancement.

G. DALLAS LIND.

THE PANTHEON AT ROME.

THIS is the best preserved of the ancient Roman edifices, and is regarded as the finest example of pagan architecture in that city. It was erected by Marcus Agrippa, the son-in-law of Augustus Cæsar, in the year 26 before the birth of Christ, and dedicated to all the gods in the Roman mythology. Letters written at that time are extant which record the circumstances of its construction. In the center a colossal statue of Jupiter stood, and surrounding it were seven niches designed for the marble representatives of the chief pagan deities.

The Pantheon was used for worship in the ancient Roman manner until A.D. 399, when it was closed by the Emperor Honorarius. Nearly 300 years later, in 608, Pope Boniface IV. consecrated it to Christian usages under the name *Sancta Maria ad Martyreo*.

Like all the edifices of Europe whose age goes back to or beyond medieval times, the Pantheon has suffered from the rigors of war and the caprice of sovereigns. The pediment in front, which is supported by a triple row of columns, each being $46\frac{1}{2}$ feet high and 5 feet in diameter, was originally covered with tiles of gilt bronze, the greater part of which were removed by the Emperor Constantine II., and the remainder by Pope Urban VIII., in 1623, to make cannons for the Castle of St. Angelo, and a baldachino for St. Peter's. In the eleventh century the anti-Pope Guibert used it as a fortress, and a hundred years later it was again the scene of religious strife. In the seventeenth century two Popes, Martin V. and Eugenius IV., expended large sums toward its restoration, but they were soon after followed by heads of the Church who appeared to have little sympathy for its preservation. Urban VIII., as we have seen, stripped its pediment of the remaining bronze covering. Benedict XIV., in 1740, removed all the precious marbles which lined the columns and walls of the interior.

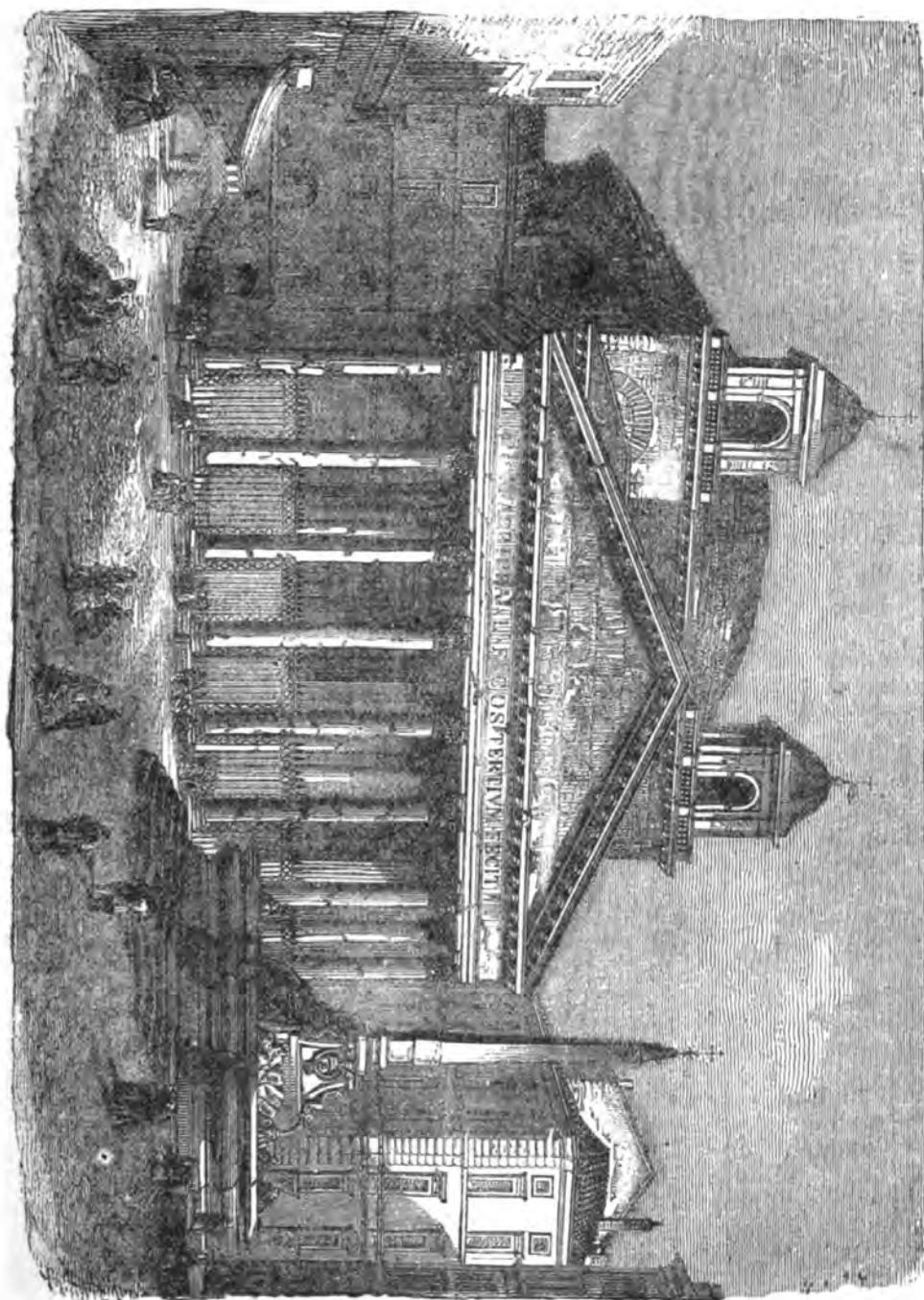
The Pantheon stands in a piazza between the Corso and the Piazza Navona, and near the center of the ancient Campus Martius. In form it is circular, the diameter inside being 143 feet; above the massive walls rises a dome whose summit is 143 feet above the pavement; in the center of this dome is a circular opening 28 feet in diameter by which the building is lighted. The Corinthian portico is the most remarkable feature, it being 110 feet long by 44 in depth, with its 16 granite and marble columns supporting the pediment. Other interesting features are the bronze doors, the niches, the marble cornice, and the mosaic pavement, which are all in excellent preservation.

Nathaniel Hawthorne, in his "Transformation," visits the Pantheon with Hilda and Kenyon, and says: "The world has nothing else like the Pantheon; so grand is it, that the pasteboard statues over the lofty cornice do not disturb the effect any more than the tin crowns and hearts, the dusty artificial flowers, and all manner of trumpery gewgaws hanging at the saintly shrines. The rust and dinginess that have dimmed the precious marble on the walls; the pavement, with its great squares and rounds of porphyry and granite, cracked crosswise in a hundred directions, showing how roughly the troublesome ages have trampled here; the gray dome above, with its opening to the sky, as if Heaven were looking down into the interior of this place of worship, left unimpeded for prayers to ascend the more freely—all these things make an impression of solemnity which St. Peter's itself fails to produce. 'I think,' said Kenyon, 'it is to the aperture in the dome—that great eye, gazing heavenward—that the Pantheon owes the peculiarity of its effect. It is so heathenish, as it were—so unlike all the snugness of our modern civilization! Look, too, at the pavement directly beneath the open space! So much rain has fallen there, in the last two thousand years, that it is green with small, fine moss, such as grows

over tombstones in damp English churchyards.'"

Europe, and other features of the Pantheon have been profitably studied by

THE PANTHEON AT ROME.



The dome has served as the suggestion of all domes which have been built in architects of the Christian era even to the present day.

An inscription on the frieze of the portico shows that it was erected in the third consulate of Agrippa, while below are recorded statements of repairs done by Septimus Severus and Caracalla.

Within the Pantheon are the tombs of Raphael, Zuccherò, Annibale Caracci, and other painters; and last to be laid there was Victor Emanuel.

ECHOING BELLS.

It was a coy, calm, fragrant night in summer-time,

When through the dusky hush no whisper came

Save thirsty meadows rustling for the rain,
Or woodlands musing with a soft and sleepy rhyme.

A night, when one would dream of dear and lovely things;

Of tender passages and sweet pursuits;
Of Orphean lyre or threnody of lutes;
Of songs and sighs and stars and liquid murmurings.

Thus musing, as I wandered o'er the drowsy lawn,

I came upon a marble basin white,
And sat me down beyond the fountain-sprite—
Beyond her damp, gray drapery in the night-breeze blown.

And as I sat, I lookèd up; lo! there gleamed a bell,

A sweet-toned bell, that once I used to know,
Up in yon star-torn belfry long ago.
To-night the nakedness of heaven becomes it well!

"Oh, Voice of old!" I cried—"thou dear dead Voice of old,

What would I not, to hear thy mellowing strain

Call back the scattered leaves of life again
Into the Book, between the asterisks of gold!"

Yet how could it reply, that long disused bell,
From which the rotted ropes hung scarcely down;

Whose belfry-ladder, in the dusk-light brown,
Bent as the hastening spiders spun their webs
and fell?

But hark! was that the whisper of some voice I knew,

It was so full, so sudden, and so sweet?
Nay! some far-distant bell with languid beat
Rolling up hours into the horoscope of blue.

Again! Ah, sweet delay of rapturous surprise!

That weary bell complaining far away,
With silver hammers in the shades astray,
Had touched my voiceless bell to whispered harmonies.

Back rushed the tide of memory from isles of old,

And through the night some nameless angel came,
Numbered life's scattered leaves with pen of flame,

And wrote between the stammering asterisks of gold!

Whene'er at soft, still night, I chance to hear
Some far-off bell melodious and clear,
I think how many towers in all the land
Keep mystic measure to the ringer's hand.

And since our lives, like living bells, must ring—
Remember, like a bird the echoes wing!

Or joyously or sadly, as we will,
Dim towers receive the song on every hill.

Oh, sweetly ring these bells, in weal or woe!
Life's deathless echoes soft, submissive flow;
And when we, too, in moss-deep silence lie,
Float up forever to the bells on high!

PAUL PASTNOR.

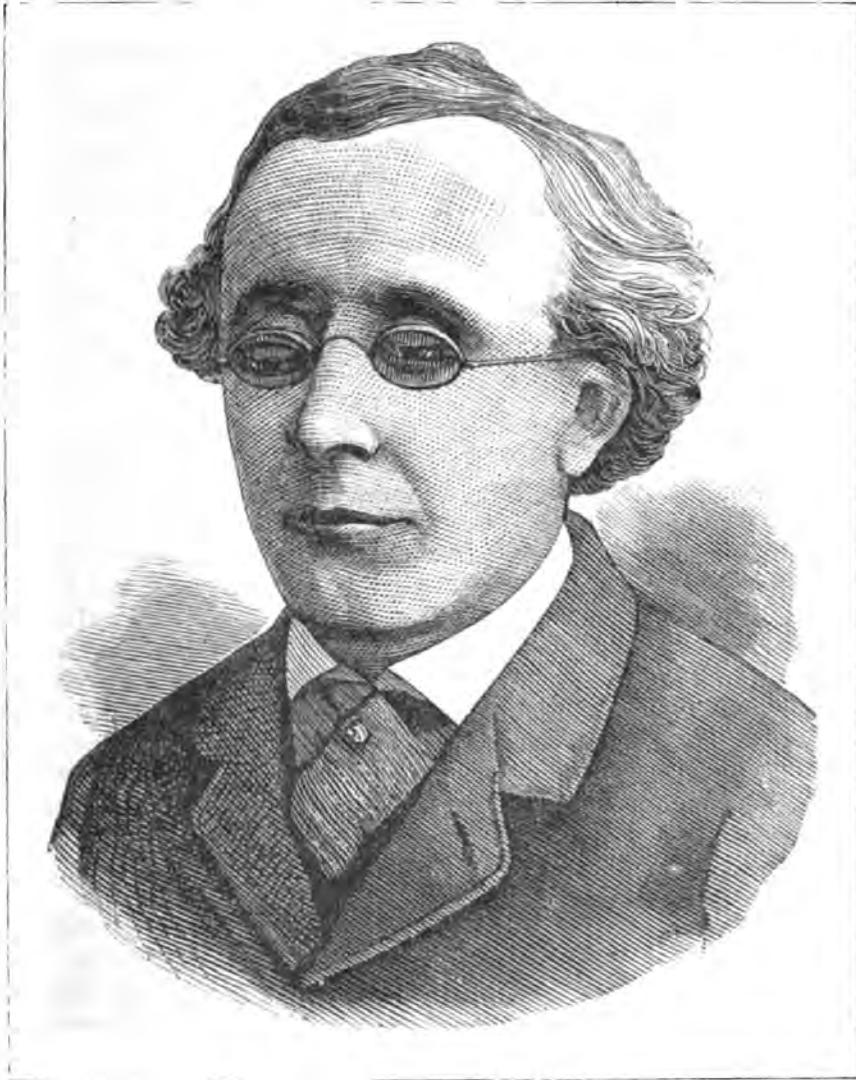
HENRY FAWCETT,

THE BLIND AUTHOR AND STATESMAN.

ONE of the most prominent among English politicians and men of letters is Prof. Henry Fawcett, who, not-

withstanding his twenty years' blindness, has won and maintained a distinguished position as a representative of the mass-

es. The portrait shows an organization of the mental type; the perceptive faculties are very large, especially those at the center, indicating power of memory and concentration. The reflective faculties are full, Comparison being the strongest in a character marked for its appreciation of details, for ability to understand their relations, to devise and organize methods of action which shall be characterized by their practical, economical, and prudential features, and at the same time by



est, and correlating intimately with the perceptives. There is a notable expansion in the region occupied by the organs of Constructiveness and Ideality, while Acquisitiveness is also well marked. This type of development should exhibit itself their harmony, proportion, and symmetry. The head is high from the root of the nose to Benevolence, but its unusual breadth renders the height less apparent than it would otherwise be. One must observe, however, that the proportion of

the features is almost classic, the respective thirds of the face approaching the standard of the artist for the masculine type of symmetry. The moral region, as shown by the elevation of the crown above the ear, is large, the organs of Benevolence and Faith being among the best developed, and inclining him to be kind, sympathetic, and trustful. He is also evidently ambitious and tenacious of his purposes, and may, because of the delicacy of his organization, show, at times, some irritability, when opposed by the cynical or selfish, but he usually carries himself with steadiness and ease among the factious, and commands the respect of all classes by his dignity of manner and comprehension of the subjects he would discuss.

He was born at Salisbury, England, in 1833, and educated at Queenswood College, at King's College, and at Trinity Hall, Cambridge, where he was graduated with high honors in 1856, and became a Fellow of the Society in the same year.

His sympathy for the masses led him to enter the arena of politics, and in 1857 he offered himself as a candidate for Parliament, and contested the borough of Southwark as an advanced Liberal, but was unsuccessful.

In September, 1858, he met with the accident which deprived him of sight. While engaged in partridge shooting, two shot from the gun of a companion perforated the spectacles he wore, and entered the retina of the eyes. Previous to this accident he had entered at Lincoln's Inn, with a view to practicing at the Bar, but the sad calamity put an end to his career, and he declined the considerate offer of the Benchers of that Inn, to "call" him to the Bar without further delay.

He did not, however, give up his political aspirations, but offered himself as a representative of the same liberal principles in 1862 and 1864, without success.

In 1863 he was elected Professor of Political Economy in the University of Cambridge; and two years later he published a "Manual of Political Economy," and the "Economic Position of the British Laborer." In a general election, in 1865, he was returned for the last-mentioned constituency, and he was re-elected in 1868; but he lost his seat at the general election of 1874. The election of Sir Charles Reed and Mr. John Holms, for Hackney, having been declared void, on account of an informality, Sir Charles withdrew from the subsequent contest. In April, 1874, Professor Fawcett was invited by all sections of the Liberal party in the borough to become a candidate, and he was elected. Since that time he has retained his seat in the House of Commons and no other member of that great assembly of the British nation is listened to with more respectful attention than he whenever he rises to address it. He has made Indian affairs a careful study, and is regarded a thorough master of them, so that his presence among English statesmen is deemed indispensable, as "the representative and mouth-piece of the teeming millions of Hindustan."

Besides his "Manual of Political Economy," he is the author of related works, as: "Pauperism and its Causes," which appeared in 1874, "Speeches on Political Questions" in 1875, and "Free Trade and Protection" in 1878. In 1872 Mr. and Mrs. Fawcett published, jointly, a volume of essays on Political and Economical topics.

It should be said that Prof. Fawcett has been greatly assisted in all departments of his literary and political work by his wife, a highly educated and intelligent lady.

His earnestness in the cause of public reform is shown in his co-operation with the friends of Temperance; in this he has shown himself as unfriendly to half-way measures, such as "local option," although English temperance men are disposed, as a class, and reasonably enough, we think, to accept the "half-loaf" if they can not get more.

UNITY OF THE HUMAN SPECIES.

PART III.

ANOTHER important fact in defense of evolution according to natural selection is said to be the beautiful adornment of birds and fowls, the object of which is declared to be to attract the other sex. Mr. Darwin considers the beautiful display of the peacock and butterfly designed to attract the attention of the other sex, leading to the marriage relation, just as the human sexes adorn themselves for such purpose. This conclusion is founded on the fact that he can find no other use for the possession of such beautiful wings and feathers. There may be quite a number of things in the universe the use of which Mr. Darwin does not know; but does that justify him in assuming that any of them are for some definite use, with no other reason for it than that it goes to aid his theory?

Will Mr. Darwin please inform us for what purpose the beautiful and sweet-scented flowers of the field and wild-wood are so exquisitely adorned that they called forth that forcible comparison by Him who made them: "Consider the lilies of the field, how they grow; they toil not, neither do they spin; and yet I say unto you, that Solomon in all his glory was not arrayed like one of these" ? (Matt. vi. 29).

In his "Descent of Man," Vol. I., p. 225, he says: "Now, when naturalists observe agreement in numerous small details of habits, tastes, and dispositions, between two or more domestic races, or between newly allied natural forms, they use this fact as an argument that all are descendants from a common progenitor who was thus endowed, and consequently that all should be classed under the same species. This same argument may be applied with much more force to the races of man." In another chapter we have shown this conclusion to be without the least force from the premises.

Now, whatever may be the extent of the supposed gap between the lower ani-

mals and man, it is certain he must rule them or be ruled by them; and were it the latter, he would long ago have been devoured; if, indeed, he could ever have obtained a start in existence, upon Darwin's theory.

That man does exist, and is the ruler of all the lower animals, proves there must always have been as great a gap between him and them as that which now exists. This fact is irreconcilable with the notion that there ever were animals only so much lower in the scale than man that the degree could not be easily distinguished; and evolution only admits of this, as it would have necessitated an act of creation had there ever been a great change—such even as that which now exists between monkeys and men. For the sake of argument let us admit the existence of this close relation, and do we not see that the contest for supremacy would involve perpetual warfare, and that between the two savages the most savage would always prevail? Hence the lower men-monkeys would exterminate the higher men-monkeys. Every time a lower animal evolved one of a higher degree, and therefore of a more pacific and civilized disposition, and should attempt to govern his father with less brute force, the more savage brute-father would devour him: the most unfit would therefore survive. It must be remembered that the standard of intelligence between the two does not admit of sufficient difference to give one the advantage of superior weapons.

In illustration of this let us inquire, why have the American Indians so long survived? Why has the United States Government petted and indulged them as it has? It has not been out of any peculiar sympathy or respect for them, but simply and solely because they were savages. Would the people of this country have tolerated the existence of an equal number of whites, reds, or blacks from any other country who had

emigrated here, and who had committed as many cold-blooded atrocities upon helpless, unarmed men, women, and children as they have done? No! Every man of them would have been exterminated; but for the fear of the same cruel, savage acts they have been tolerated and have survived. No; if men were savage at first, so would they have forever remained, just as the lower animals have done, unless domesticated; and this was not the work of the animals, but of civilized man. It is also true that the most savage has the lowest intellect, and as a consequence the least regard for results, either of a moral or physical character; and he would also have the greatest physical strength, in which respect man is vastly inferior to his animal contemporary or ancestral brothers and sisters.

Such a state of facts and their teaching shuts us up to the only other alternative, namely, the revealed theory contained in the Bible. Here we find the gap between man as the ruler, and all other animals as the subjects, so wide that they are under the control of his will and superior intelligence; this record is corroborated by the facts of the world's natural history: "And God created man in his own image; in the image of God created he them. And God blessed them, and said unto them, Be fruitful and multiply, and replenish the earth, and subdue it, and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth" (Gen. i. 27, 28).

Hence, according to the facts and nature of things, instead of the family of man having commenced with universal savage life—and that, too, animal savage life—from which it has been progressing toward civilization by such contests as above, it started with the highest intellectual, moral, and physical susceptibilities and endowments; and being the most fit to survive, has survived. The same authorities tell us that the largest and most powerful of the lower animals have perished; while there has not a single species or individual of the savage

animals, if left to themselves, ever lost their savage nature; and that all are savage still, demonstrates that man could not have been the exception; and that were his ancestors brutally savage, and associated with none higher to teach him civilization, such also must his children during all successive generations have remained.

When the polygamists assume that one species produces another, they put themselves in opposition to all these facts, and also in contradiction to all the naturalists, botanists, and zoologists, and indeed all the eminent minds who, following Buffon, Turnefort, Jessieu, Cuvier, Geoffroy, Saint Hilaire, have studied plants and animals outside of all discussion and without thought of evolution; but the facts of experiment thus furnished demonstrate nature to be utterly incapable of producing a new species, and of the primitive pair as well, and that her laws are confined to the simple and unimportant changes modifying species resulting in different races of each, thus rendering the conclusion inevitable that each pair of animals and each plant originated in supernatural wisdom and power.

Now, if a continent has been peopled by a single pair of animals of a certain species, or by a certain single plant in the course of a few generations, then, in a greater number of generations, the habitable globe has also been thus populated. And if among all the modifications of species into races there has never been produced an organic thing lacking a single vital organ, or one that had double the number—say one which had two sets of lungs—and transmitted the same to offspring, it also follows that the original progenitors of each species were perfect in themselves, necessitating the continual identity of each; therefore polygenism can not be true; but that the original progenitors of each species had its existence in the mind and acts of an independent *Creator*. Any other view is alike antagonistic to philosophy, science, and the endless array of the cosmological facts of nature, discovered and understood by her

students of all ages. Hence Mr. Darwin's definition and classification of species and races meaning the same, is one of the most gross and palpable errors ever advanced claiming the name of *Science*.

If we would hope to arrive at truth, is it not the simplest dictate of reason that we must consult the laws, facts, and principles connected with those animal and vegetable species with which we are most familiar—consequently those of historic and not of prehistoric times—therefore commencing with the living generation? In other words, we must reason from the known to the unknown. Every historian knows that among the ancients each nation had its fabulous epoch, and every religion of idolatry its mythical period; and whatever there was of science, it partook of the same characteristics. According to the geological mode of reasoning, these cloudy records of myth and fable are to be considered more reliable than those of real history. Fossils of supposed extinct species—even one of a kind, and which might have been a monstrosity, having no identical unity in time or kind—evolved from others less perfect, are brought forward to defend the theory. Their position demands that they should produce the most indisputable facts, showing that known plants and animals are the parents of new species before unknown,—for instance, that fowls are from fish, acorns from pines, birds from serpents, serpents from monkeys, monkeys from men—and this only reverses the order of evolution which the facts render necessary, if it exists at all. Instead, however, of giving us absolute proof here, where it is indispensable, these gentlemen have the effrontery to beg the whole question by saying, "Only give nature time enough, and she will evolve that which she does not possess. She will unroll that which is not enrolled, or turn out that which she has not within—such as an organic thing from inorganic matter;" and, to the disgrace of the age, multitudes of sensible people seem to believe it. Let us ask, are not six thousand years of historic time suf-

ficient at least to have made some sensible approximation toward such a result? Especially when it is remembered that during this period it is declared that many species have become extinct by the survival of the fittest; and that, according to the theory, it required the same length of time to go out of existence as to come into it.

Thus, according to their own pet argument, evolution was always impossible, because it is so inconceivably slow that any two generations standing nearest each other are so identically similar that they can not be distinguished; from which it follows that before any radical change is reached the species exhibiting it has become extinct; and the tooth of time has so marred and obliterated the features of the remaining fossils, that no just comparison can be made. Those fossilized human skulls, for instance, which have been pronounced a hundred thousand years old, have their exact types among the living men of our most civilized countries at the present day. Indeed, all the varieties of shape, size, and peculiar form of human heads exhibited by the whole human family may be found among the living, native inhabitants of the city of New York, with phrenological developments of every degree of mental and moral capacity, from the lowest savage to the most civilized of the world.

Some of the facts relating to organic beings, and which show they originated in a single mind, are as follows: All organized beings are born small and weak, and have limited existences, varying from a few hundred years to an ephemeral age. During these periods they all increase in size and strength and reach maturity; then decrease in power, vitality, and somewhat in size, and finally die. While living they must be nourished, and, as species, reproduce their kind either by seeds or eggs, and have a father or mother. As mankind are included in these general laws, they are equally controlled by them. These are not only facts of science, but are established by

every day's observations, and are therefore to be considered *fundamental principles*. And how wonderfully does this show that man and the lowest insect are linked together in the great chain of organic life, forming a world of God's handiwork of mutual dependence and beautiful harmony.

The reasons, to our mind, which show why "anthropology," or the natural history of man, is discussed at the present day with such anxious intensity—its defenders making such bold apparent advances against the well known science of man—are principally as follows: First, the assumption of facts which are not facts. Second, unwarrantable inferences drawn from real facts. Third, arrogant and unqualified declamation. Fourth, an ingenious and subtile sophistry. Fifth, collusion. But the deepest animating cause is a desire to undermine and destroy the foundation upon which Christianity rests. Hence the records of the Bible are set aside with as great an air of ostentation as though they were a mere effusion of the imagination, instead of alone containing the history and object of the world's creation and destiny, as well as the principal historic and pre-historic events, civil and ecclesiastical,

which were and are to transpire from its beginning to its end; and, indeed, reaching into "the world to come." These records present the eternal and immortal destiny to which men may attain, while evolution leaves man to die like the common beast, without the least hope of future existence.

Although the chemical properties of the mineral and organic world are interchangeable, yet man is not a mineral or a plant, but an animal. Though he is governed by the physical laws common to all animals, yet he is distinguished from these by at least three fundamental characteristics—the abstract sentiment of good and evil, the conviction that there will be something after this life, and the recognition of a Supreme Being. These are so universally the inheritance of mankind that those who reject them, naturally must have heads of such intellectual and moral depression, phrenologically speaking, as to class them among *monsters*. It is the moral attributes even more than the intellectual which distinguish mankind from the lower animals. But with these exceptions the difference ends; and, as far as the question of species is concerned, man is nothing more or less than the animals surrounding him.

THOS. MITCHELL.

REV. JOSEPH COOK AS A PHRENOLOGIST.

WITH your permission, Mr. Editor, I desire to say through the columns of your most valuable JOURNAL that the Rev. Joseph Cook expresses some views in his lecture on "Culture and Mental Physiology"—one of his Monday lectures delivered a few months ago—with which this "penholder" does not agree. In the opening paragraph of that lecture he compares the brain with a gloved hand with the fingers firmly closed against the palm; and thinks, as it would be very difficult to tell of what a glove was composed in the concealed inner portions, so, in like manner, while it would be easy enough to study the ex-

ternal surface of the brain, the mid-most and bottom convolutions, more concealed, would be more difficult to get at. And hence he says: "The great difficulty with all schemes of mental philosophy, depending on merely experimental tests of the surface of the brain as a whole."

Now, it so happens that a gloved fist bears but an imperfect comparison to a brain in more than one way, as all anatomists know; or as any one can see by examining a brain, or even by looking at an illustration of a section of the brain; for one can not take a convolution of the cerebrum as a finger can be raised from

the palm of the hand and brought in a line with the axis of the hand. No; the outer or cortical substance of the brain does not surround the convolutions as a glove surrounds the finger; the inner or white substance of each convolution is continuous with the deeper portions of the cerebrum, and this is a fact of great importance to the practical phrenologist.

The brain consists of winding eminences of brain matter called convolutions, as already stated, separated by fissures or depressions; the eminences having some resemblance to the fingers of a fist, the depressions between the fingers corresponding to the fissures; but a perfect resemblance between the convolutions does not exist in all brains, nor are they perfectly symmetrical on the two sides of the same brain. The cerebral hemispheres are the organs of the mind; that is, of intellect and emotion, as well as of will. The active portions of the hemispheres are, on good grounds, believed to be the superficial or peripheral convolutions; the white substance being commissural or communicative only. Also: "The number and extent of the convolutions, as well as their depth, appear to bear a close relation to the intellectual power of the individual," says Gray. These are generally admitted facts, recognized by phrenologists as facts which aided them in establishing the best mental science known.

Now size, other things being equal, is regarded as a measurement of power. This being the case, phrenologists claim, very justly, that length of brain fiber from the medulla oblongata is an important aid in estimating the mental capabilities of a brain. If the arrangement of the convolutions were like a gloved fist, then, to reach say, for example, the third phalanx of a finger would be a much greater distance through the continuous tissue than by passing directly over from the palm of the hand to that phalanx. But as one can not pass over from the palm of the hand directly to the finger closed against the latter, as one can pass over from brain substance into a convolution, the com-

parison ends. It is not denied here that the brain does not dip under slightly in some of its parts, but this dip being comparatively little, it is not, therefore, that insurmountable obstacle in measuring length of brain fiber from the medulla oblongata that some would have it.

It is generally admitted that the larger the brain surface the more intelligence in the individual; the deeper the depressions and the finer the convolutions, the more brain-surface. According as the distance is to the brain-surface from the medulla oblongata, so is the thickness or depth of the convolutions. Physiognomy, and also the science of temperaments, are important aids to the phrenologist in estimating the extent of brain-surface.

After stating that at least fifteen brain-centers are proven to exist by both positive and negative evidence, Mr. Cook predicates as a consequence that the weight of authority in physiological science now supports the doctrine of localization of functions in the brain. He also admits that Gall and Spurzheim made great advances in physiological science; that they were right when they proclaimed the doctrine of localization of functions in the brain; but thinks that they did not sufficiently recognize the fact that the brain is a folded glove!

The reverend gentleman also thinks, or rather does not know but that "a new revised phrenological map may some day come from thoroughly modern investigators." And further, that the "smaller subdivisions" of the phrenological map are by no means a part of established science.

Well, I believe it is generally admitted by phrenologists that the present "phrenological map" may not be perfect. Are the sciences of geology, botany, astronomy, and chemistry perfect? Are any of the sciences perfect? But phrenologists claim, and very justly too, that the present classification of organs is the best classification known, and they are willing and ready to accept any and all improvements on it that scientific investigation can make.

Physiology and pathology of the brain

have made rapid progress during the two last decades, and these investigations have not been detrimental to the science of Phrenology; for, in some cases at least, it has only confirmed what Gall had promulgated as truth long ago. To give only one instance: "The organ of Language is located in the brain above and behind the eye, and when large, forces the eye forward and downward, forming a sack, as it were, under it." Few organs, as far as this writer is aware, were so much disputed, even ridiculed, by the illiterate, for, said they, there is no brain under the eye!

Now, it happened repeatedly of late years that this organ became diseased. And what followed? Aphasia. This name is applied to loss of the power of expression in language, spoken or written, from cerebral disease. Post-mortem examination in a number of cases has exhibited some lesion of the anterior portion of the left hemisphere of the cerebrum in cases of aphasia. This writer is aware that some objection has been urged against this view, for the disease has not been detected in the corresponding region of the right side, and, therefore, it is urged that it supposes an unsymmetrical location of functions in a part of the brain which elsewhere, as far as known, is symmetrical.* But "the proof of the pudding is the eating of it," after all; for, following the principles of Phrenology as laid down by those familiar with the science, will invariably prove it to be true.

But the same authority that has been quoted already several times says: "It is no part of my purpose this morning to defend the pseudo-science of Phrenology. I am not an utter disbeliever in the outlines of it; neither am I an utter believer in it." Who could expect, or hope, or wish any one to be an utter believer in a

* See *Medical and Surgical Reporter*, Vol. XLI, p. 533, for report of one of the more recent cases of aphasia by that distinguished physician, Prof. Da Costa; also, *American Journal of Medical Sciences*, for July, 1868, p. 296, of a remarkable case of injury of the head, in which loss of language followed penetration of the right half of the brain.

pseudo or false science? I find in the same lecture, also, this statement: "Although smaller subdivisions of the cranial mass are in debate, it is conceded that the intellectual, the moral, and the social faculties have their localized separate seats in the brain." In fact, about everything is conceded in this lecture that is claimed by phrenologists, save these smaller divisions of the "phrenological map;" and as smaller organs exist somewhere in the brain, and as they are not proved to be located wrongly according to the present classification, but, on the contrary, are proven to exist as at present located, by almost daily examinations by practical phrenologists, this writer is willing to believe that, for practical purposes, Phrenology is the best mental science.

The reader of the lecture will also have noticed that the new and more comprehensive system of temperaments is not noticed; whereas the old classification is mentioned as a part of established science.

PENHOLDER.

EXEMPLARY MINISTERS.—It should please all lovers of decency to know that in some departments of the Christian Church efforts are being made to induce ministers to give up the practice of fashionable vices.

The Western Methodist Episcopal Conference not long since adopted unanimously this resolution:

"First, that hereafter no young man using tobacco in any form, coming as a candidate for the ministry, shall be received into this conference; second, that those members of this conference already addicted to the use of tobacco are exhorted to desist from it in public and when in the company of persons who do not use it; third, that all circuits and missions are advised not to send delegates to this conference hereafter who are users of tobacco; fourth, that no local preacher who uses tobacco will be ordained an elder."

A good example for clergymen East to follow.

M. GODIN, THE FOUNDER OF THE FAMILISTERE.

M. GODIN, the founder of the Familistère at Guise—a sketch of which appeared in the May number of this magazine—was the son of a blacksmith. He learned his father's trade, and made a tour through France with his tools, thus learning by experience the condition of the worker.

Of the mental quality or caliber of Godin's immediate progenitors, we have no information; but the moral sensibility of which Godin appears to have been capable from his earliest years, warrants the presumption that they were not deficient in that high domain of mental development which we term the moral and spiritual. The son of a workman, and of delicate constitution, he was from the first accustomed to the deprivations and disadvantages which separate the children of toil from the children of fortune. He noted, even in his childhood, the deplorable advantage which the rich hold over the poor, the employer over the employé, capital over labor. It became to him, even at that early time, a matter of serious thought and meditation. Sitting in the rude school-room, with the children of the workmen, the problem brooded in his heart until it became the object of his aspiration and conscience. We give his own description of his thoughts at this time: "I said to myself, if I were a teacher, I would teach these children better than they do here; and then I wondered if I ought to qualify myself for a teacher. Following this there always came another thought, the result of a deeper sentiment. No; I would apprentice myself to the manual arts; for through them I could give a great example to the world in the sphere where I should be called to act." Here is a remarkable instance of the altruistic principle operating in the mind of a child—a preponderance of social over personal considerations.

To fit himself for his grand human purpose, Godin applied himself to the industrial arts. His frail and delicate organization made the work difficult. Leav-

ing his father's workshop for the city, he anticipated finding the means and advantages for the more advanced study of Industry. In this he was disappointed; for he informs us that labor kept him in the shop from five in the morning until eight in the evening. This deprivation and thralldom only deepened the purpose within him, and led him to the resolution that if he could ever raise himself above the condition of the laborer, he would persistently seek the way to raise labor from its degradation.

In searching for the key to this problem, it is evident that even while a workman, he made himself acquainted with the thought of the prominent social philosophers; yet it is evident, from a perusal of his "Social Solutions," that Godin was free from the danger which so frequently besets the philosophic student—the danger of becoming the slave of any especial system or school of thought. The elevation of his mind and the practicality of his purpose, precluded such mental servitude. He stood over these systems; he examined their genuineness and their quality as independently as the artist inspects the material with which he may well express his dream of beauty. He discovered the utilities and the limitations of these systems; and from the material they presented, he constructed an ideal of life and industry which the present order of society could enter upon and practicalize. His years of meditation upon the subject led him to discover that there is neither wisdom nor mercy in holding up ideals which the existing social order renders impracticable.

If we follow back the line of Godin's character and its unfoldment, we come upon the elements and the methods which insure success. He selected a purpose in childhood; one in which individual aims were directed to social ends. He did not seek for a purpose out of or beyond the order of circumstances in which his life had fallen; but he developed and consecrated those circumstances to social is-

sues. He did not wait and sigh for a great opportunity; but he set to preparing himself for a great opportunity. He must gain material wealth; he must store up mental wisdom. Having chosen his path and his work, he wandered into no by-ways, and made no side issues. The long years stretched before him, and even with the most successful diligence the promise of achievement was far distant. It was an aim which demanded the consecration of his entire energies. With blood and nerve, sinew and muscle, through years of painstaking industry, he wrought for the material basis necessary for the accomplishment of his purpose. For thirty-five years he gathered into his head and heart the philosophy of the different schools, the equipoise of his character rendering his entire servitude to any one of them impossible; but with that masterly completeness which touches the sphere of truth on all sides, he stood over these systems, and with an eye single to his purpose, selected such methods as, tending to the end he had in view, could yet be readily engrafted upon the present

phase of life and society. He recast the wisdom of the schools in the mold of his own genius, and expressed the result in a practical arrangement which looks to the preservation, the development, and the harmony of human life; in a gospel of life and labor, as illustrated by the workingman's palace at Guise. In the unitary home, which the law of justice between labor and capital has there developed, in its conditions for physical, intellectual, and moral unfoldment, Godin has revealed to humanity that religion and science are necessary correlates, which, entering the same province, secure by their united action the harmonies of life and labor. This is a gospel that deserves the earnest attention of all who love our country and its prosperity; a gospel appropriate to an age of great industries. Let the rich moralize their wealth; let industrial palaces arise; and to the altars of such temples let us bring the accumulated treasures of science and philosophy, consecrating them to their holiest uses—the perfection of human life and the proper unfoldment of character.

AUGUSTA C. BRISTOL.

THE YOUNG FOLKS OF CHERRY AVENUE.

CHAPTER VI.

CONSCIENTIOUSNESS—A PLOT AGAINST SCIENCE.

TAL hurried through his chores the next morning, and when he sat down with the family to breakfast there was nothing for him to do after that but to polish his shoes, and look over the lessons for the day. It being review-day, however, his glance through the books was rapid, and at half-past eight he reported himself as ready for school.

"Why, you appear to be in a hurry, my boy," remarked Mrs. Manley with a look of inquiry.

"Yes, mamma, I'm going over to Deacon Faulkner's on the way, and that, you know, will take fifteen minutes."

"Is it about the broken fence you are going to see him?"

"Yes, mamma, and you know papa said that he would send Joe up from the mill with a new post and put it all right again."

"Ha, ha," laughed Clara, "I imagine that the deacon would not object to your being made an instrument of destruction to his old fence posts every day if he could have new ones set up in their place by so just a neighbor as Mr. Horace Manley."

"Mr. Faulkner is certainly the gainer by this accident," responded Mrs. Manley; "but we must not lose sight of the fact that, although the fence is old and weak, it nevertheless serves the purpose of a strong one in marking off the boundaries of its owner's land. No one

has a right, without Mr. Faulkner's permission, to enter upon it, and as it is an orchard, no horses or cattle are kept there. So a very firm fence is not required."

"Well, I think a fence along the road ought to be strong enough to stand when it's pushed against," put in Edith, "and if it's so old and rotten that it will fall down if you just touch it, it's the owner's business to put it up again."

"Yes, my child," replied Mrs. Manley pleasantly, "the owner should keep his fences in good condition; but it is our duty to avoid damaging them if they are weak. I would like to see the meadows and the gardens of Mapleville simply divided off by low hedges of evergreen; but that is quite out of the question, because they would not protect the inclosures against careless trespassers and loose animals."

"Why, I could run and jump over one of those hedges, and it would only be fun."

"And it is because there are so many people in the world, Edith, who are ready to jump over the bounds of propriety, in fun or earnest, that high fences of one kind or another are necessary."

"Then, mamma, I suppose you think that if everybody tried to do just right, all round here would be just like a great big garden, no ugly rail fences, or high picket ones being in the way," said Tal.

"Yes, the country would probably have the appearance of a grand park," returned his mother.

"That would be splendid, and I'm sure I wouldn't want to run over it; because I'd have enough pleasure in just looking at the gardens and the trees. But I must be off," and Tal quickly gave mother and sisters a parting kiss, and departed on his errand of justice.

"I guess I'll stay in school this noon," remarked Edith. "So give me a nice lunch, mamma, and be sure to put in two cookies."

"Seems to me Edie's forgot her manners," said Paulina archly.

"I think it must hurt her throat to say 'please,'" added Clara.

"No, it don't a bit. I must be always thinking how I should speak to please you," returned Edith sharply, and then flounced out of the room.

Mrs. Manley said nothing, but busied herself with domestic concerns, while Clara turned to the duties which belonged to her. Ten minutes later Edith came down dressed for school, and going to her mother said pleasantly:

"I'm ready, mamma."

"I see that you are, my child; and more than usually neat in your appearance this morning. You really make me feel quite proud when you take so much pains to be clean and orderly."

The girl stood with an embarrassed air, as if half ashamed to receive her mother's approval, so rarely was it deserved; and to relieve her Mrs. Manley said:

"If you wish to remain at school this noon you may, Edie; but you know I prefer to have you home to dinner."

"Yes, mamma; but Sophie and Millie, and one or two other girls stay on Fridays to draw. Miss Grace is giving them quarter of an hour's lesson, and she said I might try too."

"I certainly have no objection to your remaining for such a purpose. I will at once prepare your lunch."

"Please, mamma, put in the cookies."

"Yes."

"Ha, ha, ha!" rippled Paulie. "Edie's throat's got well, 'cause she give it such a hard rubbin' with the towel up-stairs."

Mrs. Manley made a neat little parcel of the lunch, with a red and white napkin folded around it, and handed it to Edith, who started for the door, but suddenly halted and asked:

"Oh, mamma, I'd almost forgot about the lecture to-morrow afternoon. All us girls are going, will you go?"

"I should like exceedingly to hear the lecture, it is so long since I have had the opportunity to attend one on Phrenology but I am engaged for Saturday afternoon, having to go over to Mrs. Elton, who, you know, is very ill, and read to her awhile, and help poor Alice a little in her housekeeping. Grace will probably be at

the lecture, and perhaps Horace, if he can leave the office."

"Well, won't you tell Grace to sit up near the column, on the right side of the hall, so I can find her? I might forget it."

"Yes, or Paulie will remember it for me. I know you have a great deal of play on hand Saturdays."

Dr. Welling gave his lecture that afternoon to a good audience. The next was

rounds of visitation to the sick. He made his description of the brain, and the part it played in human life, so clear with the assistance of a liberal stock of portraits and plaster busts of great and wicked people, that the children of the town were deeply interested, and many were taken by their father or mother to his rooms at the hotel to have their characters read. Dr. Whipple had asserted his utter disbelief



DR. WELLING AND HIS "ILLUSTRATIONS."

much more largely attended, and the third, which occurred on the following Thursday evening, was heard by a full house. This display of interest induced Dr. Welling to give another evening lecture before leaving Mapleville, and that also drew a full house. The two principal doctors of the town were there—Dr. Miller, the venerable Presbyterian minister, and Dr. Whipple, whose trim little chestnut mare was every day seen going the

in the doctrines supported by the newcomer, and told those who mentioned Dr. Welling to him that the phrenologist was a fraud, and "hadn't an inch of anatomical ground to stand upon." So when his ruddy face was seen in the audience Thursday night it was expected that there would be a lively tilt between the champions; but they were disappointed on that score, but very much amused in a way that was not expected.

Our account of the lecture is taken from the *Mapleville Gazette* of that week, which reported it quite fully, and alluded to the visitation of "Prof." Welling as "one of the most interesting events that had occurred in town during the past year."

Soon after Dr. Welling opened his lecture, which had for its topic "Our Social Relations," a boy was seen making his way up to the platform with a folded paper in his hand. Dr. Welling paused, and taking the paper, quickly examined it, and then having written a few words upon it, returned it to the boy, who slipped down into the crowd, while the lecturer resumed his discourse. Having sketched the philosophy of the brain organism in its connection with human character as shown in the ties of home, family, and friendship, he said:

"Now, that I may the better demonstrate the principles that I have set before you, I would ask six or seven gentlemen of the audience to step forward and occupy these chairs upon the platform. As on past occasions, I will request you to nominate the persons who will serve my purpose."

Four or five names were called, and their owners pleasantly consented to submit to the lecturer's hands. Then Mr. Jessup, a lawyer-farmer of the town, well known for his humor, rose and said:

"If the lecturer please, I see an old friend of mine down near the door whom I should like to see upon the platform. Mr. Brown, ladies and gentlemen, the good-natured, chubby-faced man there in the blue coat. Mr. *Brown*."

Mr. Jessup then sat down, and amid much laughter and repeated calls for "Mr. Brown," the man in the blue coat got up and walked slowly through the passage to the platform, where those already seated welcomed him dryly with, "Glad to see you here and with us, 'Mr. Brown.'" Before he took his seat, however, he turned to the audience and said:

"As Mr. Jessup yonder has insisted upon my being set in this conspicuous

place, I would ask him to join me in this unexpected kind of martyrdom."

There were calls immediately for Jessup, who came smilingly up and took a seat by "Brown."

The lecturer now went on with his demonstration, using measurements with tape and calipers to show the difference of living heads in size and shape in special regions; and briefly defining the parts performed by the organs of Friendship, Love of Home, Love of the Young, Conjugality, etc., meanwhile instancing this one or that one of his breathing specimens as illustrating his points, and thus, in the course of his remarks, making a brief outline of the domestic qualities of each. He particularly dwelt upon the farmer Jessup and "Mr. Brown," as they gave him the opportunity to draw a sharp contrast; and the frequent applause which followed a statement was an assurance of his correctness. Just before dismissing the gentlemen to their seats in the audience, he said:

"You must admit, ladies and gentlemen, that I am earnest in my endeavor to show the truth of my subject, and do not canvass for your good opinion by jests and witticisms at anybody's expense, and if you see reason for laughter in anything I may say, I take it that you mean to testify in that way to the correctness of my readings; but I would have you to understand that it is science which leads me to my conclusions, science which any one of you may acquire just as easily as he or she may acquire a practical knowledge of law, medicine, astronomy, chemistry, etc. You have but to study the principles and methods laid down in the text-books, and then the great volume of human nature lies wide open for your observation. Now here, for instance, are Mr. Jessup and Mr. Brown. One, as I have shown you, has nearly an inch more of breadth in the lower part of the backhead than the other, and the length of a line drawn from the center of the brain at the medulla here to the occipital spine here is three-quarters of an inch more in Mr. Jessup than in Mr. Brown. Both are hearty, cordial, generous men by the common consent of their neighbors; but their home dispositions differ much. Mr. Jessup is happy as a king in the midst of his family; home is a great, *big* word to him, and a child is a big item in the universe. I've but little doubt that he has a goodly number of olive branches of his

own, and probably two or three of other people's, for there is always room in his heart for one more, and in his home if its fire-place be wide enough, and fortune has denied them one under a father's roof."

A burst of applause followed this, for farmer Jessup had a large family of children, several of whom he had adopted, and was training to usefulness on his large farm. He was also the leading director of an orphan's home in the country town, and was often seen driving along with a little one snugly posted on the front seat by his side.

"Mr. Brown, on the other hand, has a benevolent consideration for children, but I think he has no reputation here or elsewhere as a nurse. He is evidently a man of culture and experience, and knows how things should be done at home and abroad for comfort and happiness, and no man likes more his upholstered arm-chair and quiet corner after the day's work is done than he; but at such a time he doesn't wish to have any robust babies sprawling on his knees or tugging at the ends of his neck-tie. If he be married it is likely that he found a wife somewhat later in life than is customary with the average man, and his wife is his intellectual companion as well as his housekeeper."

Another burst of applause followed, while Dr. Welling courteously handed his subjects down from the platform. All but Mr. Jessup, who remained, and when the noise had subsided the latter said:

"It is due to the lecturer to say that I had plotted a little against him, as my friends in the audience doubtless concluded, when I addressed 'Mr. Brown.' Here is a bit of paper which I sent up to Dr. Welling with this question: 'Will the lecturer be pleased to inform one of his audience if he knows Dr. Whipple?'

"And this is his answer: 'I have heard of the doctor, and may have seen him, but not to know him.' On this foundation I nominated 'Mr. Brown' as a suitable candidate for the lecturer's experiment, and thank him for his ready compliance, and the audience for its immediate appreciation of the joke and the neat way in which it was worked. Evidently Dr. Welling hadn't the slightest suspicion that in 'Mr. Brown' we had offered up our good-natured, bachelor physician to his scientific manipulations; and it is due that we should apologize for playing the little game upon him. As for myself, I shall endeavor to make amends by acknowledging that he hit me very close, and this is the first time to my knowledge that he and I ever met."

Mr. Jessup then sat down, and a buzz of approval went through the audience, which was mingled with cries of "Dr. Whipple! Dr. Whipple!"

The doctor got up, pulled out his handkerchief, blew his nose, and proceeded to say in his deliberate fashion:

"I will confess that I have been greatly disappointed to-night by the remarks of the lecturer. I came here at the instance of two or three acquaintances who told me that if I didn't hear him before he left Mapleville I should lose a good opportunity. I say I have been greatly disappointed, because I have heard an exposition of mental science in which I can pick no flaw; whereas about all I had ever heard of Phrenology before, from the few traveling lecturers who have dropped into Mapleville, has impressed me that it was arrant humbug. I went upon the platform for the purpose of watching the lecturer closely, and if the opportunity offered to ask him questions if he said anything that didn't seem to me in accordance with science. Most of you know that if I'm not much disposed to pet children, I do like a little lively discussion." (Here the people laughed heartily in assent). "Well, I must confess that I soon found that the lecturer had me on the hip about the cerebral organism, and that I was a little rusty in my reading, so I concluded to let him alone. I'm obliged to him for his discretion in showing up 'Mr. Brown's' peculiarities, for, to tell the truth, I was a little afraid he'd go further in his revelations and make me feel very uncomfortable before so many people who know me, I've no doubt, better than I do myself. I must say that Dr. Welling's method is scientific and open, and his readings of character, as illustrated to-night, have no guess-work or hocus-pocus in them. I had no idea before that Phrenology was a matter of the line and plummet, and must reverse my old opinions and say that the true phrenologist is a teacher of truth and righteousness. I see my old friend of our Presbyterian pulpit nodding his head to this, so I feel I'm quite safe in asserting it."

"Good for you, Dr. Whipple," was shouted by some one as the physician reseated himself amid clapping and laughter.

Dr. Welling then made some graceful remarks on the pleasure which the course at Mapleville had given him, expressing his regret that his engagements at other towns prevented him from remaining longer, and then dismissed the audience.

CLARE.



MILK AS FOOD.—No. 2.

WITHOUT pursuing the theoretical argument further, we stop to look at some considerations of a more practical nature. To the advocate of the free use of milk, we would say: Why that bad taste in your mouth? that brown fur upon your tongue? that rank odor from your body? that dull feeling in your head? that drowsy stupor after meals? Can you give a satisfactory answer? Can you tell why they who use only water as a drink, and drink water only when thirsty, rarely or never are troubled with such symptoms? Is there any other answer to be given, than that milk is highly organized animal matter, which becomes rapidly putrescent when subjected to a temperature like that of the blood, and which is carried by the circulation through every organ and every tissue of the body? You have noticed none of these results in your case? perhaps not. Users of tea or coffee, of beer or brandy, of tobacco or opium, often fail to see any of the deleterious effects upon themselves so generally ascribed to the use of these popular, but hurtful luxuries. Possibly, with strong digestive powers and great physical activity, all the milk used in rare cases may be well assimilated, and none of these unpleasant sequences be observed. But that, in most cases, they do exist, will hardly be questioned by any careful and impartial observer; and when, as is too often the case, cross and negligent attendants, untidy milkers, and slovenly dairy-

maids, with filthy, badly-lighted, and badly-ventilated stables, or no stables at all, foul and decaying provender, impure water, insufficient exercise, and uncomfortable conditions generally, combine their influence, the conclusion is inevitable that the supply of milk can not be of the best quality, if fit for use at all. That the lacteal secretion serves as a vehicle for the elimination of impurities from the body, does not admit of a doubt. Note the odor and taste of turnips, cabbages, wild garlic, ragweed, etc., in the milk and butter of cows feeding upon them.

These disagreeable odors and tastes are not the only things excreted in this way. Poisons, some of them of the most deadly nature, are thus carried off also. Before the woodlands were improved in the now famous Blue Grass region, in Kentucky, cattle running at large often suffered from short supplies. The early opening of the Buckeye buds, and the dropping of the mature fruits in their season, often tempted the hungry animals to feast upon them. Cows giving milk freely generally escaped injury; but the calves feeding upon their milk, and dry cows, did not fare so well. "The cows, or the calves, are Buckeyed," was often heard there in those days. Many recovered from the poisoning, but some died. In those localities where that mysterious disease known as "Milk Sickness" prevails, or did prevail in times past, a still more convincing illustration may be

found. Cows giving milk rarely have the disease, while their calves, and the whole family of the owner, feeding upon the milk, take the "Trembles," as it is called. Dry cows are also quite subject to it. They who know anything of this malady, need not be told that it often terminates fatally, both to the human subject of it and to his domestic animals. Without the use of milk and butter, many persons live in the same localities with impunity.

A gentleman and lady who spent some years as missionaries to the Indians where Omaha city now stands, long before the aborigines had been crowded from the homes of their fathers, are responsible for this statement: "Most of the whites connected with the mission, and with the Government agency, lived upon high and well-drained localities. The best pasturage was on the low grounds along the river and its tributaries, where fogs and malaria prevailed. The cattle grazing on these low lands being regularly milked, seemed free from disease. Persons connected with the mission and with the agency were subject to agues and intermittents only when they used milk as a part of their diet, and all such had it."

How can this be accounted for, except on the ground that the malarial poison was transmitted to them through the milk used as food?

The fearful consequences of using impure milk, and the general prevalence of its use, is occasionally brought to light by an examination of the condition of city dairies, and an inquiry as to the health of families patronizing them. A few hours spent in the study of the reports of such investigations would be interesting and profitable to any one seeking information in this direction.

Some eight or ten years since, the medical journals of Great Britain and this country contained an interesting and instructive report of an investigation into the causes of typhus fever, as it prevailed at Islington, near London. The number of cases was about 160, and nearly all belonged to families taking milk from

one dairy. The few exceptional cases had taken meals and used milk with such families. The dairy was examined and found apparently in good condition. A more careful search revealed a tunnel, cut by rats, underground from beneath the drain at the rear of the stables, and opening at the other extremity into a tank at the opposite side of the yard. The water in this tank seemed pure, and was used for rinsing milk cans. In dry weather the cows were sometimes watered from it. These apparently trivial causes were deemed sufficient to account for the prevalence of the fever, and with their removal it ceased in that locality.

This case is briefly mentioned on page 49 of "Wilson's Handbook of Hygiene," where reference to the outbreak of scarlet fever at St. Andrew's, and of enteric fever at Perinth, in 1870, are referred to, and the distribution of the fever-poison accounted for in the same way. It is impossible to tell to what extent contaminated milk may be responsible for the dissemination of disease germs in any case, and it may play an important part in many cases where it is least suspected.

The conclusion from all this, and much more which might be added, may be briefly summed up as follows:

1. That milk is not natural food for adults.
2. That cows' milk is not natural food for human beings of any age.
3. That while, with some modifications, it may be the best available substitute for the natural food of infants, it should only be used when a substitute is indispensable.
4. That while good milk is better than many other things in use, it is wiser neither to use the milk nor the other things, when better food can be obtained.
5. That milk is often charged with the germs of disease, and with poisonous excretive matter, which are often unsuspected, and which, if suspected, could not be easily detected till their results are developed in the form of contagious or infectious disease.

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FALSE EXERCISE.

WE use this term to express a contrast to natural exercise. Every part of the system requires exercise, that it may have health and vigor; and in order that exercise may promote health, it should generally be gentle, not violent. Animals, if left to themselves, take exercise that is general in the main; they run, frolic, kick up their heels, and play fight, and thus set an example for human beings, who contrive methods of partial exercise, and thereby produce partial muscular culture, and sometimes overtax one part of the system while the other parts have too little activity. We have entered gymnasiums and seen young men struggle to put up dumb-bells weighing perhaps a hundred pounds. Now, this requires a very powerful effort, and tends to wrench the spine and produce an undue exertion of a part of the muscles, those of the chest and loins in particular. Some may say that the gymnast alternates the arms; but we answer by saying that because one strains the muscles of the right arm by excessive lifting, there is no reason why he should strain the opposite muscles by undue lifting with the left arm. If men would lift a pair of dumb-bells weighing, say ten pounds, one in each hand, and thus make the use of the muscles equal, simultaneous, and harmonious, and all within the just limits of power, it would be much better than to strain and struggle to put up one heavy affair. A great objection to the usual exercises in the gymnasiums is that the chief desire seems to be to outdo everybody else, and only those who are specially well endowed with muscular power make any show at all. Those who need exercise most for purposes of culture and growth, are ashamed to perform their little labor for fear they will become contemptible in the eyes of the robust. To see who can do the greatest amount of lifting, or perform the most wonderful feat, seems to be the law of gymnasiums. We do not now speak of public professional gymnasiums; some of them no

doubt are managed judiciously, the exercises are not excessive; but in school gymnasiums, and in little home arrangements for exercise, there is a tendency to overdo in effort.

We remember a beam in the wood-house where "we boys," in our earlier days, would take hold with the fingers and pull the body up till the chin rested on the beam, and he who could do this the greatest number of times received the applause. We have tried this till the muscles of the arms, the pectoral muscles, and the abdominal muscles would be sore for a week. If we had performed this feat once or twice every day, that is, raised the body once or twice in a day, it would probably have been beneficial.

We had another violent exercise, which we called "pulling stick," which was performed by two persons seating themselves on the floor, putting their feet together, taking hold of a broom-stick and pulling against each other. We would pull till we could see stars, if the match happened to be pretty equal, and the muscles of the back would sometimes be so sore for a week that we could not stoop, or turn in bed. This is what we call unnatural exercise. Now, if a person would take that position and pull at a rope having a pulley and weight, and raise fifty pounds, or two hundred pounds, it might not be a bad movement exercise; but to have two strong young persons pulling against each other, having their pride and ambition and pluck called into play, the parties are very liable to injure themselves for life; get a weak back or a stitch in the side, or otherwise strain themselves.

We like what are called "free gymnastics." The horse, the calf, lambs, and kids have free gymnastics; but the horse when he becomes older and is subjected to the training and control of men, is sometimes obliged to haul immense loads up steep hills or through bad places in the road, which work is as bad for him as "pulling stick" is for young men. Free

gymnastics are a series of exercises without dumb-bells, clubs, or other apparatus. In this method persons are not obliged to overwork. To practice this, let the person stand erect, fill the lungs, and strike out first one arm and then the other, then both, then advance one foot and strike out with one hand and then the other, and thus take exercise with the shoulders, arms, back, and legs. Persons can thus take abundant exercise and bring themselves to a state of perspiration, and at the same time incur no danger of a strain. In these methods the action of the muscles is harmonious, and may be vigorous or gentle, and always useful; besides, it costs nothing in the way of apparatus or tuition, and can be taken every night and morning and at midday by teachers, students, clerks, literary men, and all girls and women.

A series of such exercises every day would tend to build up the muscular system better than taking irregular exercise at a gymnasium once or twice a week, where one is very apt to be led to over-exercise. When a person is half dressed in the morning, or half undressed at night, he can take exercise that will make the blood fairly tingle in the extremities, relieving the brain and vital organs, especially the digestive organs, and thus promote sleep at night, and growth and vigor during the day. Thousands of book-keepers and others in sedentary employment are suffering for the want of exercise; and though they may visit the gymnasium occasionally, they often feel too nervous, tired, and restless at night to go to the gymnasium, while if they were wise they could just step out of sight half a dozen times during the day and take three minutes of rapid, energetic exercise, without apparatus, without costing money or time, and without danger of overwork. This exercise could also be taken Sunday morning, Sunday night, any time, and almost anywhere.

The modern methods of *lifting* are excellent if they can be kept within judicious bounds. In New York and Brooklyn, and in other large cities, there are

several places where the lifting-cure, as it is called, is available, and as this is under the careful supervision usually of a doctor, excess is out of the question. One is not allowed to go beyond the limits of constitutional strength, and as the apparatus is fixed with springs, it isn't exactly a dead weight. By lifting this slowly, as it ought to be, every muscle can be brought into simultaneous action and harmonious requisition. We have no doubt that the effect is most salutary. But human nature is such that it becomes perverted; there is a desire for strife and superiority which leads one to try how much he can do. These lifting machines, however, do not offer much opportunity to strain the constitution by extra effort, as putting up dumb-bells would, because the lifting is done in such a way as to use all the muscles equally.

Children if left to themselves make their exercises general and harmonious; but even little girls in jumping the rope, learn to count, and see who can make the greatest number of jumps, and some have been known to keep this up until they fainted, and in one or two cases sudden death has occurred from heart trouble by merely jumping the rope.

People as they advance to old age should take easy, active exercise. One who walks considerably, keeps his feet and legs in better condition than those who keep themselves housed up and sit a great deal, or always ride when they can. Nothing shows age more than a tottering step, and he who keeps his legs in good working order by a good deal of walking, manages to keep up a very general circulation, and, of course, promotes the general health, and in this way will avoid many of the pains which age is usually made accountable for. If a man use his bones and muscles as he advances in years, he is not half as likely to fall; or if he fall, to break a bone, because the bones are kept in healthful condition by means of daily exercise. Everybody knows how, if the arm be suspended in a sling, from any cause, it becomes soft and flabby. In the same way we think that

the bones become weak and brittle by non-use, nature declining to furnish them with food or nutritive support if they are not called into use. If an elderly person can stand well on his feet, be brisk and nimble in walking up and down stairs, he

not only has more comfort and independence, but appears better, more vigorous, and younger, and isn't half as liable to accidents as those are who, by taking but little exercise, become clumsy, awkward, and ungainly in their walk.

NELSON SIZER.

HUMAN OBLIGATION IN OUR SOCIAL RELATIONS.

AN interesting theme of inquiry is, How much of human responsibility and human obligation grow out of our relations to each other as social beings? And further, How much of right and wrong, of good and evil, have their origin in the social system, the creations of that system, and would not exist only for and because of it?

Let us suppose that man could exist as a perfect recluse, entirely and absolutely isolated from his fellows, uninfluenced by them, and ignorant of their existence. If such a condition were possible, to what extent would obligation and responsibility cease? moral law and conscience become nugatory and inoperative? His conduct would be regulated alone by his physical wants and necessities; that which conduced to his physical comfort and present good would be right, and the contrary wrong; or rather, the first would be the only good, the latter the only evil. In this condition would not conscience be dormant; or, in other words, not being needed, would it have an existence?

I leave out of the question any suggestion as to his relations with his Creator. What they might be will not be here considered. It is, however, not likely that he could have any very definite or clear conceptions of what he was, or how he came to be such.

Then, is our social state the creator of our consciences? Is it the originator of good and evil in the world? Are holiness and sin only the outgrowths of circumstance in our social condition? Thou shalt not steal; thou shalt not kill; thou shalt not covet—all the commandments

nearly—are based on our condition as members of human society. Is it true, then, that society governs, and must govern, absolutely? It would seem so. Society makes its laws, from which there is no escape. As it is impossible for us to exist except as social beings, so it is impossible for us to escape the responsibilities and obligations which society imposes.

Is it true, therefore, that society not only governs and must govern absolutely, but that it defines right and wrong, good and evil, for us, and builds up our moral code? And have we, as individuals, no voice in the matter?—have we no more voice in the matter than the drop of water has in causing the roar of the waves? And as the drop of water is lost in the ocean, so our individuality is lost in the great volume of associated humanity. Nor does the comparison end here. As the wave or the tide forces the drop hither and thither without any agency of its own, so is the individual ruled and controlled by the all-powerful and ever-acting force belonging to our social state.

Again, in each the force is physical in its ultimate. For, however much we may descant upon the law of love and moral suasion, it is physical force that keeps our social system from a state of anarchy. Moral precepts and statute laws and constitutions, which we call government, are good and necessary as defining our obligations and duties, but they are as ropes of sand unless backed and maintained by the strong arm of physical power. Thou shalt not steal, is good as a moral or statute law; but it needs physical force to render it effective. The truth is, all hu-

man government must, in the nature of things, be based on force.

Yet it is not safe to say that the individual will must be bound by all that society demands. And it is perhaps one of the hardest problems to solve in the whole system of ethics to determine the

point at which the individual will shall cease to operate, and the edict of society assume control.

These thoughts are thrown out, thus crudely, in the hope that some abler pen than mine may take them up at length in a future number of the JOURNAL. T. G.

BUTTER AND OLEOMARGARINE.

THESE two substances are much alike in the respect of being, aside from the salt put in to give them a flavor, entirely composed of fat and water. This fat is simply heating material when introduced into the human body; but as the bread and vegetables and flesh commonly used as food contain a large proportion of fat or oil, butter is an unnecessary adjunct to a meal. Probably no article gives the housekeeper more annoyance than butter, so various are the tastes of people who use it with regard to its quality. Two packages may be equally good and of equal price, but one will be accepted as excellent and the other rejected as abominable. Now that oleomargarine, or the butter manufactured from animal fat, has become a prominent article of commerce, the difficulty of procuring good, "wholesome" butter is greatly increased. Many housekeepers look with suspicion on even that which pleases their palates, so close is the artificial product to that derived from milk.

Many ways have been suggested for the detection of the oleomargarine. One of the best is the microscopic test. Under the glass, milk-butter shows a mass of globules similar in size and appearance, with intermediate layers of salt and water. Oleomargarine shows a mass of what appears to be fan-shaped and fibrous crystallizations entirely different in character and appearance from butter. Another test, commended by Professor De Smedt, is the following: A piece of oleomargarine, the size of a walnut, is placed in a wine-glass and ether poured on sufficient to cover and dissolve it, which is hastened by stirring with a spoon. The whole becomes soluble, but the salt is immediately precipitated, when the liquid mass

is poured off into a saucer, or, what is better, a small glass plate or saucer. The work of evaporation commences at once, and continues until every trace of the ether is gone, leaving the stearine or tallowy substance openly exposed with its offensive odor and appearance. The character or appearance of good butter is not changed by a similar test; the fatty substance left after the evaporation of the ether retaining the odor of pure butter totally unlike that of the stearine from oleomargarine. This test Professor De Smedt thinks better and every way more satisfactory than by the microscope. As a general thing, however, it is claimed that the artificial article is not so dense as pure butter, and usually has a whitish appearance on the outside. So far as the effect of either sort upon the health is concerned, we suspect that there is little or no difference. Some chemists, in fact, have stoutly asserted that the oleomargarine is purer than the ordinary butter.

It seems true, at any rate, that the factory article is working its way further and further into the provision trade, and is therefore becoming extensively used: a state of affairs which indicates that people are either unable to detect a marked difference between it and milk butter, or that the difference in taste is not commensurate with the wide disparity between the cost of oleomargarine and the best creamery products.

On the whole, it would be better if butter were not eaten at all; the best contains so little real nutrition that it is a most expensive article for the table, and its liberal use in cookery and otherwise is generally attended with more or less functional disturbance in the stomach and liver.

THE LITTLE SHOES DID IT.

A YOUNG man, who had been reclaimed from the vice of intemperance, was called upon to tell how he was led to give up drinking. He arose, but looked for a moment very confused. All he could say was, "The little shoes, they did it." With a thick voice, as if his heart was in his throat, he kept repeating this. There was a stare of perplexity on every face, and at length some thoughtless young people began to titter. The man, in all his embarrassment, heard this sound, and rallied at once. The light came into his eyes with a flash; he drew himself up and addressed the audience; the choking went from his throat.

"Yes, friends," he said, in a voice that cut its way clear as a deep-toned bell, "whatever you may think of it, I've told you the truth—the little shoes did it. I was a brute and a fool; strong drink had made me both, and starved me into the bargain. I suffered—I deserved to suffer; but I did not suffer alone—no man does who has a wife and child, for the women get the worst share. But I am no speaker to enlarge on that; I'll stick to the little shoes I saw one night when I was all but

done for—the saloon-keeper's child holding out her feet to her father to look at her fine new shoes. It was a simple thing, but, my friends, no fist ever struck me such a blow as those little new shoes. They kicked reason into me. What reason had I to clothe others with fineries, and provide not even coarse clothing for my own, but let them go bare? And there outside was my shivering wife, and blue, chilled child on a bitter cold Christmas Eve. I took hold of my little one with a grip and saw her feet! Men! fathers! if the little shoes smote me, how must the feet have smote me? I put them, cold as ice, to my breast; they pierced me through. Yes, the little feet walked right into my heart, and away walked my selfishness. I had a trifle of money left; I bought a loaf of bread, and then a pair of shoes. I never tasted anything but a bit of bread all the next day, and went to work like mad on Monday, and from that day I have spent no more money at the public house. That's all I've got to say—it was the little shoes that did it!"

Could there be a more powerful temperance lecture than this?

NOTES IN SCIENCE AND AGRICULTURE.

Antiquity of Wheat.—Wheat has been in use for bread since the earliest antiquity. Its origin can not be authentically traced, nor are the millions who use it much concerned on that head, as long as they have plenty of the flour which the nourishing article produces. It was introduced into this country, according to a writer in the *American Miller*, in 1539. As to its cultivation, this may be true, but there is good reason to believe that it was brought over with Columbus in one of his voyages at an earlier period. Its discovery is attributed to have been by chance on this continent, the story of which, as told by the *Miller*, runs in this way: A slave of Cortez found a few grains of wheat in a parcel of rice, and showed them to his master, who ordered them to be planted. The result showed that wheat would thrive well on Mexican soil, and to-day one of the finest wheat valleys in the world is found near the Mexican capital. From Mexico the cereal found its way to Peru. Marie D'Escobar, wife of Don Diego de Chauves, carried a

few grains to Lima, which were planted, the entire product being used for several successive crops. At Quito, Ecuador, a monk of the order of St. Francis, by name Jodosi Bixi, introduced the new cereal; and it is said that the jar which contained the seed is still preserved by the monks of Quito. Wheat was introduced into the present limits of the United States contemporaneously with the settlement of the country by the English and Dutch.

A Floating Island.—Among the many natural curiosities of Tuolumne county it is not generally known that there is a "floating island." Up in the "Siskiyou," lying like a pearl in the great mountain chain, is Squaw lake, a beautiful sheet of water, now utilized by a mining company as a reservoir. For many years the lake has been a favorite and delightful resort for fishing parties, and contained nearly in its center an island, comprising about an acre of ground, covered with luxuriant grass and a growth

of willow and alder. It was never dreamed that the pretty little island was not terra firma, but when the bulkhead across the outlet of the lake dammed up its waters, the island rose slowly until it had been elevated fully sixteen feet above its original level. It would be a question for the naturalist rather than the geologist to determine the age of this floating island, as it is evidently made up entirely of decayed vegetation. Perhaps at some remote period the roots of a tree, upturned by the mountain storm, drifting out in the lake, formed the nucleus from which the island has grown, but it seems singular that it should have remained anchored and unchangeable in its position. The locality is much frequented by pleasure-seekers, who will hereafter notice the increased elevation.—*Jacksonville Sentinel.*

What will be asked the Farmer.

—The editor of the *Prattsburgh (N. Y.) News*, very appropriately suggests to the readers of his lively paper that, "the next United States census will be completed during the month of June next, and there is hardly anything which will do more to render it easily taken and correct than for the farmers (from whom principally the statistics will be gathered) to begin now to prepare answers to the questions of the census-taker. He will want to know how much you had in 1879 of acres and bushels of wheat, corn, oats, rye, barley, buckwheat, and potatoes; how many bushels merely of pease and beans; number of acres and value in product of orchards and vineyards and small fruits; number of acres and tons of hemp and hay; bushels of clover, flax and grass seeds; acres and pounds of hops and flax; bees—number of hives and pounds of wax and honey; sugar-cane—acres, hogsheads of sugar and gallons of molasses; sorghum—acres, pounds of sugar and gallons of molasses. Of the crop of the calendar year 1880 the officers will want the number of fleeces and pounds of wool; pounds of maple-sugar and gallons of molasses. Of the yield during the twelve months from June 1, 1879, to May 31, 1880, he will want pounds of butter and cheese, gallons of milk sold, value of animals slaughtered, value of products and acres of market gardens, value of forest products, value of home manufactures."

Experiments with Seed Corn.—A

subscriber sends us this apt selection: "Four boxes of earth alike in quality and exposure to light and heat, were planted at the same time with corn from a single ear and placed recently in a physician's office. In one box dry corn was planted; in another, seed previously soaked in clean warm water; in the third, seed that had been soaked in a solution of lime-water; in the fourth, seed soaked in chloride of lime and copperas water, equal parts. One week afterward, the dry corn had not germinated, the corn in the second box had just commenced to sprout, that in the third box was just showing its green

blades, and that in the fourth box had grown nearly three inches high. Copperas water will prevent birds and worms from eating the seed, and one pound of the dry copperas will soak seed enough for twenty acres."

Setting a Hen.—The following very funny letter appeared in a number of the *Poultry Monthly*. It may appear out of place in this department, yet—"Meester Verris—I see dot mosd efferpoty wrides someding for de shicken bapers nowatays, and I tought praps meppe I can do dot too, as I wride all apout vat dook blace mit me lasht summer; you know—oder of you don't know, den I dells you—dot Katrina (dot is mine vrow) und me, ve keep some shickens for a long dime ago, und von tay she sait to me 'Sockerery,' (dot is mein name), 'vy dond you put some of de aigs under dot olt plue hen shicken, I tink she vants to sate.' 'Vell,' I sait, 'meppe I gess I vill,' so I bicked out some of de best aigs und dook um oud do de parn fere de olt hen make her nesht in de side of de haymow, poud five six veet up; now you see I nefer vos ferry big up und town, but I vas pooty pig all de vay around in de mittle, so I koodn't reach up dill I vent und get a parrel to stant on; vell I klimet me on de parrel, und ven my hed rise up by de nesht, dot olt hen she gif me such a bick dot my nose runs all ofer my face mit plood, und ven I todge pack dot plasted olt parrel he preak, und I vent town kershlam; I didn't tink I kood go insite a parrel before, put dere I vos, und I fit so dite dot I koodn't get me out efferway, my fest (vest) vos bushed vay up unter my arm-holes. Ven I fount dot I vos dite sthuck, I holler, 'Katrina! Katrina!' und ven she koom und see me shtuck in de parrel up to my arnholes, mit my face all plood und aigs, she shust lait town on de hay und laft und laft, till I got so mat I sait, 'Vot you lay dere und laf like a olt vool, eh? vy dond you koom bull me oud?' und she set up und sait, 'Oh, vipe off your chin, und bull your fest town,' den she lait back und laft like she vood shblit herself more as efer. Mat as I vas I tought to myself; Katrina, she sbeak English pooty goot, but I only sait, mit my greatest dignitude: 'Katrina, vil you bull me oud dis parrel?' und she see dot I look pooty red, so she sait, 'Of course I vill, Sockerery,' den she lait me und de parrel town on our site, und I dook holt de door sill, und Katrina she bull on de parrel, but de first bull she mate I yellet, 'Donner und blitzen, shtop dat; dere is nails in de parrel!' you see de nails bent down ven I vent in, but ven I koom oud dey schticks in me all de vay roundt; vell, to make a short sthory long, I told Katrina to go und dell naypor Hausman to pring a saw und saw me dis parrel off; vell, he koom, und he like to shblit himself mit laf too, but he roll me ofer und saw de parrel all de vay aroundt off, und I git up mit half a parrel aroundt my vaist; den Katrina she say, 'Sockerery, vait a little, till I get a battern of dot new oferskirt you haf on,' but I didn't sait a vort. I shust got a nife oud und

vittle de hoops off und shling dot confoundet ole parrel in de vood pile.

"Pimeby ven I koom in de house, Katrina she sait so soft like: 'Sockery, dond you goin' to but some aigs under dot olt plue hen?' den I sait, in my deepest voice, 'Katrina, if you efer say dot to me again I'll get a pill from you, help me chiminy cracious,' und I dell you she didn't say dot any more. Vell, Mr. Verris, ven I shtep on a parrel now, I dond shtep on it, I git a pox.

"Werry drooly yours,

"SOCKERY KADAHOUT."

Prohibition of the Telephone in ENGLAND.—How British "Conservatism" works against the practical and useful sometimes, is illustrated in the fact which was announced by the London *Times*, that the English Government is about to take measures practically equivalent to a prohibition of the telephone, or which at least will put a powerful check upon the extension of its use. There are no telegraph companies there, but the whole telegraphic business is under the government control solely, and combined with the post-office, while at every post-office there is a telegraph office also. The post-office administration has found that the extension of the use of the telephone considerably decreases the revenues of their business, because when people can talk over the wire they don't want to send expensive telegrams or letters, with long delayed answers, and it has become a legal question if the telephone be not an infringement upon the government privilege of transmitting telegrams as well as letters.

How is this for the enlightenment and liberty of the "tight little island?"

Growth of the Eucalyptus.—Strangers visiting Oakland and Alameda notice graceful trees standing much higher than any of the ancient oaks. These are the famous Eucalypti, which, although planted only ten or twelve years ago, have shot up into young giants. Some of these are seventy feet in height, measuring seven feet eight inches to seven feet eleven inches in circumference three feet above the ground. It became necessary to remove one in Alameda not long ago, to make room for improvements. The tree, only ten years old, measured twenty-six inches in diameter at the collar, with a long tapering trunk, fit for a saw-mill, at least twenty feet in length. Some of the timber was shown to a carpenter, who, after a deliberate examination, pronounced it hickory, having all the toughness, and, as the carpenter expresses it, "cheesy" cut of the best ash or white oak. There is nothing, unless it is a mortgage on one's homestead bearing two per cent. per month compound interest, that grows as fast as a Eucalyptus, and it is not improbable that a well-planted grove of them would overtake and capture the mortgagor. An amount of timber equaling one cord of wood being planted, the growth will be for the first year eighteen

cords; the second, fifty-four; the third, one hundred and twenty-five; the fourth, two hundred and fifty; the fifth, four hundred, and so on. No other timber known grows with this rapidity. Flourishing in all kinds of soils, and equal in quality to the oak and hickory, it bids fair to be of the greatest value to California, which has much need of a timber suitable for wagons and machinery.

"How(e)" to Clean Lamp-Chimneys.—"Howe" tells the *Inter-Ocean*: "I have been night operator on railroads for over twelve years, and know how to clean lamp-chimneys, and want to tell the 'wimmin folks' how to do it. Whittle out a stick half an inch square, and, say, a foot long. In one end drive four or five small nails, brads, or small tacks, letting them project a quarter of an inch, then set your lamp-chimneys for a moment where they may become cool as possible; next take a piece of soft rag, fold or twist it into a bunch, place it in the chimney, and taking your stick place the end containing the nails on the cloth and it will be seen that the stick acts as an arm, and the nails as fingers, to grasp the rag. Now all that remains is to moisten the inside of the chimney with the breath and rub, repeating the breathing into the chimney often as necessary. I can clean as well and twice as quickly this way as by water or powders. Then lay your stick and rag away for another time. Try this, and with a little practice you will be delighted with the ease with which you can make a chimney sparkle."

On the Use of Plaster of Paris.—The plaster may be made to "set" very quickly by mixing it in warm water to which a little sulphate of potash has been added. Plaster of Paris casts, soaked in melted paraffine, may be readily cut or turned in a lathe. They may be rendered very hard and tough by soaking them in warm glue size until thoroughly saturated, and allowing them to dry. Plaster of Paris mixed with equal parts of pumice stone makes a fine mold for casting fusible metals; the same mixture is useful for encasing articles to be soldered or brazed. Casts of plaster of Paris may be made to imitate fine bronzes by giving them two or three coats of shellac varnish, and dusting on fine bronze powder when the mastic varnish becomes sticky. Rat holes may be effectually stopped with broken glass and plaster of Paris. A good method of mixing plaster of Paris is to sprinkle it into the water, using rather more water than is required; when the plaster settles, pour off the surplus water and stir carefully. Air bubbles are avoided in this way.

Des Cartes' Cranium.—It has been asserted that this great French philosopher had a small brain, thus giving the lie to Phrenology. Dr. Le Bon finds the cubic capacity of his skull to be 1,700 centimetres, which exceeds by 150 centimetres the average of Parisian crania of the present time.—*Exchange.*



MRS. C. FOWLER WELLS, *Proprietor*,
H. S. DRAYTON, A.M., *Editor*. N. SIZER, *Associate*.

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CABINET COLLOQUY.—No. 8.

PHRENOLOGY AS A SCIENCE.

A LATE visitor at our rooms expressed himself "much entertained" by the unique collection of busts and portraits upon the walls, adding, with a smile of ill-concealed cynicism :

"I can not help wondering how it is you so zealously prosecute a business which has no scientific basis."

"Are you conversant with the subject which is here illustrated?" we asked.

"Well, no, I can not say that I have taken much time to look into Phrenology; but then, you know the weight of scientific authority is against it," he replied.

"We know that some prominent writers have made disparaging allusions to it, with scarcely a show of argument, and others have simply adopted their dicta. As for a thorough-going endeavor to refute its principles, we are not aware of one since the days of Sir William Hamilton, and if you know of anything recent in this line, we should thank you for the reference to where it can be found."

"Really," said he, "I can not give you any such reference; but it certainly is true that in scientific circles your subject is not regarded, at least generally, as belonging to the domain of science."

"We are aware, sir, that there remains a good degree of the old prejudices against Phrenology, which once greatly hindered the work of its early advocates, and that they have to-day assumed the mantle of science. May we ask you what you understand by 'science'?"

"I regard science as that comprehensive term which relates to the demonstrated facts of nature."

"Very good; we suppose a lexicographer would define it in some such terms as these: Knowledge arranged or classified according to its relations to general principles, or truths. Science fundamentally means *knowledge*. Now, knowledge of nature is obtained through observation of physical phenomena. A peach-tree has certain characteristics; they are seen in its mode of growth, wood, bark, leaf, flower, and fruit, and when once fully noted by an observer, they enable him to distinguish the peach from other kinds of trees wherever he finds it. Deposits of gold occur in connection with certain quartzite rocks, and wherever those rocks abound gold exists. These are facts, with definite relations, and as such form part of human knowledge or science. Now, wherein do the data of Phrenology differ philosophically in their origin from these generally acknowledged facts?"

"Why," returned our visitor, "the difference between Phrenology and the sciences of pomology and geology is marked, in my opinion. Men have simply gathered together the results of investigation with regard to them, and drawn inferences from them which are subject to the

revision of anybody who may devote himself to their study. But the facts being supplied by nature are positive, and although observers may differ a little in their methods of classification, fundamentally they agree. The data of Phrenology, however, are variable, no two heads being precisely alike; and then, your doctors appear to have been more anxious to formulate a beautiful symmetrical system than to follow nature. Hence, the theory is more fanciful than real. This, I grant, is not my own opinion, but the opinion of others for whose authority I entertain high respect."

"We understand you, for nearly all of those who protest against the scientific character of Phrenology are in your position. They are not personally conversant with its principles or its history. They have the impression that Gall and Spurzheim formulated its principles and organology in their study, and searched for parallelisms in human nature to sustain their already-made theory. This fancy is entirely on the side of the skeptics, for the fact is that the first phrenological observers were trained physiologists, and proceeded in their study of mental phenomena just as the student of natural history does. They did not entertain any preconceived notions as to the parts of the brain in which certain of the faculties were to be looked for, but merely observed and noted facts, until a vast array of data were accumulated. When they began to classify these, with the view to mapping the brain, it was found that organs of a like class grouped themselves together; the Intellectual, for instance, all lay in the anterior lobes; the Social in the posterior region; the Religious sentiments in the superior parts; and the Propensities in the lower lateral

parts. This fact was sufficient in itself for the formulation of the science of mind. Now, good sir, if I say to you that a large development of a particular region of the head is invariably accompanied with a certain characteristic, is not this co-ordination of phenomena perfectly accordant with the canons of science? Suppose that you knew a man who was given to paroxysms of rage, which put physicians entirely at a loss for their explanation beyond the opinion that some disease of the brain was their cause, and a learned phrenologist, on being invited to examine the man, should say that the location of the disorder is in the region of the ear, the organ of Destructiveness being abnormally excited. Suppose, further, that in accordance with this diagnosis, inquiry should be made, and it were found that the man had been struck in sport with a cane some time before, the location of the injury being at the place designated by the phrenologist. Suppose now, further, that a surgeon should trepan the skull there, and find, on lifting the excised portion, a spicula of bone half an inch long which had penetrated the convolutions and caused the excitement. Suppose, further, that on the removal of this source of irritation the man began to improve in general health, his fits of rage ceased and he was the gentle, quiet person he had been known to be before the injury. Could you, with all this in view, deny that the diagnosis of the phrenologist possessed the qualities of true science? Yet this is but the rehearsal of an actual occurrence recorded by Dr. A. L. Wigan in his "Duality of the Mind," and is one of hundreds of cases in which disease of the brain has confirmed the phrenological localization."

"Candidly," said our visitor, "this method of putting the case is purely scientific; and if your deductions have been obtained in this way, I can not see how the learned generally avoid recognizing Phrenology as among the sciences."

"No principle, especially that of localization, has been formulated, except as a necessary deduction from thousands of facts, and we invite the skeptic and the objector to go over the ground and see for themselves whether or not it is truth we advance. You will find, if you consult the history of our subject, that many of Phrenology's staunchest advocates were at one time among its bitterest foes; but being induced to look into it to examine its groundwork, they were converted. If scientific men showed half the toleration for Phrenology that they exhibit toward mere theories in astronomy, geology, biology, etc., we should have them all on our side, for the data they readily accept in support of their favorite theories are not as definite, abundant, and convincing as what Phrenology arrays in its behalf."

"You appear to have a very considerable following, and doubtless number many representatives of the learned professions?" remarked he, in a tone of inquiry.

"Yes, many distinguished physicians, clergymen, teachers, etc., accept the principles of Phrenology, and that fact in itself should go a good way toward counteracting the inherited prejudice and class conservatism, which appear to be the only real antagonistic influences. However, recent experiments in nervous function, by conservatives too, are strongly in our favor."

"You allude to those of Ferrier, I suppose?"

"Yes, Professor Ferrier in Scotland, Broca in France, and others, are feeling their way toward us, with the assistance of electricity. They are removing impediments, one by one, which they alleged were in the way to an acceptance of Phrenology, and it is most probable that ere long they will stand practically on our side, but with a formulary of their own devising. We will not object to that, however. 'The rose by any other name,' you know.

"Well," rejoined our visitor, smiling, "you can afford to be generous if you have been in the possession and enjoyment of so great a truth so long. But I have been occupying too much of your time, and quite forgetting, in the interest which your subject has suddenly awakened in my mind, an important business engagement. I must therefore bid you good-morning, in the hope of seeing you again soon, and obtaining some hints with reference to entering upon a course of study to acquaint myself somewhat with the doctrines and principles of phrenological science."

A "CORNER" WITH POSSIBLY GOOD EFFECTS.

THERE are instances in which unscrupulous men may be serviceable in promoting the welfare of society when they are only seeking to carry into effect certain motives of gain. These instances are rare enough we must admit, and we will admit also that the good done is no part of the intention of its workers; but an indirect outcome which perhaps they would rather not have occur. Everybody knows what a "corner" in commercial affairs means. A few men, thinking that

they see an opportunity to control temporarily the sale of some staple article of trade, combine to buy all there is of it in the market. If they succeed in obtaining such control, they of course advance the price according to their desire for gain, and they who need the article must pay the price to get it. This is a "corner," and whatever may be the business view of such an operation, when tried by high moral standards it is seen to be a trick so reprehensible as to merit the contempt of upright, honorable men. For instance, a few months ago, in the midst of a large export of wheat to Europe, certain "smart" dealers in grain contrived to "corner" that article of necessity so that for weeks several hundred vessels were kept at moorings in the neighborhood of New York waiting for cargoes. Probably 5,000 men suffered for lack of employment during that time, while the loss to the commercial interests of the country was great. If the men who engineered this "corner" made sudden fortunes by it, their gains were at the great loss and damage of a large number of others; thus illustrating the claim of philosophers like Mr. Ruskin that he who wins large gains in a short time does so at others' loss.

At this writing there is a rumor afloat that a "corner" has been effected in opium, and that the price, which has already been about doubled, will rapidly advance. The morality of this transaction is essentially no better than that of the one previously mentioned; but it will probably have the desirable effect of reducing the number of opium users, which has been on the increase for several years.

Can not these "smart" operators effect a permanent "corner" in whisky? We

should be glad to see that precious beverage locked up by a combination among the dealers so that a quart of it would cost twenty-five dollars. No doubt, even in that case, some would be found who could and would pay that much for their favorite "poison," but the rank and file of drinkers would, like the fox as he gazed at the inaccessible grapes, express their disgust with the liquid.

HAND READING.

A WESTERN man has lately made a bid for fame by publishing a little book on chiromancy. He entitles it, "Mysteries of the Hand," and assuming in the start that "the hand represents the man," proceeds to lay down a system of rules by which fingers, palm, and back are made signs of character.

Of course the idea is as old as the Zingaree race, and some noteworthy points have been made thereon by Desbarolles and other writers; but to formulate a system of philosophy upon the manual anatomy, and to ask us to accept it when there are better means for studying human character, well known and well attested, is at the least unnecessary. We do not deny that there is character in the hand; neither can it be denied that there is character in the foot. So, too, the nose, the eyes, the ears, the lips, the chin have their relations to man's psychology, and men have written with a profound show of learning on them. Further, the pose, the walk, the voice, the language indicate character, and, in fine, the whole physique from scalp to toes may be studied for its signs of the mental nature.

But all these have their degrees of doubt, and no two observers are to be found whose opinions so closely tally that

a rule may be established which may be implicitly followed. The body and its members may indicate the quality and the temperament; but the mental characteristics, disposition, appetite, intellect must be sought for at the organic source of their manifestation, the brain.

Having already at hand a system carefully formulated on grounds of reason and the facts of nature, why need we to resort to mere conjecture? We can rely upon the showings of the brain, why turn to hand or foot? It seems to us that those gentlemen who prepare books like "The Mysteries of the Hand" may find some amusement in the labor they assume; but the ultimate conclusion must be far from compensating for the time spent or wasted.

INSTRUCTION IN PRACTICAL PHRENOLOGY.

TEN thousand people are feeling the need of a better knowledge of human nature and human character, and not a few of these are anxious to take instruction in mental philosophy, at some expense of time and money; while some are resolved to make themselves thoroughly familiar with Phrenology, Physiology, and Physiognomy, so as to qualify themselves to preach, practice the law, or teach, or work successfully in other fields. It requires many years to learn to build a wagon, a ship, a house, to make a set of harness, or to buy and sell goods wisely, or manage any business which involves risk and responsibility. It takes years of study to learn the science of medicine or law. It is not strange, therefore, that few persons understand human character

In consequence of this need the Amer-

ican Institute of Phrenology was organized, and for the express purpose of teaching human science according to its latest developments and affording the fullest knowledge that is possessed on the subject. The next session, that for 1880, will open on the first day of October, and continue for about six weeks.

The aim is to prepare students for lecturing on Phrenology and Physiology, and for practicing mental science as a profession, although one-half of our students attend as a means of general culture, and to fit them the better to perform the duties of their profession and vocation, whatever it may be. If every theological seminary, every school of law, every normal school, and every business college had, in its course of study, careful instruction in Phrenology, it would be the most profitable part of their whole curriculum; because this science teaches human nature, and every profession has to deal with human character in some way, and he who understands the science of human character can most successfully relate himself to the world in general. As man is one great feature in all worldly affairs, he who understands him best will best fulfill his duty.

Any person who would like to obtain special information in regard to the course of study referred to, may write for a circular to the "American Institute of Phrenology," 753 Broadway, New York.

THE MILLERS' FAIR.—The millers are to have an Exhibition of their products in Cincinnati during June. Doubtless there will be a fine display of the different grains and grades of meal and flour, with illustrations of the many processes of manufacture. These gentlemen will have a good opportunity to show how excellent a quality of unbolted flour they can produce; and doubtless they will not be backward in this respect, notwithstanding the foolhardy attempt of some of them at a recent convention to demonstrate that superfine flour is more nutritious.

Our Mentorial Bureau.

"He that questioneth much shall learn much."—Bacon.

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. But one question at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of an early consideration.

IF AN INQUIRY FAIL TO RECEIVE ATTENTION within two months, the correspondent should repeat it: if not then published, the inquirer may conclude that an answer is withheld, for good reasons, by the editor.

WE CAN NOT UNDERTAKE TO RETURN UNAVAILABLE CONTRIBUTIONS unless the necessary postage is provided by the writers. IN ALL CASES, persons who communicate with us through the post-office should, if they expect a reply, inclose the return postage, or what is better, a prepaid envelope, with their full address. Anonymous letters will not be considered.

STUDENT.—E. F. S.—You can unite both subjects, and the study of one will help you to a better understanding of the other. A knowledge of anatomy and physiology are indispensable to a good phrenologist, and one can not be a thorough physician without a good knowledge of Phrenology.

SENSITIVE ORGANS.—ALTO.—Highly-developed organs, particularly those in the part of the brain which is classified as the semi-intellectual, are very sensitive to impressions relating to their special function—Ideality, Sublimity, Tune, among these are very impressible. A delicate nervous organization, too, has much to do with the thrills which they experience who hear powerful music.

HALF-WAY DIET.—B. S. W.—Too much grease is used in the cookery you describe. You will perceive by some of the recipes which have been recently published, that very little oily matter is necessary in the way of shortening. The best results are procurable with little or nothing 'n the way of carbon. There is enough of that element in cornmeal as it comes from the mill; and one whose digestion has become enfeebled should be very particular in making cakes with cornmeal. She should use very little lard or butter or oil; a little milk is all that is necessary, beside the trifling quantity of butter or pure fat to oil the pan. Your friend should use very little salt. As for lard, she should not recognize it at all as part of her dietary. If she be in any way affected with scrofulous humors, she should eschew grease as she would calomel.

GEOGRAPHICAL QUESTIONS.—J. W. G.—If there be any increase of weight on the part of the earth, it is due to the fall of inter-planetary

matter upon its surface. It is estimated by some observers that the amount of meteoric matter deposited in the course of a year is upward of two tons. Occasionally a huge mass comes hurtling from the spaces beyond our atmosphere. Not long since a Western farmer, who had gone out very early to look after his stock, was struck dead by a piece of meteoric iron weighing upwards of two hundred and fifty pounds.

Your second question should be referred to a good veterinary surgeon.

As for your third question, with regard to chickens, we would advise you to keep those kinds which do not sit, like "Leghorns," "Houdans," "Black Spanish," etc. One trouble which we have found with such fowls is, that when we wished to increase our stock we were compelled to borrow a common hen from a neighbor.

COMBATIVENESS AND DESTRUCTIVENESS.—W.—The main distinction between these two organs consists in the first being defensive, and the second aggressive in its nature. Combativeness gives courage in sustaining one's individuality, maintaining rights, privileges, etc.; Destructiveness gives force, executiveness, determination in carrying into effect one's motives and purposes.

CONSUMPTION.—A. P.—Predisposition to pulmonary consumption may be inherited; but, in spite of that, we are of the opinion that if measures are taken early in life, the disease may be arrested and the health in a great measure, if not entirely, restored. If the inquirer be well on in years and the disease has indicated itself, and it be known to be an inheritance, we are of opinion that the most that can be done for her will be to prolong life, but not cure. She should eat good food—that which is thoroughly nutritious, and take abundance of air out of doors, avoiding, however, over-fatigue or excess. She should live in an atmosphere that is dry—a mountain region rather than a level country, and well away from the sea, say three or four hundred miles.

OCCUPATION AND LONGEVITY.—J. M. P.—Statistics show that the farmer lives longer than the merchant; but we are of opinion that the longevity of the former is much less than it would be if all lived in accordance with hygiene.

SODA.—N. D. C.—Carbonate of soda or any other preparation of sodium is injurious to

the organization of man. It is a mineral, with toxic or poisonous characteristics. To be sure, soda makes biscuit light and beautiful to look upon; but we are impressed that it deprives the flour of a large portion of its nutritious effect, in that it arouses an excitement in the digestive organs which is due to an effort on the part of nature to eliminate the mineral. Soda is often administered by some physicians to correct stomach derangement, acidity, flatulence, etc., and its use, when persisted in, weakens the digestive power, lowers the general tone of the assimilative function, and so is productive of dyspepsia. We believe there are many people who are suffering from one form or another of dyspepsia, induced by their taking soda as a stomachic correctant in early life.

RESEMBLANCE TO PARENTS.—Phrenologists often say of a person, that he resembles his father or his mother. By what indications is that fact known to them? What characteristics or qualities would be implied as belonging to a person by the statement that he resembles his mother for several generations back? Please answer in the JOURNAL.

Answer: We published on the subject of resemblance to parents an elaborate article, extensively illustrated, in the PHRENOLOGICAL JOURNAL in 1857. Since that time we reproduced the article in the ANNUAL, which is now bound under the title "Combined Annuals," price \$2, and is a work which contains many other articles, equally interesting and important.

INSANITY AND HEALTH.—*Question:* Why does the body continue to grow in youth, when the mind is wrecked in insanity?

Answer: The examination of an idiot or a lunatic will show you that the health of the body, when the mind is feeble or deranged, is dependent upon the character of the insanity. There are a great many varieties of idiocy and lunacy. Physicians make a classification for convenience, which embraces three or four sorts of the first, graded according to the degree of imbecility. While of insanity, they distinguish three or four sorts, such as acute mania, or the condition of frenzy; mild or harmless insanity; melancholia or desponding, etc. It is the acute form which is particularly destructive to health; the subjects living in many cases but a few months if the disease persists. Phrenology makes its distinctions of idiocy and insanity dependent upon the organs of the brain which are defective or diseased. Some lunatics are cheerful and good-natured. They are the subjects of hallucination merely, one or two organs only of the brain being diseased. Others have an occasional spell of frenzy, which does not continue long, and for most of the time they are quiet and inoffensive.

Such persons are likely to live long and have good health.

STARCHED SHIRT.—*Question:* Will a shirt starched and ironed and laid away be more likely to become weak and rotten, than if not so prepared?

Answer: If the shirt be properly laundried and put in a safe place, we think it would last just as long as one made of similar materials and unlaundried. It seems to us that the starch, unless a very impure article, should preserve the fabric. We do not, however, claim to be infallible on this point, and if there be any among our readers who knows, let him speak.

MENTAL TEMPERAMENT AND CHILDREN.—A. B. K.—The predominance of the Mental temperament in the organization of the child, gives it character for quickness of discernment, fertility of thought, and capability for learning. This fact is fully covered in the works on Phrenology and the Temperaments. Very young children, naturally organized, are more fond of physical enjoyment than of study. Growth is their chief vocation; yet the Mental temperament may be exhibited very early by a child's inquisitiveness and aptness to learn.

EASTER EGGS.—J. K. N.—The practice of using eggs on Easter-day is so old that its origin can not be definitely ascertained. It appears to have been in vogue as far back as history goes, with the Jews and Persians and other ancient peoples. It is altogether probable that the use of eggs at this spring-tide festival was symbolical of the revival of nature. The term Easter itself comes from the old Anglo-Saxon *Eastre*, the goddess *Ostare* or *Eastre* being the personification of morning, and also of the opening of the year or spring. The Anglo-Saxon name of the season was *Eastre Monath*, and it is still known in Germany as *Oster Monath*. Many of its observances by Christian nations were derived from the old pagan worship of the goddess *Ostare*. In the ancient Church the celebration of Easter lasted eight days.

IMPAIRED VISION.—A. J. K.—When the eyesight is obscured by a sort of lace-work or web seemingly before it, that condition may be due to two or three causes—a weakness of the nerve; a diseased condition of the cornea, as a morbid growth; or floating matter in the crystalline lens. The condition is serious enough for you to ask the opinion of a surgeon.

THE "PROBLEM OF LIFE."—P. H.—We have not had an opportunity to examine this work of Wilford, but we have received good reports of it from those who have.

Several ANSWERS must be deferred to the next number.



Communications are invited on any topic of interest: the writer's personal views, and facts from his experience bearing on our subjects, being preferred.

A CONFESSION.—About nine years ago I received my first idea of the existence of Phrenology—that is, of its practical existence. I was then fourteen years old, and attending school in one of the rural districts of Missouri. There were five scholars in the school who could not succeed in arithmetic, and they were all from the same family. The three eldest had attended the school one or two terms a year, as far back as I could remember, yet not one of them had mastered the multiplication table or ever solved and explained an example in long division. I noticed that their foreheads were very narrow, and that those who succeeded well in arithmetic had broad foreheads. I noticed, also, that the heads of the most peaceable and benevolent boys were high, and of the former narrow between the ears, while those who were “on the fight,” as we expressed it, had broad, heavy-looking heads at the base. I told a friend of my discovery, and when I had finished he said, “You must be a natural phrenologist.” He then explained what Phrenology is, and loaned me two books—one a work of Gall, the other of Spurzheim. I feasted upon these for some time, and was so much interested that I procured the “Student’s Set,” and devoted most of my time to the study of the great science of man, and the more I studied the more I loved it. It has done more for me than any other teacher, explaining many things that were mysteries before, and would probably have remained so otherwise. It made the Bible appear an hundred-fold more glorious and real than all my Sunday-school teachers ever did, and taught me not only what I am and the laws that govern me, but helped me to obey them.

I was left an orphan at four years of age, and my health had continued poor until I studied Phrenology. Phrenology has been a parent to me. At the age when a boy is most likely to fall, it was my guide, and kept me from forming unworthy associations, for by it I was able to tell who was worthy and who was not. When I hear a man object to Phrenology on the ground that it is at variance with the Bible, I know that he knows but little about the one and nothing about the other.

SAMUEL HURST.

MUSICAL TALENT—ITS POWER FOR ENJOYMENT.—On a moderately cold day in the winter of 1878, as I was passing an old, dilapidated log-house, which I had passed many times before and found to be lonely and desolate, I was sur-

prised to notice that, on this occasion, it seemed to be inhabited by happy mortals, notwithstanding that its appearance and surroundings were of a character to impress the beholder with the idea that, if any persons lived therein, they must belong to the class of the sad and sorrowing.

To give the reader some idea of the destitution of the place, I will state that there were but a few sticks of wood in the yard; in the only sashless window hung an old garment, and in the doorless doorway hung a coarse blanket, swung tuck so as to close about half of the opening. Yet there were those inside of this desolate-looking house who seemed to be enjoying life to a good degree. Judging from the sounds and voices heard within, there were about six persons seated around an old-fashioned fire-place, two of whom were playing on well-tuned violins, while all joined their voices in a sweet, melodious song.

Had I passed this place after night without knowing how devoid it was of every indication of comfort, and had I heard the same sweet music and musical voices, I should have been impressed with the idea that it was the abode of comfort and refinement, as well as the home or temporary abiding-place of music-loving souls; but, as it was, there seemed to be pure enjoyment, and a good degree of soul-refinement, in spite of the lack of every other worldly comfort. Had I not been familiar with the principles of phrenological science, I might have said: “There can be no real enjoyment in such a place; they are playing and singing to drown the sorrows that burden their hearts.”

As it was, I could realize truly how pure and deep is the joy a cultivated talent for music can afford in every stage and condition of life.

WILLIAM W. STOCKWELL.

EDUCATION AS APPLIED TO MARRIAGE.—If we could but commence life with the ripe experience that comes with mature years, unhappy marriages would be a thing unknown. Seeing that this is impossible, our next efforts should be toward finding out from what causes certain results ensue, and so enable the rising generation to avoid the rocks upon which so many lives have met shipwreck.

As the physician, in order to cure, must know first the source from whence a malady springs, and so apply his knowledge to the place where it is needed; so must the thinker, eager to save others from the mind-maladies he sees on every hand, seek earnestly to know where lies the root of the evil he is anxious to correct.

Much has been written regarding the sacred institution of marriage which, by errors in individual judgment, has served to aggravate existing evils. In educating the young in the knowl-

edge of the laws that govern our earthly well-being, we meet with opposition from the start. Let the sober reader take the question home to himself. How many pitfalls and snares, how much of physical suffering and taint transmitted to offspring might have been avoided had some kind friend spoken frankly and intelligently in regard to the truth we were destined to learn by bitter experience.

But there is a class of parents who, while admitting the truth as we have stated it, shrink instinctively from a task so distasteful in itself, fearing, perhaps, their inability to do so satisfactorily. We would not wish to call this false modesty on their part, for they have been educated to view the subject from that stand-point.

To such we would say, look the question fairly in the face; in the light of the experience you have seen, is there not deep cause for interest in this subject? Should the parent still feel unequal to what he may recognize as a duty, he can still have recourse to the minds of those who have studied the subject in all its aspects, weighing well their words before transmitting them to paper.

Love is acknowledged as the strongest power that sways the human heart. He that best loves his offspring will see to it that no safeguard of future well-being is left uncared for. In order to live successfully, we must first of all marry successfully, and failing to note this important truth has cost millions of ruined lives. Could we but see the motives from which, spring so many deeds that shock our hearts and rouse our sense of indignation, how many might be traced directly back to an ill-assorted marriage. "But," says one, "Love is blind; how can we hope to govern or direct its movements?"

Here we take issue and reply, Love is far-seeing, Passion only is blind. There is a strange anomaly between the two as viewed by the majority of mankind, and though at first sight they may seem so much alike, investigation shows a wide disparity. Love waxes the stronger in the possession of its object. Passion, on the contrary, quickly fades into unconcern or merges into disgust. Love sees the virtues, and, attracted by them, passes lightly over the faults. Passion exaggerates the faults and is blind to the virtues. Love will but cling the closer to its idol though the world may despise and shun it. Passion at the first signs of impending storm leaves its victim to its fury. And yet the younger generation continues to take the two terms as having the same general character, and awakens to the truth only when it is too late. Therefore, we say, educate them in time; armed with the power to distinguish rightly, their reason will infallibly guide them to see the truth.

Love will ever be found able to withstand the severest test human agency can apply to it, but

the baser Passion, in moments of calm reasoning, will stand revealed in all its deformity.

True love never dies. Unforeseen circumstances may sweep its object from its presence, but once kindled the spark remains. If not rekindled in this world it will be beyond, for God Himself is Love. As certain fixed laws govern the universe, so does a wise Providence endeavor to instruct us. We know well that animals of different habits and instincts are compelled to follow the laws of their being. Yet man, grand in the possession of his God-given faculty of reason, sees not the lesson that Nature intends to convey.

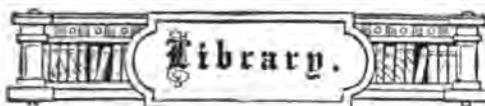
The familiar expression, "a cat and dog life," as applied to some ill-mated couple, is but a recognition of the principle we are striving to have noted. Alas! it exists to a far greater extent than the world at large ever think of. Pride, self-respect, or shame, interposes a screen between the abode of torture and a gaping public.

"A man is what his wife makes him," is an old proverb, and the reverse of this is equally true. In other words, to live happily they must exist on the same plane. It would naturally seem to follow that in the choice of a companion for life, no great disparity should exist in this respect. Let the reader, for instance, imagine the effect that would be produced upon a sensitive ear by a piano frightfully out of tune, for it aptly illustrates our meaning.

Love is claimed to be the law of contrast, but here again the popular judgment is at fault. Opposite tastes never serve to bring people together in unity; they must of necessity repel. The man of courage despises the coward. The man of honor has no sympathy with a rascal. On the other hand, we are drawn toward persons whose tastes are similar to our own.

Man was by nature destined to be a champion and defender of the weaker sex. Only folly and anarchy result from endeavor to reverse this rule. Women of tact born only of love, recognize this instinctively, and though sometimes evading it, always manage to appear to yield when in reality they have gained the victory. All men have a share of self-esteem born of the responsibility they feel. It is a part of their very nature, and rightly used brings joy and happiness to all around it. Man being therefore the stronger vessel, it would seem to follow, as a logical conclusion, that he should, in choosing a partner, select one with tastes similar to his own, though in a less marked degree. Especially should this be true in regard to the ruling principles of his mind. In other words, he should be one to whom the wife would naturally look up with respect, and not (as is too often the case) be the shivering victim of a curtain-lecture.

S. W. FEAROE.



In this department we give short reviews of such New Books as publishers see fit to send us. In these reviews we seek to treat author and publisher satisfactorily and justly, and also to furnish our readers with such information as shall enable them to form an opinion of the desirability of any particular volume for personal use. It is our wish to notice the better class of books issuing from the press, and we invite publishers to favor us with their recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

ADVENTURES IN PATAGONIA: A Missionary's Exploring Trip. By the Rev. Titus Coan, with an Introduction by Rev. Henry M. Field, D.D. 12mo, pp. 319. New York: Dodd, Mead & Co.

According to the terms of the introduction, the author is one of the most venerable of living missionaries, nearly eighty years of age, and has spent the whole of his ministerial life in the Sandwich Islands. Soon after embracing the ministry as his calling, he was sent to Patagonia, where he remained some months, exploring the country and studying the native tribes, with the view to determining the practicability of commencing missionary work among them. The field proving not as promising as he had been told, he returned home, and having married, set sail for the Sandwich Islands, where he settled permanently down to evangelical labors. Mr. Coan tells the story of his experience among the Patagonians in a simple, frank, yet lively style. Chapter IV. commences the record proper of his extreme South American doings, when on the morning of November 14, 1833, he found the whaler which had carried him from New York at anchor in Gregory Bay. The narrative is related in the order of a diary, as it were, from copious notes taken by Mr. Coan in the progress of his explorations among the wild people. Some memoranda are added to the account of later visits by travelers and scientific men to Patagonia; but the data concerning that almost desolate country are so few that Mr. Coan's reminiscences, although nearly fifty years old, have an entertaining freshness.

ALASKA AND MISSIONS ON THE NORTH PACIFIC COAST. By Rev. Sheldon Jackson, D.D. Fully illustrated. 12mo, pp. 327. New York: Dodd, Mead & Co.

We are pleased to announce this book to the reader, as we are of those who regard the acquisition of Alaska by the United States as a grand stroke of diplomacy, and one of the most brilliant events during Mr. William H. Seward's occupancy of the Washington State Department. The character of this vast Territory is graphically described by Dr. Jackson. Even far north, in the vicinity of Fort Yukon, the warmth of the sum-

mer clothes the land with verdure and flowers, and permits the gardener to raise a great variety of vegetables and fruits, while the southern regions—the Aleutian and Sitkan districts—offer to the colonist opportunities almost unsurpassed in any other country for agricultural, mining, and lumber enterprises. The ordinary maps do scant justice to the island wealth of the Alaskan waters. The great Alexander Archipelago, which extends 300 miles from north to south, and 75 miles east and west, contains over 1,100 islands. There are other groups of islands—the Kadiak and Aleutian being noteworthy. We are given many data from high authority concerning the resources of the Territory and its immense prospective value to the United States.

The efforts by missionaries to improve the condition of the natives of the Territory constitute the larger portion of the book. Such is the low moral state of the Alaskans that Christianity has a wide field there. Probably no other people can be found among whom women are more oppressed and degraded. In their behalf, schools and asylums have been already organized. At Fort Wrangell a Presbyterian mission was established in August, 1877, by Dr. Jackson and a lady, and it has done very much for the people of the region in which it is situated.

We commend the book to those who would have a realizing glimpse of this new and great section of our country, and to the philanthropist who would have the heathen Christianized.

THE FAITH OF OUR FATHERS. Being a Plain Exposition and Vindication of the Church Founded by our Lord Jesus Christ. By Rt. Rev. James Gibbons, D.D., Bishop of Richmond, etc. Sixth Revised Edition. Baltimore: John Murphy & Co.

This little volume is simple in style, but very winning in its method of presenting the principles of Roman Catholicism. It is a special plea, as indicated by the title, in behalf of the Church whose head is the Roman pontiff, and a comprehensive one, discussing Apostolical succession, Infallibility, the right to Temporal Power, Invocation of Saints, Sacred Images (in which the plea is weakest), Purgatory, the Eucharist, Penance, etc., and is generally characterized by frankness. The sectarian differences of Protestants are very strongly set forth, and made a premise for an argument in which unity and propriety are claimed for the Roman Catholic Church, and held up as conspicuous evidences of its superiority. The good Bishop does not state on which side intellectual enlightenment prevails more abundantly in this latter time; he makes no allusion to the perverting doctrines of Liguori, whose works so gratify the Pope that he has ordered them to be translated into French that they may be widely distributed; nor does he say to what extent the maintenance of the

Roman Catholic Church in America is due to Protestant enterprise and industry. In his strictures on the hasty marriages and unscrupulous divorces of the present day, he is not a whit too severe.

SIXTY-FIRST ANNUAL REPORT of the Trustees of the New York State Library for the year 1878. Transmitted to the Legislature, January 21, 1879.

This is an unusually interesting document, containing, as it does, in the elaborate report of the librarian, a deal of information concerning the libraries of Europe and the United States, and many excellent thoughts on the care of public libraries, the character of books needed, and the special wants of the Albany library. From 1855 the number of volumes has increased rapidly, there being now over 108,000 with 50,000 pamphlets.

PUBLICATIONS RECEIVED.

FAITH A RESPONSIVE CHANT. By Samuel Main Sawyer. Washington, Ind.

OUR HOME. A new monthly publication for the family, issued by Messrs. George H. Bradworth & Co., of New York. The first number promises well. Thirty or more pages are filled with a variety of reading matter relating to house-keeping and fashions, fancywork, social amusements, and miscellaneous literature. Price \$1.00.

THE ORIENTAL AND BIBLICAL JOURNAL. We welcome the first number of this candidate for public consideration, which will be issued quarterly, and is edited by the Rev. Stephen D. Peet, of Clinton, who is well known in biblical and archaeological research. Messrs. Jamison & Morse, of Chicago, are the publishers. Although technical in character, its matter is edited in a popular style. The number now at hand is quite rich in varied information, and very readable from beginning to end. Price \$2.00 per annum.

PURE WINE, FERMENTED WINE, AND OTHER ALCOHOLIC DRINKS in the Light of the New Dispensation. By John Ellis, M.D., author of "Avoidable Causes of Disease," "An Address to the Clergy," etc. Here is an additional contribution to the literature of Bible wines and temperance, written by a physician of experience and an author who is deserving of attention.

HARPER'S NEW MONTHLY MAGAZINE;
HARPER'S WEEKLY JOURNAL OF CIVILIZATION;

HARPER'S BAZAR; and
HARPER'S YOUNG PEOPLE.

Current numbers of all these publications have been received. The *Magazine* for May appears to us to be specially noteworthy among recent issues, both on account of its matter and the excellence of its illustrations. We are pleased also to mark an

improvement in *Young Folks*—that improvement consisting in its having of late reading matter of practical utility, as well as entertaining to its youthful readers. We can make this statement of but few juvenile publications now so widely distributed, as nearly all seem bent on being funny without regard to sense.

THE STANDARD SERIES. Ruskin's Letters to Workmen and Laborers. From *Fors Clavigera*. Parts 1st and 2d. Complete. Price 15 cents each. Messrs. I. K. Funk & Co., publishers, offer to Americans a cheap opportunity for reading Ruskin's views on labor questions. Scarcely an English writer can be named who shows more attractiveness of style, while, at the same time, he has a vigorous and original way of asserting himself.

PERSONAL.

ERNEST RENAN was lately invited to lecture in Westminster Abbey, and telegraphed across the British Channel the subject. The subject, as written by him, was "The Influence of Rome on the Formation of Christianity." According to the Rev. Jos. Cook, it was published in England as "The Influence of Rum on the Digestion of Humanity."

SARA BERNHARDT, the French actress, appears to be getting out of favor with the Paris public, and on account of her success in England shows a disposition to come to America. She would probably suit the crowd that waits on the walking-matches and concert-saloons; but we hope we echo the sentiment of the educated classes in saying that actresses of her notorious immorality are not wanted here. There are already a sufficient number of public performers among us whose influence is bad.

THE Rev. Dr. Samuel Osgood, one of the best known clergymen of New York, died suddenly, April 14, in his house No. 154 West Eleventh Street, after a sickness of thirty hours. He was born in Charlestown, Mass., August 30, 1812, and educated for the Unitarian ministry. Very early his eminent abilities were recognized, being in 1849 called to the Church of the Messiah in New York city. He was connected with that church for twenty years, and then withdrew from Unitarianism to enter the Protestant Episcopal Church. Besides his ministerial work he performed a large amount of literary labor, publishing several volumes, acting as editor for two or three religious publications, and contributing frequently to leading periodicals. His latest public work was the delivery of his paper on "Channing" before the New York Historical Society. He was a man of imposing presence, his manners being precise and courtly, and his conversation impressed the hearer with a sense of his culture and familiarity with the subject under discussion.

THE
PHRENOLOGICAL JOURNAL
AND
LIFE ILLUSTRATED.

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VOL. LXXI. OLD SERIES—VOL. XXII. NEW SERIES.

JULY TO DECEMBER, 1880.

H. S. DRAYTON, A.M., AND N. SIZER, EDITORS.

NEW YORK:
FOWLER & WELLS, PUBLISHERS, 753 BROADWAY.

1880.



“Quiconque a une trop haute idée de la force et de la justesse de ses raisonnemens pour se croire obligé de les soumettre a une expérience mille et mille fois répétée, ne perfectionnera jamais la physiologie du cerveau.”—GALL.

“I regard Phrenology as the only system of mental philosophy which can be said to indicate, with anything like clearness and precision, man's mixed moral and intellectual nature, and as the only guide short of revelation for educating him in harmony with his faculties, as a being of power; with his wants, as a creature of necessity; and with his duties, as an agent responsible to his Maker and amenable to the laws declared by the all-wise Providence.”—

JOHN BELL, M.D.

“To Phrenology may be justly conceded the grand merit of having forced the inductive method of inquiry into mental philosophy, and thus laid the permanent foundations of a true mental science.”—*Encyclopedia Britannica*, 8th Edition.



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DR. ARNOLD OF RUGBY.

DR. ARNOLD has come to be generally held up as in some way the patron saint of the school teacher, as the great exemplar of the profession. It is now many years since he died, but his fame increases as time rolls away, and references to him are daily of more and more frequent occurrence in literature. This is the surest sign of permanent reputation. Many men go off this stage of ac-

tion in an apotheosis of glory; but their fame gradually fades away, and proves to be only evanescent; while those whose reputation is laid upon a more substantial basis, grow in lustre from age to age. This being evidently the case with Dr. Arnold, it may be well to present a brief outline of his life and work, for the benefit of those who have not access to more extended treatises.

Thomas Arnold was born in the Isle of Wight on the 13th of June, 1795. His early education was confided to his aunt. In 1803 he was sent to Warminster School. In 1807 he was removed to Winchester College, where he remained until 1811, when he was elected as a Scholar of Corpus Christi College, Oxford. In 1815, when only twenty years old, he was elected a Fellow of Oriel College. At Oxford he distinguished himself, taking a first class in polite learning, and gaining the Chancellor's prize for the years 1815 and 1817. Having chosen the Christian ministry as his profession, in 1818 he was ordained a deacon in the Established Church. In 1819 he settled at Laleham, where he remained a number of years, taking young men as private pupils for the Universities. In 1820 he was married. One of his children is Matthew Arnold, D. C. L., the distinguished poet and critic, whose own brilliancy has reflected additional lustre upon the name of his father. In December, 1827, Dr. Arnold was elected head-master of Rugby; in June of the next year he took priest's orders, and in the following November received his degree of Doctor of Divinity. In 1841 he was appointed Professor of Modern History in the University of Oxford. He continued at the head of the Rugby school until his death, which took place on the 12th of June, 1842. These are the dates of the leading facts in the life of Dr. Arnold.

The most striking features in Arnold's character were fearlessness, independence, thoroughness, earnestness — in short, Christian manliness and devotion to duty. These qualities shine out in al-

most every line of his writings, especially in his letters. With all this, was a simplicity of character, a buoyancy and joyousness of disposition, that gave him a fast hold upon all who came in contact with him, and particularly upon the minds of the boys and young men who were committed to his care. The affection of these never died out of their hearts, and much of his correspondence was with those who had been his pupils. He had an intense love for young men; he delighted to have them with him, to walk with them, to bathe in the river with them, to share in their sports and enjoyments. Nothing can be more touching than the account given by Hughes of Tom Brown's feelings when he first learns of the death of Arnold; and that account all who can read between the lines know to be a transcript of Hughes' own feelings on that occasion. His companions could not understand Tom Brown's affection for his old master, though they too had been public school men. But their teacher had not been Arnold.

It was predicted upon the election of Arnold to Rugby, that he would change the face of education all through the public schools of England. That prediction he amply fulfilled. The place was one well suited to his natural tastes—"to his love of tuition," says his biographer Stanley, "which had now grown so strongly upon him, that he declared sometimes that he could hardly live without such employment; to the vigor and spirits which fitted him rather to deal with the young than the old; to the desire of carrying out his favorite ideas of uniting things secular with things spiritual, and of introducing the highest principles of action into regions comparatively uncongenial to their reception." He accordingly entered upon his school-work at Rugby with all his characteristic enthusiasm and earnestness, and in the course of his fourteen years there he stamped upon the institution the imprint of his own spirit, and made it forever famous in the annals of education. The secret of his success is found in his devotedness to

his work. "A school," says he, "like a parish or any other occupation in which our business is to act morally upon our neighbors, affords in fact infinite employment, and no man can ever say that he has done all that he might do." Again he says, "Education is a dynamical, not a mechanical process, and the more powerful and vigorous the mind of the teacher—the more clearly and readily he can grasp things—the better fitted he is to cultivate the mind of another."

Not only did Arnold change the face of public-school education in England, but his influence was scarcely less felt in other walks in life. His labors as a clergyman were also distinguished. He published no fewer than six volumes of sermons. As a Christian he was eminently devout and charitable. He was superior to all sectarian prejudice. He recognized as a brother every man that called himself a Christian. He took also a deep interest in public affairs. He was a profuse writer in the public journals, and published many pamphlets and treatises upon questions of the day. He was naturally a politician—not in the degraded sense in which the word has come to be used among us—but in the sense of one interested in and understanding the public affairs of his country; and he held, as he expressed it, that "the one thing needful for a Christian and an Englishman to study is Christian and moral and political philosophy," even though to acquire that knowledge he should be left so ignorant of physical science (much as Arnold valued the latter,) that he should think that the sun went round the earth, and that the stars were so many spangles set in the bright blue firmament. No private individual has perhaps ever exerted a wider and deeper influence upon public opinion than did Dr. Arnold. He abounded in labors. In addition to his work as headmaster of Rugby with its three or four hundred pupils, his efforts with both tongue and pen as a clergyman, and the active part which he took in the discussion of public affairs, he put forth a

critical edition of Thucydides, in three volumes; a History of Rome, in three volumes, written with great minuteness and elegance; the History of the later Roman Commonwealth, in two volumes, and Introductory Lectures on Modern History, in one volume. Yet his watchful eye seemed to be everywhere. It was a new light to Tom Brown to find that, "besides teaching the sixth, and governing and guiding the whole school, editing classics, and writing histories, the great headmaster had found time in those busy years to watch over the career, even of him, Tom Brown, and his particular friends—and, no doubt, of fifty other boys at the same time; and all this without taking the least credit to himself, or seeming to know, or let any one else know, that he ever thought particularly of any boy at all." Dr. Arnold carried on also a voluminous correspondence, much of it with Chevalier Bunsen, Archbishop Whately, and other learned men, and employed much of his vacation leisure in foreign travel on the continent. When he was thirty years of age he learned the German language that he might be able to read Niebuhr in the original. He mastered the language thoroughly, as he did everything else that he set about. One is puzzled by the multifarious character and the vast amount of his labors, and astonished by the grand results of a life of only forty-seven years. Even in his early youth he was known at school as the Poet Arnold, to distinguish him from another boy of the same name.

Arnold's ceaseless activity and independence in discussing public questions, and in denouncing what he believed to be wrong, gained for him a great deal of ill-will and unpopularity from a generation that did not see things in the light in which they appeared to him. Even his warmest friends sometimes discountenanced him. But he was utterly free and fearless; and he lived long enough, though his life was but a short one, to see the popular tide turn in his favor. The Rev. F. W. Robertson, then a young man at Oxford, thus speaks of

this change in the tide: "It was my lot, during a short university career, to witness a transition and a reaction, or revulsion of public feeling, with respect to two great men. The first of these was one who was every inch a man—Arnold of Rugby. You will all recollect how in his earlier life Arnold was covered with suspicion and obloquy, how the wise men of that day charged him with latitudinarianism, and I know not with how many other heresies. But the public opinion altered, and he came to Oxford and read lectures on modern history. Such a scene had not been seen in Oxford before. The lecture-room was too small; all adjourned to the Oxford Theater; and all that was most brilliant, all that was most wise and most distinguished, gathered together there. He walked up to the rostrum with a quiet step and manly dignity. Those who had loved him when all the world despised him felt that at last the hour of their triumph had come. But there was something deeper than any personal triumph they could enjoy; and those who saw him then will not soon forget the lesson read to them by his calm, dignified, simple step—a lesson teaching them the utter worthlessness of unpopularity or of popularity as a test of manhood's worth."

Arnold died in the prime of his life, and in the thick of his work and usefulness. There was no previous lingering illness or decay of his bodily or mental powers. In the midst of life we are in death. On the evening of June the 11th he wrote: "The day after to-morrow is my birthday, if I am permitted to live to

see it—my forty-seventh birthday since my birth. How large a portion of my life on earth is already passed. In one sense how nearly can I now say 'Vixi.' And I thank God that, as far as ambition is concerned, it is, I trust, fully mortified; I have no desire other than to step back from my present place in the world, and not rise to a higher." How like a prophecy it seems! Early the next morning he was attacked by a sharp pain across his chest; the pain increased in spite of all that could be done, and at eight o'clock in the morning he expired; and when Monday came—that forty-seventh birthday—he lay forever mute in death.

Dr. Arnold's memory has been made specially dear to us by the labors of two of his Rugby pupils—the first the celebrated Dean Stanley of Westminster Abbey, who has written his life and edited his letters in a loving and appreciative spirit; the second the equally celebrated Thomas Hughes, M.P., the author of "Tom Brown's School Days," who has introduced his old master in his immortal fiction in such a character that to read the book is to love the man.

"If, in the paths of the world,
Stones might have wounded thy feet,
Toil or dejection have tried
Thy spirit, of that we saw
Nothing—to us thou wast still
Cheerful, and helpful, and firm,
Therefore to thee it was given
Many to save with thyself;
And, at the end of thy day,
O faithful shepherd! to come,
Bringing thy sheep in thy hand."

—Matthew Arnold: "Rugby Chapel, 1857."

THOMAS J. CHAPMAN, A.M.

S O N G .

STAY, sweet day, for thou art fair,
Fair, and full, and calm;
Crowned through all thy golden hours,
With Love's freshest, purest flowers,
Strong in Faith's unshaken powers,
Rich in Hope's bright balm.

Stay, what chance and change may wait,
As you glide away!
Now is all so glad and bright,

Now we breathe in sure delight,
Now we smile in Fate's despite,
Stay with us, sweet day.

Ah! she can not, may not stop;
All things must decay;
So with head, and heart, and will,
Take the joy that lingers still,
Take the pause in strife and ill,
Prize the passing day.

All the Year Round.

"INFINITE ADJUSTMENTS."

WE use the words of certain prominent physicists relative to the operations of nature—Tyndall, Haeckel, Darwin, and others, who stand in awe before the evolutions of the Cosmos. In the varied forms of matter they see the workings of a mysterious power incomprehensible to their understandings. They speak of the Infinite, but with no capital I; not as a personality, but as a force; not as a vast intelligence over lesser powers; not as a Creator over creation; a Designer above design; a Lawgiver above law, but a physical wonderment, ceaseless in its operations, which they would not speak of with personal pronouns but as something having within itself the potencies of creative energy. They admit that there is inscrutable power somewhere, but while admitting it as a mystery which overpowers them would not call it a *cause*, a *mind*, or *He*. They define matter as that mysterious thing by which all that they see is accomplished; refusing to call it God, they give it all the attributes of Deity, but deny their exercise as making any appeal to faith, adoration, worship, conscience, or veneration. Standing in awe before incomprehensible forces, they will admit no God behind them; and while talking of infinite adjustments, refuse to acknowledge an all-wise Adjuster within and above them.

Now, infinite is a great word, and if there are such adjustments, why should there be any limits set to them? We feel very sure there are such, and we know that they meet all the wants of men. Instincts are from God, and provision is made for the cry of the raven as well as the wail of the infant. Whatever craving there is in human nature for outward things is met by provisional appliances. Desire is met by satisfaction, hope with reality, search generally with finding, and labor with reward. The roots of a tree will feel their way to adjacent water; the instincts which prompt to migration in birds are not baffled by a failure to reach in time of need a more

genial climate; and if these infinite adjustments are not scientific vapor, there must be provision in them to satisfy the intellectual and moral reachings of mankind. We instance the question of prayer. Wisely or unwisely men have been in the habit of supplication to higher powers. Pagans, Buddhists, Mohammedans, Jews, and Christians of every name, have been accustomed to pray. Yet Mr. Tyndall, who speaks so much of infinite adjustments, has in his prayer-gauge expressed his skepticism as to any such provision being made for such an exercise. Here the finite and the impracticable, according to this physicist, meet us just when we should touch the infinite with the most confident approach. There is much reason to suppose that in some circumstances mind may read mind; that one mind can influence another at a distance; all these may come in the provisional arrangements of the universe, but in all of them prayer meets with no assistance or response. There is no angel of mercy to bear the cry of the drowning or burning victim of the ocean wreck to the throne of the Maker and Guardian of mankind. Amid all the contrivances and adaptations everywhere seen, no mercy-seat is discernible. Who can believe it? The enlightened soul utters against it an indignant protest; and multitudes know, by the highest experiences of their lives, that the Being whose name is Love does hear, answer, and bless them. Amid all these adjustments we might expect to find some means of enlightenment as to what the Inscrutable Force or the Invisible Power at work in its secret laboratories of molecules or gemmules really required of the human race. Has it given to us any perceptible law, any revelation of its will? Men have been disposed, because they could not very well help it, to ask very anxious questions as to, What are we? Whence came we? Whither are we going? Shall we live in some other state of existence after we have left this? We have been sinners,

can we get forgiveness for our sins? Are there any higher orders of beings than we are, and what is their relation to us and ours to them? Can they render any assistance to us here, and shall we be connected with them in some other state of being? These physicists tell us they see nothing of which matter is incapable in all the cosmic spaces and periods. We appreciate design in ourselves; we think we see design at work around us, and we deem ourselves measurably intelligent beings. If we are matter only, matter certainly is very intelligent; and may not this *material* intelligence condescend to our ignorance, enlighten our minds, nay, fill us with holy confidence and joy? Who knows? These atheistic scientists do not seem to know, and to such questions of the soul they confess their inability to reply. With them the infinite adjustments fail us in the very acme of need. Just when we would lean upon

the hope conveyed in the words, and say to ourselves, "Now we have it! this is science, and science is *knowledge*," our ascending ladder breaks—it was all built of star-dust floating in moonshine. But we correct ourselves; this is anything but science. Knowledge laughs at it. Human nature rebukes it. All our faculties—Conscience, Veneration, Curiosity, Hope, Sublimity—cry out after the invisible and eternal. While there is what Paul called "science falsely so called," there is a divine learning gathered from the *interiors*; it knows whereof it affirms; believes in these adjustments of infinite wisdom and goodness; can certify to what they have experienced of this power; and can proclaim to all men that within this mundane shell of materiality there are order, beauty, love, happiness, and glory, of which all that is seen here is but the type and prophecy.

REV. JNO. WAUGH.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER III.—*Continued.*

PARIETAL BONE OF THE CARNIVORA.

THE parietal bone in carnivorous animals is of a quadrilateral form, its external surface being slightly rounded. One notices certain reliefs or prominences, which are due to the presence of the cerebral convolutions (Figs. 89, 90, 91). The four borders of this bone are quite irreg-

ular. The anterior edge, b, f, articulates with the frontal bone throughout its length except where it presents a sharp blade which articulates with the great wing of the sphenoid. The posterior margin, b, o, articulates with the inter-parietal (Fig. 106), the occipital (12), and with a part of the temporal bone. The superior edge, b, p, is more regular than the others, and articu-



Fig. 89.—PARIETAL BONE OF CAT. OUTER SURFACE.



Fig. 90.—PARIETAL BONE OF CAT. INNER SURFACE.

ular. The anterior edge, b, f, articulates with the frontal bone throughout its length

lates with the parietal on the opposite side. The external or inferior margin, b, t, is

extremely uneven, showing throughout its length an irregular surface, x, x, x, designed to articulate with the scaly por-

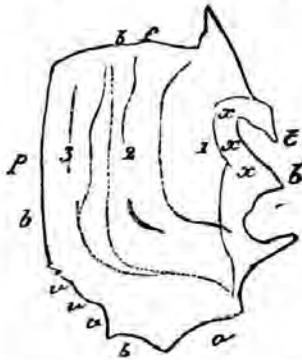


Fig. 91.—PARIETAL BONE OF CAT. OUTLINE OF OUTER SURFACE.

tion of the temporal bone. Examined by its interior surface (Fig. 90) the parietal of the cat shows us a striking difference in organization, as compared with the same bone in man and in the ape, which consists of a bony plate dividing the bone



Fig. 93.—PARIETAL OF RABBIT. OUTSIDE.

transversely into two unequal parts—the one situated in front having three times at least the extent of the other (see 1, 3, 4, 5, 6, 7, x), accommodates all the convolutions of the hemisphere to which it corresponds, and of which it shows im-

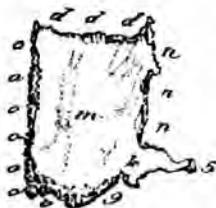


Fig. 95.—PARIETAL OF RABBIT. OUTLINE OF OUTSIDE.

pressions; the other region, c, c, c, is designed to receive a part of the cerebellum. We have observed in man and the ape that the cerebellum lies in the lower occipital fossæ and has no relation to the parietal bone; here, on the contrary, the part of the parietal most remote or farthest back may hold a portion of the cerebellum. The whole anterior surface of the parietal lies in contact with the dura-mater.

PARIETAL BONE OF RODENTS.

The parietal of rodents is also double in formation, showing more regularity in



Fig. 92.—PARIETAL BONE OF CAT. OUTLINE OF INSIDE.

shape than it does in the carnivora. Its external surface is slightly convex, presenting reliefs in correspondence with the most prominent parts of the brain which it covers. Seen from within, its surface appears smooth (Figs. 93, 94). We notice certain shallow channels designed to hold certain vessels of the brain, and we also observe depressions which correspond to the prominences of the cerebral structure. As in the case of other animals, it is lined by the dura-mater. We



Fig. 94.—PARIETAL OF RABBIT. INSIDE.

do not observe here, as in the cat, that osseous plate dividing the cranial cavity into two parts. The cerebellum, while it is largely developed in the rodent family, does not occupy a part of the parietal. The anterior margin of this bone in the rabbit, d, d, d, (Figs. 95 and 96), articulates with the frontal bone; the upper, o, o, o, o, o, with the parietal on the opposite side. The inferior or external border shows a peculiar arrangement, which consists



Fig. 96.—PARIETAL OF RABBIT. OUTLINE OF INSIDE.

of a triangular process, k, 5, situated near the posterior third of this border, having a direction from within outwardly, slightly inclining downward and lying upon the internal surface of the squamous part of the temporal bone, and terminating at the highest



Fig. 97.—PARIETAL OF CROW. OUTSIDE.

part of the great wing of the sphenoid. The posterior margin, which is least extended of all, shows two hollows—the one interior and the other exterior: the first, v, forms with that which belongs to the opposite parietal a space receiving the anterior margin of the inter-parietal bone. The external hollow, 9, articulates with the occipital.



Fig. 99.—PARIETAL OF CROW. OUTLINE OF OUTSIDE.

THE PARIETAL IN BIRDS.

The parietal in birds is formed, like that of quadrupeds, of two distinct pieces which unite early in the life of the individual. Some species, and we may cite, for example, the raven and shrike, show at the end of eight months, and even after a year, some white lines indicating the points of union of this bone with its mate and with others with which it articulates. The form of the parietal is



Fig. 101.—OCCIPITAL BONE OF APE. OUTER SURFACE.

that of an elongated square, the transverse diameter being ordinarily longer than the antero-posterior. Its external surface is

more or less rounded, and extended according to the species, and covered by the skin of the cranium, and in certain individuals by small muscles. The internal surface is smooth and lined by the dura-mater. We notice in Figs. 98 and 100 channels which accommodate vessels belonging to that membrane, and some depressions which correspond to parts of the brain which lie in contact with the internal surface of this bone. It shows also certain reliefs and recesses arranged transversely and corresponding to those which the cerebellum presents in these animals. The parietal of birds articulates by its anterior margin, p, p, p, with the frontal bone; by the external margin, q, q, q, q, with the temporal; by the posterior, o, o, o, o, with the occipital; and lastly with the opposite parietal at its superior border, a, a, a, a.



Fig. 98.—PARIETAL OF CROW. INSIDE.

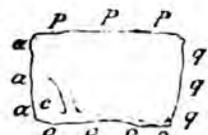


Fig. 100.—PARIETAL OF CROW. OUTLINE OF INSIDE.

OCCIPITAL BONE OF THE APE.

The occipital bone of the Sajou (Fig. 101), while less in extent than that of man, as may be seen by comparing it with Fig.

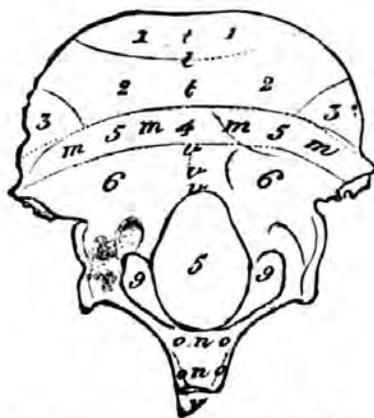


FIG. 102.—OCCIPITAL BONE OF APE. OUTLINE OF OUTER SURFACE.

105, shows much resemblance to it. Seen on its exterior surface, it shows the following characteristics: a rounded surface

(Fig. 102), corresponding to the posterior lobes of the brain. At the central part the exterior occipital crest, v. v. v; at the

middle, lodging the middle lobe of the cerebellum, and two lateral, upon which lie the lateral lobes of that organ. The whole



Fig. 103.—OCCIPITAL BONE OF APE. INNER SURFACE.

sides of this are two surfaces more or less convex, 6, 6, corresponding to the cerebral lobe; at the middle, lower down, a large oval opening, the occipital aperture, 5, upon the borders of which we perceive, as in man, two rounded projections, 9, 9, which articulate with the first vertebra.

Below the occipital opening, n, n, o, o the basilar appendix, which has evidently the same direction and the same form as in man, but is much inferior in extent and size. The internal surface (Fig. 103) shows two depressions of considerable breadth proceeding from above downward, 1, 2, 3, (Fig. 104,) which are separated by a prominence at the middle, 4; these two hollows show impressions of the posterior and of the lateral convolutions, and some traces of the arterial and venous channels. In the groove at the center is the termination of the longitudinal-superior sinus. We observe that it ends on the right and on the left by two grooves, m, m, m, m, in which lie the lateral sinuses. Below the parts just mentioned three fossæ are seen: the

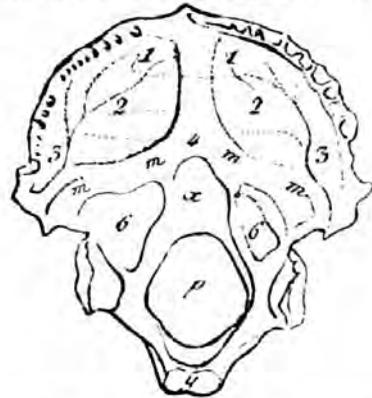


Fig. 104.—OCCIPITAL BONE OF APE. OUTLINE OF INNER SURFACE.

of the interior surface of the occipital bone is in contact with the dura-mater.

OCCIPITAL BONE OF CARNIVORA.

Independently of some general characteristics, such as the vertical position of the opening through which the spinal cord passes, the very considerable devel-

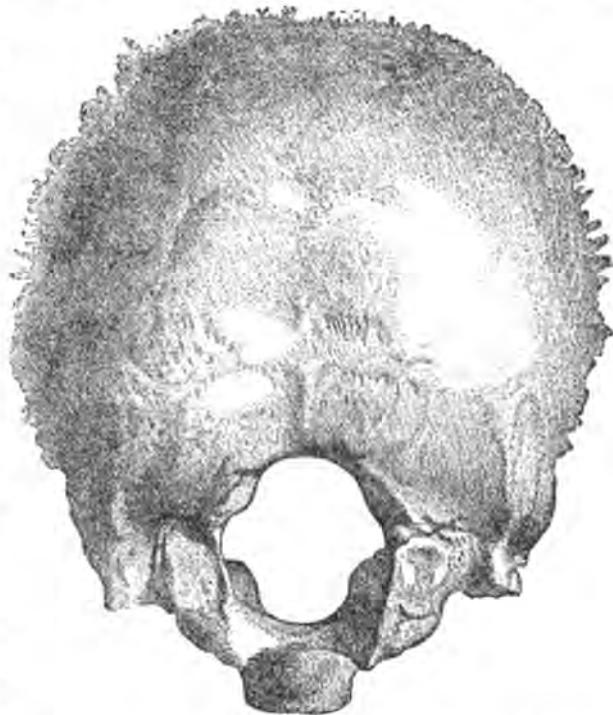


Fig. 105.—OCCIPITAL BONE OF MAN, REDUCED. EXTERIOR SURFACE.

opment of its basilar apophysis, whose direction is horizontal, the occipital bone offers for our consideration features which



Fig. 106.—INTER-PARIETAL AND OCCIPITAL OF CAT.
OUTSIDE.

are interesting to the zoologist and particularly the physiologist. Directing our attention first to this part of the cranium as we find it in the carnivora, we associate under the name occipital the two pieces represented in Fig. 106.

The smaller has been designated by many anatomists by the name of *Inter-parietal* bone; probably, because it is found in the angle formed by the union of the superior margins of these two bones as represented in Fig. 91. Although in all the carnivora and the gnawing animals this osseous portion is separated, at an age quite advanced, from the occipital bone, we think it should be regarded as a process of that bone. This opinion appears to be well founded, since it is found completely united with the occipital in very young

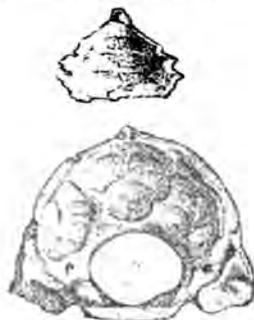


Fig. 108.—INTER-PARIETAL AND OCCIPITAL OF CAT.
INSIDE.

cats and dogs. In some human heads the postero-superior angle of the occipital, composed of one piece, has been found to

have much similarity to this bone in quadrupeds. If we examine the occipital in the cat by its external surface (Figs. 106

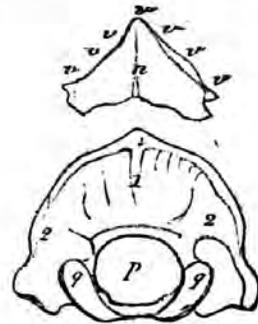


Fig. 107.—INTER-PARIETAL AND OCCIPITAL OF CAT.
OUTSIDE. OUTLINE.

and 107), we notice first a triangular part running from above downward (Fig. 107): it is that which the anatomists call the *inter-parietal*, and which we shall consider as the superior angle of the occipital; secondly, we notice a surface of considerable breadth, 1, 2, 2, n, corresponding to the principal divisions of the cerebellum—in the cat this organ shows a great extent; thirdly, an opening, p, directed from front backward: which is the occipital aperture affording passage to the spinal marrow; on each side of this opening the two condyles articulate with the first vertebra. The internal surface (Fig. 108) shows, first, the internal surface of the osseous part called *inter-parietal*, which is quite uneven and has transverse depressions corresponding to the upper part of

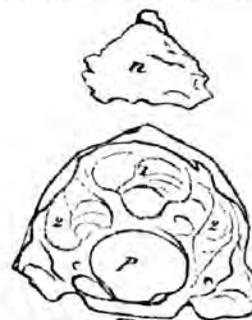


Fig. 109.—INTER-PARIETAL AND OCCIPITAL OF CAT.
INSIDE. OUTLINE.

the middle lobe of the cerebellum. The remainder of the interior surface, 1, 2, 3, lies adjacent to that organ. One should

be struck, while examining the two parts which constitute the occipital of the cat, by the difference which this bone shows when compared to the occipital in man and in the ape. In the latter a great part of the occipital is occupied by the posterior lobes of the cerebrum, while in the cat the whole occipital, although of good extent, is filled by the cerebellum. It is seen thus how easy it would be for

the phrenologist to make serious mistakes in considering the heads of quadrupeds, if his observation were not assisted by a knowledge of comparative anatomy. The occipital bone of the cat articulates with five bones and the first vertebra, viz: the parietals, sphenoid, the two temporals, and with the first vertebra by means of the condyles.

HOW TO TEACH TEMPERANCE TRUTHS.

IF it is so important to know what temperance is, in order to make it spread and prevail, why not teach it? If alcoholic drinks are deceitful and the people at large are not aware of their true nature and effects, why not expose them thoroughly and systematically? "Knowledge is power" everywhere, and if people know about these drinks they will be much more likely to avoid them from true wisdom, self-preservation, motives of economy, good statesmanship, and a score of other reasons.

"Of course I'll come," said a learned professor in a large city in the State of Maine when, a few months since, he was invited to speak at a meeting to influence public opinion in favor of having temperance text-books introduced into our public schools. "It seemed to me so entirely the thing to do," said he afterward in speaking of it, "that I was ashamed of myself to think that it had never entered my head." And yet perhaps if it had been mentioned to him before public sentiment was ready for it, he might have regarded it as an idle scheme. To my certain knowledge that measure was advocated in public in the city where he lives eight or nine years ago, and it was briefly mentioned the same year in the annual State Temperance Meeting always held at the capital of that "dirigo" State during the winter session of the Legislature. But there amid the assembled temperance wisdom of the State the mention did not produce an echo.

It takes time for the public mind to become familiar with some ideas, and the

idea of the necessity for a temperance education has been growing slowly, but surely, during the last ten years. In Maine they have been looking largely to other instrumentalities. Elsewhere they have been hampered by public apathy and indifference, besides feeling the political bearings of the question. School commissioners were elected by popular ballot, and the teachers, more or less, took their "bearings," if not their views, accordingly. Let any one who is interested in this question at the present day look at the foreign make-up of the school-boards in some of our large cities, and he will see some discouraging things. I had the rather questionable privilege of interviewing a learned German doctor, a prominent member of the school-board of a neighboring city a few years since, and he met me almost fiercely. "No, it was not the business of the State to teach morality." "So," said I, German fashion; "but of course you allow it to be the business of the State to punish offenses against morality. Why not try to teach the children of the public schools to be good citizens before you punish them for being bad citizens?" To which he had no reply but to reiterate that it was "not the business of the State to teach morality."

But this opposition is not confined to the German population. Rather more than ten years ago I had the privilege of addressing a wide-awake Teachers' Institute in the Yankee part of the State of New York on the importance of the study of physiology, into which, in its appropriate place, were brought the bearings of the

temperance question. Very soon the presiding commissioner found that my "time had expired." I had the satisfaction of seeing a very indignant set of teachers swarm about him at recess, and of learning that he was a candidate for early re-election dependent on whisky votes. These have been and still are some of the difficulties in the way of success.

A great help in this line, however, has been lately realized in the publication of the Temperance Lesson-Book of Dr. B. W. Richardson. Here is a practical point to make, and a great many of the temperance people are making it to some purpose. Meetings have been held in various cities to influence public opinion in favor of its use. "For, if the majority of our people demand it, the school-board has no alternative but to put it in," says one of my correspondents, who is trying it on. But that does not always follow readily. In one city, and in New England too, a petition was circulated and signed largely by ministers and other influential people, and the commissioners decided favorably, "provided the petitioners would furnish the books at their own expense!" The Christian temperance women in several of the States are making systematic efforts for its introduction, usually in connection with Story's "Alcohol," and the "Juvenile Temperance Manual." So that if one does not suit, perhaps another will, and besides it does no harm for the inspector to examine them all. He will then be the more likely to be impressed with the importance of the subject. A common method is to make personal inquiries and investigations, "talk the subject up," perhaps also some suitable tracts are used, and when the official promises to examine the books the latter are sent for and presented to him. The "unions" seem to think it a good investment of their usually scant funds, to get so influential a person to read these books full of weighty truths, and especially with a view to their being used as text-books in the schools. Others who can not afford this, use "specimen pages." In short, there is no end to the variety of

influence and tact brought to bear in favor of this work.

The results will come slowly of course. Men who feel the responsibilities of their position (to put the very best face on the matter), men who have perchance never been in the habit of looking at temperance in this light, are to be convinced that this teaching is best, and that it is practicable in this shape, and then various hindrances are to be removed, one after another; but still the work goes on with a success truly encouraging when we consider that it is but little more than a year since the first systematic endeavor. A letter just received from the lady who has charge of the work in Ohio says: "These books are gradually finding their way into various schools of our State, and are commended most highly wherever they are honestly examined. Our school superintendent in this place has used the 'Lesson-Book' by permitting the teachers to read a portion to their pupils at specified times. Next year we expect to have it regularly introduced through the board of directors. I deem this the most hopeful feature of our temperance work, imbuing our children with temperance principles."

A lady in Massachusetts writes: "We are pushing the preliminary work of influencing different members of our school committee (in a large town) by talks with them about it whenever opportunity offers. One at least is all ready to do whatever is in his power to carry it whenever it is presented in the committee meeting." Subsequently this lady, in speaking of her general work in the temperance cause, expresses the regret that she has not had a temperance education, and the determination to get it as soon as possible. This is a most intelligent conclusion, to which I fear very few of our workers come, and it is not too much to say that one great reason why the work has been carried on so imperfectly is that most of the workers have not even felt the need of a temperance education. The great want of the work to-day is trained, intelligent, competent workers,

and the change that will take place in the work when we have these we will not now stop to estimate; but it will be something marvelous.

That this is a legitimate department of public-school teaching we have taken for granted, and we will bestow but a sentence or two upon that. In the words of our leaflet "To the Teacher," "The great object of common-school education is to make good and reliable members of community, while no one cause does more to destroy good and reliable members of community than alcoholic drinks."

But when we come to speak of the practicability of getting the majority of the teachers in our common schools to teach this science faithfully and properly, we may well pause. In nine cases out of ten they know little about it, and care less. They did not study it when at school. It was not taught at the Normal school. The one text-book, whatever it be, can contain but a small part of the subject. In many cases they will be prejudiced against it from more or less familiarity with the social wine-cup or the glass of cider, to say nothing worse, and in a still greater proportion they will be tainted with the prevailing apathy and indifference. The book may be *there*, but it will not go far toward teaching itself, and more than half will depend on the manner in which it is taught. What is to be done to meet this difficulty?

In the first place, we would say, *go right on*. You never can begin one day earlier than the present moment. In the next place there are several supplies in this line, and several ways of using them. In one city the local union has presented to each of the teachers in the public schools a copy of the "Juvenile Temperance Manual." This is a book intended for teachers, though not specially for public-school teaching. It sets forth the *rationale* of the subject in a very simple manner, and contains a perfect treasury of illustration which the teacher can use in a great variety of ways, and which, if perused, will be very likely to come to the aid of the memory in teaching. Next and largest, and by far the most hopeful,

we have "The Temperance School." Without waiting to influence school-boards, without waiting for money to purchase school books, the temperance workers themselves turn in and bring with them their children and their Sunday-school children, and as many more as they can influence. The Temperance school is framed closely after the model of the Sunday-school in every respect, excepting the time of meeting and the text-book. The time is usually Saturday afternoon or evening, and the text-book is the "Catechism on Alcohol," a little five-cent pamphlet which each child can buy if the treasury is low, while the superintendent, and perhaps the teacher, uses as a help by way of explanation and illustration the Manual above mentioned, for which purpose it was specially designed.

One great advantage in having the school on this model is, that it is familiar to all. Another is, that it can easily be made to take a religious cast, and thus throw about the whole work the sacredness of conviction (thus particularly suited to Christian temperance work); and still another is that it can readily be made to include what are sometimes called the better classes of society, the middle classes. One great fault in our juvenile temperance work hitherto has been that it has been made to seem specially suited to the children of the poor, if not of the drinking classes; and it did not educate them much after it got them. It entertained them and prejudiced them in favor of temperance, which was much better than nothing; but it did not make strong men and women of them. But this takes the best, the brightest (many of them), the most enterprising, and educates them for temperance workers. If, as often happens, a large proportion of them are girls, it is well understood now, if never before, that girls and women make good, effective temperance workers. The most of our teachers are also women; and if these have been educated in the temperance school, they will know how to teach temperance to good purpose. They will help introduce it into the Normal school,

where they will soon be taking their places, and where they will be our best allies.

But we need not even wait for these children to grow up and become teachers. Most of the teachers in the temperance school (and they are numerous, one to each class, like teachers in a Sunday-school) are learners also, and often the most enthusiastic learners. These are day-school teachers sometimes, or preparing for that position, so that their influence will soon be felt. In any case, all these teachers and scholars form an influential part of community. The books, tracts, and papers they take home are scanned by the remaining members of the family, and the facts they learn become more or less familiar to all. These all help to make up the public opinion which must be brought to bear in getting temperance teaching into the public schools, and to set a standard for its thoroughness and efficiency when introduced; and much depends upon this. Since the greatest absurdities are prevalent in the community concerning the nature and effects of the drink, some of them would almost inevitably come into the teaching in spite of the excellence of the text-books. We do not say that the teachers in these temperance schools are always right on every little point; but having their hearts right, and making a specialty of these studies, they certainly do achieve remarkable success, and their accuracy would be a great help to public intelligence.

There is little doubt that the time will come when the teaching of temperance science will largely be done in schools and colleges, and perhaps eventually it will find its suitable and sufficient place in a physiological treatise which details the influence of drink upon all parts of the human system. But as the drink and its effects are now a special course of alarming proportions, so the remedy must demand a large share of the public attention until it has become effectual. We shall not have too much of it with both the temperance schools and temperance text-books in public schools and colleges. Nor shall we get about it any too soon by starting with what is nearest at hand and most available. In this respect the facts coincide with the theory. The temperance schools are already numerous and flourishing, and we hear of some one or more new ones almost every day. The helps for their use are numerous and rapidly increasing—text-books, singing-books, tracts, cards, mottoes, etc., etc.

And so the two kinds of work go on harmoniously, side by side, one helping the other, and without the slightest danger of interference; and if these temperance educational movements are suitably helped and encouraged, there is no doubt whatever that temperance work will go on triumphantly to accomplish all its legitimate results, and the race will be redeemed from the dominion of appetite and passion in their worst form.

JULIA COLMAN.

THE SUMMONS.

FROM THE GERMAN OF LUDWIG TIECK.

ARISE! go forth! the sunbeams call
From God's irae world so wide;
Go see His glown, glories all
From every green . . . side.

The stream that never standeth still
Doth onward joyous flow,
The winds the world with music thrill
As on they rushing go.

The moon her round doth tireless tread,
The sun so cheerfully
Goes up to crown the mountain's head,
Then down to kiss the sea.

Yet, man, thou stayest there at home
Longing like bird to fly

Away, and earth's green valleys roam—
Go find a brighter sky.

Who knows for thee where Fortune blooms?
Go seek her favor kind;
The morning flies, the evening comes,
Oh, haste thy path to find!

Let sorrow go and anxious care,
Is not the Heaven blue?
And after grief, Joy's rainbow fair?
Oh, trust her promise true!

Wherever beams the heavenly blue
Love's fruit hath alway grown,
And every heart that's brave and true
Shall surely find its own.

LYDIA M. MILLARD.

CURIOUS HABITS OF PLANTS.



THE ROSE OF JERICHO.

THE rose of Jericho is a true child of the desert, typical of the Jericho of the present rather than of the ancient "city of palm-trees." There is a pretty legend that it first sprang where the feet of Mary, the mother of Jesus, touched the desert sands during the flight into Egypt. It is fabled to bloom only at the great festivals, especially at Christmas. When open it is similar to a rose in outline, but the petals, if its skeleton leaves merit that name, are harsh, rigid, brittle, and not unlike the wiry lichens on our fences. The diameter of the flower when open varies from one to three inches, and the color is a light yellowish green. But let this arid, homely ball be set floating in a tumbler of water, then one by one the dry leaves will extend themselves till each can absorb the refreshing draught. If removed from the water this singular flower folds its petals and becomes as rigid as ever, but retains its vitality as perfectly as in its desert home, and can be expanded at any time.

Analogous to this, but much handsomer, is the "Resurrection-plant," also a native of the arid plains of the East. This, when placed in water, not only puts forth a beautiful fan-like foliage, dripping like a miniature shower, but it also changes color from a dull ash to a bright green. The resurrection of this plant is by no means eternal, as it will soon die if allowed to remain in the water; but if

dried it will retain its vitality and can at any time be renewed.

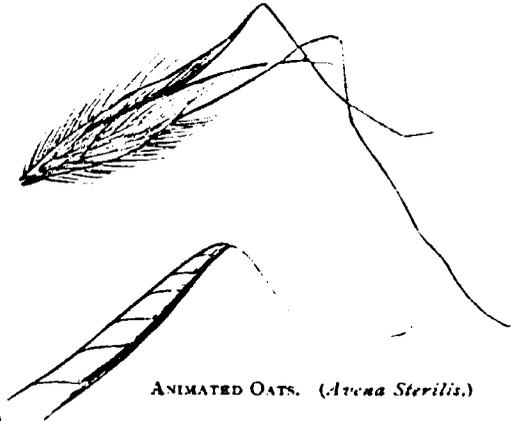
Some of our common plants—the oxalis, honey-locust, and sensitive-plant—fold their leaves and apparently go to sleep every night. As these plants frequently close before evening and open before day, their peculiarities can not be attributed to the action of light alone. The locust also shows occasionally some sensitiveness to the touch, but not nearly so much as the sensitive-plant.

There is a plant resembling the live-forever, or the house-leek, which is quite uncommon in its mode of propagation. Its leaves are thick and fleshy, and of a beautiful bright green on both sides, with a reddish margin. The stalk is round, heavy, and green, not branching, and the stout, elongated petioles are a dull red. The edge of the leaf is divided into rounded, shallow scallops, averaging half an inch in length. On examination with a botanical glass, a mass of red veins is seen to converge from the surface of the leaf to the notches on the margin, thus giving them a purple appearance. From these points, if a leaf be broken off and fastened to the ground, new plants will spring, whose growth, strange to say, does not diminish the vitality of the parent leaf. A leaf crowded into a pot considerably less in diameter than itself, last September, sent forth three sturdy shoots, and though these are still attached to it, it recently produced two more and still seems as youthful and fresh as its children.

The squill-onion has also an original mode of perpetuating itself. The bulb, except in being longer, resembles the common onion, but grows entirely above ground. The scales of this onion occasionally burst and in the seams appear quantities of bulblets, each prepared to take care of itself on being placed in the soil, while the original plant continues developing and flowering in apparent indifference to its offspring.

The graceful artillery-plant of the green-houses, will, on being moistened, send up a vapor from which it derives its name. In a few minutes, perfect flowers, nearly white and not larger than the head of a pin, open over all the surface that before was in appearance like an ordinary leaf. When the moisture evaporates, the blossoms close, but can be renewed at pleasure, if the plant be in proper condition.

But even more singular than any we have named are the *animated oats*. These grow and appear like barley, but the spike is not over an inch long and has two curved beards much longer than itself. The whole spike in form, and, as we shall soon see, in conduct also, bears a remarkable resemblance to a grasshopper. Throw a number of these ears on the

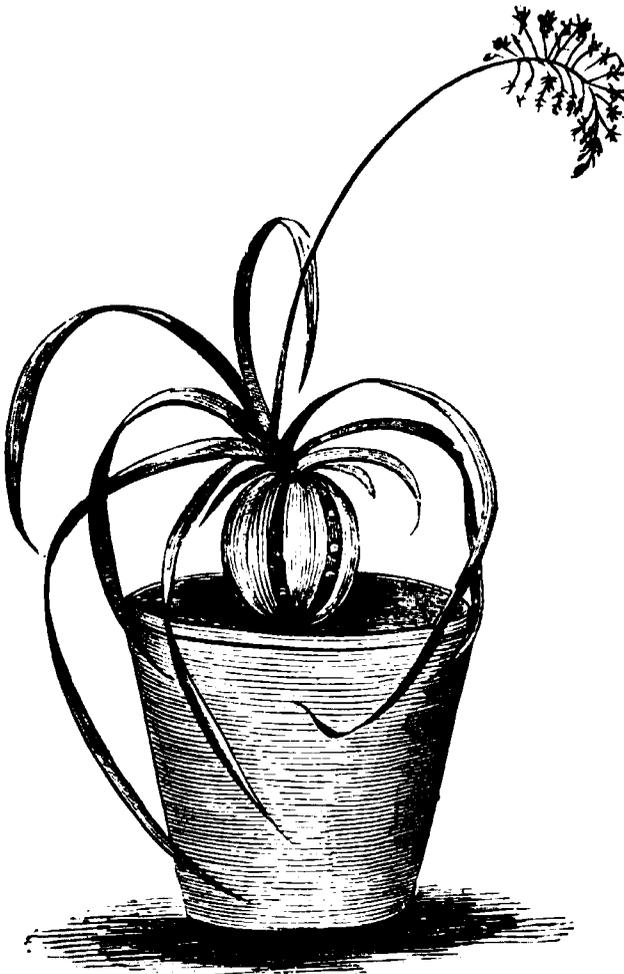


ANIMATED OATS. (*Avena Sterilis*.)

table and sprinkle them lightly with water:—they will immediately show signs of great disturbance, rolling and tumbling over each other and sometimes leaping several inches. Even though planted in the ground, they preserve their activity, and when the time has arrived for young plants to appear, the seeds have been found on the surface, staring impudently at the dismayed gardener.

This may seem incredible, but we have not only the fact, but also the cause. Around the long beards, a spiral, faintly visible (see illustration) to the naked eye, is coiled. On receiving moisture this coil straightens, and as it unwinds, turns the whole body over and over in a series of somersaults. This spiral is not nearly so large as a hair, but it moves a bulk larger than that of a large grasshopper. As it coils again in drying, and with no little force, if the box in which the grain is kept be not well secured, the "wild oats" will mock at its restraint. These oats are propagated without difficulty save that of persuading them to remain in the ground long enough to germinate.

M. I. C.



SQUILL BULB. (*Scilla Fraseri*.)

THE FIRST OFFER OF SALVATION, MURDER, AND FOUNDING OF A CITY.

IN an article by François Lenormant in the February *Contemporary Review*, on "The First Murder and the Founding of the First City," there are presented some very remarkable facts :

1. That this first city of Enoch was founded in early summer, in the month Sivan, corresponding to our May. June, which was the third calendrical month of a time antecedent to the Semitic settlement of Chaldea, which I would remark was not a Hamitic settlement, for the Hamitic succeeded the Semitic ; nor a Japhetic, for the Japhites never were there, and must, therefore, if his conclusion is true, be from a race antecedent to the sons of Noah ; in other words, from the Cainitic race. Eden was situated at the head of the Persian Gulf, as is clear from Tayler Lewis in Lange's "Genesis." And Cain, in going eastward from the Schekinah, or Presence of Jehovah, at Eden's gate, went into the land of Nod, or the Vagabond land. This month system originated with him or his descendants, and survived the flood ; and if prehistoric in its origin and different from any of those of the Noachian race, besides being idolatrous in its symbolism, it makes it Cainitic as well as distinctly African, outside of its Hamitic race-origin. I believe the migratory character of these Africans is well established, and everything shows that those south of the mountains of the moon were not Adamic peoples. The Chinese are from them as well as many other aborigines. The signs of the zodiac were of non-Adamic origin, except in so far as Cain, who married a non-Adamite, influenced it. He may have been the originator of the system, using their idolatrous symbols of the "Sons of the Gods" to illustrate his revelations of time to them, as he was especially a *time-world*, not *cosmical-world* man in all his ideas. He was the first great *disorderer*. He was out of joint with all idea of Cosmic order, though time meant everything to him.

2. This third month was "the month of construction of bricks," religiously considered, and gives reason to claim that the first city, Enoch, was then founded.

3. It is an universal tradition that a fratricide accompanied the founding of most national first cities, of which the most popularly known is that of Remus by Romulus, at the founding of Rome.

4. This slain one becomes the hero of that city, its fortune, its savior, and the mediator of its mysteries of worship ; that is, the slain became greater than the slayer, so that, traditionally, there gathered around the slain the idea of salvation for all by his death. Therefore Lenormant's proper theme should have been like mine.

He traces these three ideas very ingeniously, and the article is extremely suggestive, and well worthy the thought of every one. Having made in the past few years some original investigations on Cain—his fratricide, his marriage, his race, etc.—I desire to offer in this article the new light Mr. Lenormant brought to me by his article, and some criticisms on a few of his positions.

I have given the five points above as the new light, now for his errors :

1. His first and great one is in supposing that the salvation idea originated in the cities being named after the slain brother. The very first city so named was not Abel, but Enoch ; the name not of the dead brother, but of the son of the surviving one. It might have originated in the *superiority* assigned to the slain one, and that have been confounded with the name of the son, as he shows the tradition to have two forms : one in which the parties held the relation of brothers, and the other that of father and son ! But he bases his conclusion on the claim that the Church holds Abel to be a type of Christ. That is news to me, especially as St. Paul in Hebrews shows that Abel and Christ do not resemble, but differ. Abel's blood cried for vengeance, and

Christ's for mercy! It "speaketh better things than the blood of Abel." It is true that Cain evidently held the founding and naming of the city after his "initiator" son, to be of the power of a spell, and a sacred act to him, the idea of his salvation from the foes whom he feared and against whose enmity he was "marked" to save him. His *initiation* idea (Enoch) is best understood in the light of the climatic name of the seventh from Adam through Shem, who was initiated as the first immortal into the mysteries of the other world. Cain evidently tried to make "a city which hath foundations" immediately on the earth, where that city is to come (Rev. xxi. 1-3), instead of waiting for it till the close of time, and so became guilty of his mother's sin of *haste*, the sin that caused Eden's loss. This can be seen in his very name—Cain—and her idea in giving it: "I have gotten a man in fellowship with Jehovah," when she thought the promised "seed" had already come—was a *prenatal* tendency of Cain. Eve was essentially a *hasty* woman; not even the fall cured her; and she "marked" her son. Her daughter's infinite patience since is the lesson thus sadly learned and wailed in Abel's name, "vanity."

Possibly the idea of a walled town as affording safety from human foes, gave rise to the salvation idea annexed to the tradition of a fratricidal founding of race cities; then through the mystery of agedness, sacredness clustered around it; because Memory in true religion is a means of grace, and in false religions is the fruitful mother of nearly all worship. Cain, with his large Veneration, Spirituality, and Hope, not yet degraded, was very likely to start with the religious idea from his mere time-world stand-point. This would be the genuine source of the idea, on the supposition that this was the reason of the Savior idea in these traditions, and be one proof of the Cain and Abel story being original, and the source of Assyrian tradition as well as of all others.

The Bible presentation of universal

traditions is always of the simplest and briefest form in which they are found, and are like the seed as compared with the developed tree that lay there in germ. All great universal traditions are "seeds from Eden," and out of the first eleven chapters of Genesis I can give the germ of every such universal idea, which lives simply and only by the seed *truth* there found in its best condition. This will be more plain as I proceed.

2. He makes a very common philological mistake in translating Genesis iv. 7: "When thou hast not done well, sin *lieth in ambush* at thy door, and its appetite is turned toward thee," etc. He says: "The participle *robêc*, which is here used substantively, forms the only known instance in Hebrew in which the verb *râbac*, is taken in the sense which in Arabic is always that of *rebaca*, and sometimes that of *rebadha*, whence the lion is styled *rabbâdh*—'he who lies in ambush.' . . . In Assyrian, on the contrary, *rabac* has currently—and as frequently as the other—two meanings: 'to lie down, to repose,' and 'to lie in ambush, to watch for.'" Then he goes on to speak of the "seven *Rabici*," as "among the most redoubtable of the wicked and infernal spirits," emphasizing two ideas:

1. That the word translated "sin" means "sin," and derivatively the author of sin, the devil and his demons, forgetting as is plain from Moncure D. Conway's "Demons of the Shadow," the derivation is the other way: the idea of sin from the demon. Demon first, sin afterward in the mythological origin of the idea, as well as the Scriptural.

2. That this word "lieth" in our version, and "lieth in ambush" in Lenormant's, is proper as he puts it, though he confesses that as such it would be the one exception in all Hebrew. That begs the whole question in a most unauthorized way.

3. His term "appetite" while consistent with his theory, is a vicious translation of our accepted version's word "desire."

4. His "door" should be "gate."

Changing our version as little as possible, Gen. iv. 7 reads: "If thou doest well, shalt thou not be lifted up? [referring to the clearing away of his *power*, for this and verse 6 is the first Scripture lesson in Physiognomy]. And if thou doest not well, a *sin-offering couches* at thy *gate*; and his *desire* is unto thee, and thou shalt become strong in him."

This, as Gen. iii. 15, is the *first* promise, is the *first offer* of salvation! It is not a warning, but an exhortation; not an appeal to fear, but to hope; but Cain preferred strong walls in sight to a *slain lamb* and an act of faith. If my other theory of the source of the salvation idea in the tradition of the fratricidal founding of first cities—as growing out of Cain's felt need of walled salvation from his foes—is not the proper one, this is the only logical one left. Ere he slew Abel—a lamb instead of Abel was offered, and that lamb, not Abel, typified Christ and His salvation! It slain and offered in the spirit, and the intention of Abel would have relieved all his feeling of sin and grievance—grievance, child of conscious sin; for the difference in the sacrifices lay more in Cain's egotism—another and kindred of Cain's prenatal tendencies—than in the unworthiness of the sacrifices of his first-fruits. Abel's was a sin-offering, and Cain's a thank-offering, if not in his eyes a complimentary-offering.

I offer before proceeding to exegesis, Gen. iii. 16 paired with Gen. iv. 7 as a verse greatly misunderstood, but rightly translated a help to the understanding of this, its obvious mate, but translate only its last sentence as applicable, "And thy desire shall be to thy husband, and he shall become—strong in thee."

"And his desire is to thee, and thou shalt become—strong in him."

A brief conclusion is that creationally woman holds the same relation to her husband, that redemptionally Jesus Christ does to a sinner! Woman was undoubtedly the first savior (or rather, developer, as sin had not entered), and Christ is the

last Savior, though man married is easiest and best saved!

For "*sin*" as developed by him to be the right translation, does violence to historical development, as I have shown. It demands a wrong sense for the preposition *Beth* translated "over" in our version and "toward" in Lenormant's, the proper rendering of which is "in."

It demands a low sense for "desire," which is only used in these two passages, and in the Song of Solomon vii. 10, where used of the Savior—as in all three cases—the *conjugal* idea: The idea of union. "Becoming one flesh"—an idea fundamental and common to matrimony and sacrifice: "I am my Beloved's, and His desire is toward me!" There are over a dozen words for "desire" in the Old Testament Hebrew, and some with meaning suitable to his translation, but this one is plainly not.

It is further, though the general Genesis sense, at variance with a large Scripture usage, and a violation of the whole tone of God toward the tempted at Eden's gate, as well as in the world universal. It is also at variance with the scientific fact that great *typal* creations and truths precede smaller and inferior ones. It is at variance with the other words in dispute—the "lieth" is never "lieth in ambush" in Hebrew usage, never *crouch*—to bend the back, to spring; but always to *couch*, to repose.

The word "door" is most appropriately "gate," where the Lamb might be lying down, as he owned none himself, and would await the sacrifice at his gate, not at the door, he not being familiar with sheep, but with vegetables. Men had not become deity as well as sinful so soon, especially as shepherd habits were not Cain's, a fruit and grain-raiser. He had not animals, Irish fashion, around his house *door*, though Abel might come to his gate. Let us give Cain as well as the devil his due, especially as he was a young fellow of great self-esteem.

I am thankful for Lenormant's truth. I hope I have corrected his errors and made none myself.

ALEX. M. DARLEY.

DEL NORTE, COL., Feb. 26. 1880.

LUCK.

I DON'T believe in luck, or more clearly, I hold there is a wealth of good fortune awaiting us all, but it is to be mined, and is not piled up in bright coin ready for spending. People who have unwavering confidence in luck are generally unprosperous drones who imagine they have all the ill-luck, and that persons who possess the good collect it with even less effort. Those who have paved the way by steady industry and pluck to the sunny side of luck are less ready to attribute their reward to chance, because they are thoroughly cognizant where the credit belongs.

Nothing accomplished without ripened attention and effort brings lasting advantage. Even the success which sometimes unexpectedly alights on fortune's mendicants, as often departs early from a lack of proper appreciation and entertainment. Blessings lightly won, lightly depart, as a rule.

A man grows up awry, is ill-shapen, ill-mannered, and ill-tempered. He marries; he has an ill-wife, ill-fortune, ill-children, and everything goes wrong. He wails: "Luck has always been against me, nothing favors me. There is neighbor Jones, on whom everybody smiles and for whom everything goes well."

Neighbor Jones is a young man, to whom nature and fate gave no special charms; even his disposition was not, without training, cheerful. But he has cultivated luck, and it is beginning to grow. He has a pleasant wife; he reads pleasant books and periodicals; he labors industriously and understandingly, his children waking in a pleasant atmosphere become unwilted buds of promise.

We are arbitrators, in a manner, of our own luck. If we have crooked, repulsive tempers, and allow them to control our speech and actions, it is not probable that we will be surrounded by smiling friends. If we discontentedly whine because weeds smother our corn and potato patches, and seed the ground for successive harvests of their kind, we can not

expect the reward of perfect tillage. If we misuse and overtax our physical organs they can not act with vigor and elasticity. We are subject to immutable and reasonable rules. If we study and comply with these rules we are happier, better, and more permanent citizens.

Activity is one of God's laws. He has given us all talents as seemed meet to Him in His grand eternal and universal plan. He has not told us to bury our one talent in the earth, anticipating its increase by bewailing the greater gifts of our fellow-laborers, but to double it by use, lest it be given to a better servant.

Thriftless people employ the term ill luck as a screen for their sloth and inability. It is not he who possesses the most wealth who is best off by any means. Adversity often develops the soul when mammon is abroad. A recent writer in the *Saturday Review* says: "There is really no end to the uses of adversity, if the thing is judiciously managed."

Usually it is mismanaged. Adversity to be properly appreciated should fore-run prosperity, but there are enviable temperaments who entertain it soothingly whenever it calls, and send it out with such a smile at the back-door that it has not the face to return to the front.

I came across a long newspaper article to-day on "Matrimony," written, I imagine, by a single lady of years, which says: "Marriage is a lottery. I should not dare to marry, for when luck decides I always draw a blank." Then she cites the unfortunate experience of all her friends, until I grow almost nervous at the recital, and conclude the whole settlement is demoralized. The couples mostly disagree because they have been differently educated, and each clings tenaciously to his or her own opinion. "Of course they do," she reiterates.

Then, of course, my dear Miss or Madam, this fathers their ill-luck. If persons who wed do not love each other sufficiently to make it a pleasure to yield their little differences in opinion, of

which in the main they should always make themselves cognizant before marriage, I doubt if they will ever comprehend conjugal felicity.

Marriage should not be a lottery; neither is it a duty. It is a blessed privilege granted by our Creator to kindred souls; a solemn relation which should never be assumed without a depth of affection that sinks all minor differences into insignificance. Affection should be subservient to judgment. There is little probability that a young woman of ordinary mental discernment will be induced to draw a blank, though a blank has advantages over a regular bad number.

If affection grows puny with years, it is not the fault of luck, but of the husband or the wife. Never be determined to rule, even if you imagine you have the stronger mind. Show your strength by

unwearied efforts to fit yourself for the position you have assumed as husband or wife, and ennoble it. True love scorns wrangles and claims for ascendancy. It is not luck, but good common sense and generous true hearts that makes happy marriages. Life is not perfect, and there are continually arising uncontrollable circumstances to mar its smoothness; incidents in the shape of accidents, sickness, and death to show us its rugged reality. In view of these unfathomable changes, let us not be troubled by the small stones and stumbling-places, but rather help to lift them from the highway, or lead the nearer-sighted round them.

Our luck is what we make it,
 Joy waits for those who take it.
 Patience, energy, smiles, and pluck
 Mine, and coin, and stamp good luck.

MRS. S. L. OBERHOLTZER.

THE NEW EDUCATION.

IN a former article it was shown that the beginning of all knowledge lies in the development of the five senses, and that the unfolding of the perceptive powers, aided by memory, lays the foundation for all future gain. The five senses act as agents in picking up knowledge, memory packs it away in the warehouse of the brain, becoming responsible for its preservation. This is the natural method of mental growth.

Concerning the modes of education in use among the true ancients—the old Hebrews, the Persians, the Egyptians, the Assyrians, etc.—we know next to nothing; but coming down the stream of time we find ourselves amidst the Greeks, a cultured race, with distinct, well-defined ideas of mental development. Their system of education was not simply a cramming of facts in history and the sciences, but a gradual unfolding of thought-powers by the Socratic system of questions and answers leading to a definite result. What the Greek mind

accomplished through powers cultured by this method is shown by sculpture no nation since has been able to equal; by architecture that is the admiration of the world, and by literary works whose exquisite finish and grand proportions are the despair of all modern writers. Everywhere these people are known as the incomparable Greeks. Their religion was most foul and corrupting; their government was inferior to those of modern Europe; they had the debasing institution of slavery; as a rule, their women were kept in ignorance, yet, notwithstanding these unfavorable influences, in mental culture and acumen they were the "incomparable Greeks." To what can we ascribe their superiority if not to their system of education?

Yet that mental culture alone, though of the highest, will not save a nation, is plainly shown by the decadence of Greek power and the deterioration of the Greek mind. A government that upheld injustice and oppression, a religion that incul-

cated impurity and immorality, a public sentiment that debarred one sex from mental culture, each and all planted the seeds of ruin. Another fatal fault was their disdain for what Bacon calls the "fruit" of mental activity. The Greek philosophy despised utility; any knowledge devoted to material uses was debased. For a philosopher to invent anything of service to the people, a help in any agricultural or mechanical pursuit, was at once to lower himself in public estimation. Anything like modern philanthropy, working for the good of others, was almost unknown to the ancient Greeks and Romans; of course there was not among them any provision for the education of the masses of the poor.

Grecian women were confined with almost Asiatic jealousy to apartments that had no communication with the rest of the house save by a single guarded door. The unmarried were strictly confined to these apartments, the matron retired hither whenever her husband's visitors were entering. Closely veiled and attended, they might occasionally visit other women; they were allowed to witness religious processions, and the tragic drama. Spinning, weaving, embroidery, and cooking occupied their time. This was the life of high or well-born women in Greece.

Though the influence of the "wolf's milk" seemed to permeate the Roman character, yet women had more freedom and greater opportunities for mental improvement. The Roman tried to mould his civilization after the Greek model, and hence it was necessary for students to become familiar with Greek works in manuscripts; thence arose the fashion of studying books in connection with lectures from philosophers, teachers, and orators. The medieval scholars of Europe, scattered here and there in monasteries, pursued their studies in solitary cells; men were more and more drawn from living teachers to dead books, from observations of animate nature to the deciphering and transcribing almost illegible, often inaccurate, manuscripts. By

their labors the literature of Greece and Rome was in part preserved to us. Universities were founded, grammars and other text-books were compiled, and plans of study formulated. The great part of these institutions were at first ecclesiastical corporations, and either theology, or something preparatory to theology, was taught therein; gradually their scope widened, and by degrees the schools, colleges, and universities of to-day were developed.

We have hitherto followed too closely the medieval methods, devoting ourselves too much to books and memorizing set subjects, but there are indications of a revolution and a return to old Greek modes of mental development. Though we can imagine nothing superior to Plato's instruction for men of his day, yet our state of society demands something different. Now there is such a vastly greater sum of knowledge which every one must acquire to act with any power in modern life, that one must have at command methods for acquiring facts and ideas with far greater rapidity than in those calmer Greek days. Hence, the "New Education" strives to combine the excellencies of the lecture with the study of books. Froebel has given us the Kindergarten method of opening the youthful mind, keeping its powers fresh and alert, whilst knowledge and a thirst for knowledge are gradually insinuated. Without mental pain or strain the first steps are taken, and with beautiful gentleness the young mind is unfolded as April showers with warm tenderness open the flowers of May, and insure the fruits of September. Teachers are beginning to learn that minds are not alike homogeneous; that the pruning, training, teaching that is fitted to one youth, is not just that which will best help another. It is true that all the leading faculties are present in every normally developed mind, but they combine in such entirely different proportions in every different human being, that results are widely divergent. To early injuries inflicted upon the brain by the attempts

of parents and teachers to force distasteful knowledge into reluctant minds, we may ascribe many of the vagaries and much of the insanity of later years. We can not estimate or imagine the mental and moral injury that may be produced by one act of wrong or injustice inflicted upon a child. In the management, training, and teaching of the young little injuries, mistakes, and wrongs are no trifles: they may be the seeds of a deadly, destructive growth of which the teacher has not the faintest conception. Teachers should strive to love their pupils, that they may more certainly avoid doing them involuntary injury; we are not apt to pain those we truly love. And pupils should not be forced to attend the instructions of teachers whom they distrust and dislike.

We trust the old ways of coercion and force in education will finally pass entirely away, and knowledge will be inculcated only in sweet, kindly words by loving and tender teachers. No morose, irritable, quarrelsome nature should ever be allowed to become a teacher of the young. The world has been too long

under the dominion of rough, hard, cruel natures; it is quite time particular attention should be paid to the disposition of those to whom early education is intrusted, and unkind, uncharitable, evil-tempered teachers should be as rigidly discarded as are those of immoral character. The spiritual standard should be far higher, and the graces of the Spirit should be as strictly demanded as the graces of knowledge, or the ability to impart learning.

The "New Education" in our Eastern States has taken the name of the "Quincy Method," from the success with which Col. Parker has combined and utilized in practice the good points of Froebel, Fénelon, Horace Mann, the ancients, and Col. Parker. The key-note of the method is making knowledge and school attractive. When plants and flowers are universally introduced, and fine engravings decorate the school-walls, and the sweet courtesy of the best drawing-rooms is invariably shown by pupil and teacher, and the spirit of love prevails, then will the "New Education" be seen and known as the "True Education."

AMELIA VERONICA PETIT.

POPULARITY.—There are few things more universally dreaded than the frowns of Mrs. Grundy; and her smiles are coveted by the millions. Popularity does not always spring up in the path of duty, and, consequently, they who will become popular fall into temptation. The man whose duties call him into direct contact with the mixed multitude must of necessity perform labor for which he will never be receipted. They who labor for the caresses and flattering comments of the public will receive their pay in very irregular installments, and ere they are aware the moth of human jealousy will dispossess them of their treasure. In seeking for this emolument men have planned out an endless variety of adroit movements, especially on the political checker-board; and they frequently become involved in inconsistencies which annoy them more than the public whose trust they have betrayed.

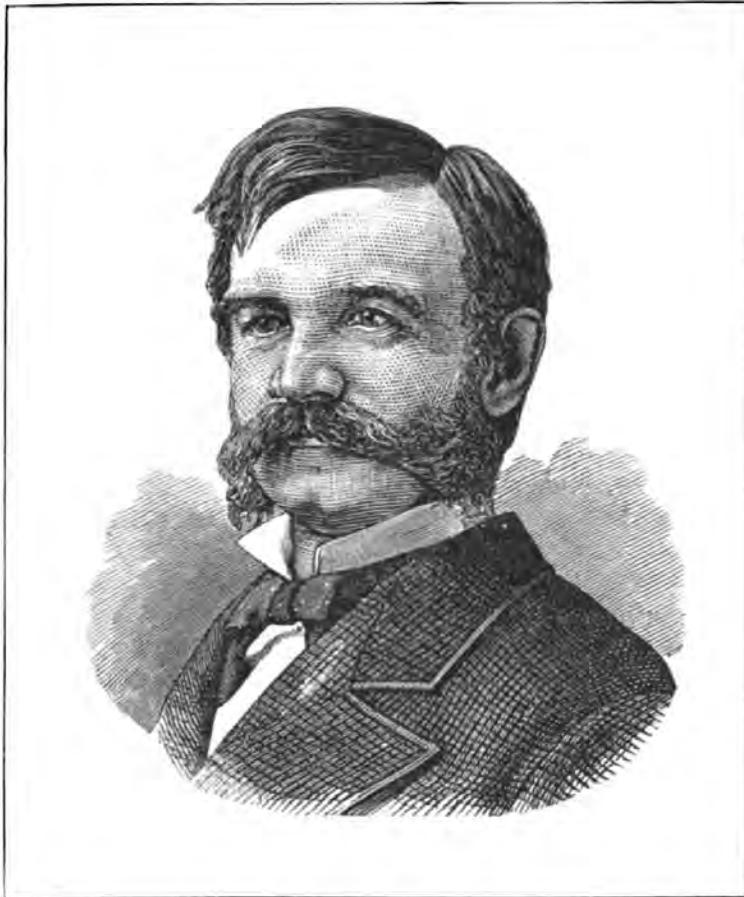
The record of men whose personal vanity has been their guiding star contains many a dark line portraying the chame-

leon hues of their character. We say chameleon hues, because the ardent popularity-seeker is a many-sided character, and keeps out the sign that suits the times and conditions of society; and apeing the virtues of the strong-minded or pandering to the follies of the weak, he would draw all men to him. Men take to arms as naturally as ducks take to water, little caring what cause they espouse, if only their own selfish ends are subserved.

We would not strike out popularity from the world's "bill of fare;" but if men will clamor for sugar as their chief article of diet, the fault is their own if they wear a sour expression as the result of a sour stomach. In such a case it will be useless to apply to Mrs. Grundy for a redress of grievances. She has only sugared you in common with the rest of her subjects.

Some men need public notice to prevent sluggishness; but commend us for a political compact to the care of men who are able to go it alone, for under their leadership our grand old ship of State need not be steered in shallow waters.

W. R. GREGORY.



WILLIAM A. CROFFUT.

THIS gentleman has a very compact and vigorous constitution; the muscles are dense and well sustained by ample vitality. His brain, measuring twenty-three and a quarter inches, ought to be related to a body weighing 180 pounds, eight pounds more than he weighs.

Force is one of the qualities which pertain to the body as well as to the brain; whatever he undertakes to do, physically, he engages in with a hearty earnestness that means success, and always has worked hard when he had anything to do. If he had but one day's work to do in three months, he would manage somehow to finish it about the middle of the afternoon on the first day.

He has large Firmness, which, uniting with his force, gives him steadfastness and strength of purpose and a desire to conquer opposition and overcome obstacles. He has enough of Caution to give him prudence, watchfulness, and regard for consequences. He has Secretiveness enough to impart policy and shrewdness, and to point to him the easy and smooth way of attaining results. Though he feels strong enough to conquer and drive over impediments, he does not grapple with trouble and difficulty and opposition simply for the pleasure of contending. If he were a lawyer, he would generally manage to anticipate whatever snares and traps his opponents might be preparing for him, and

would "maintain a line of retreat," as they say in the army, and yet if he were in the army, a line of retreat would be only the *dernier* resort. He would smite with heavy blows in front, and conquer if it were possible; but in the common affairs of life he seeks the smooth way, the easy way, when he can.

There are two kinds of influence which he brings to bear: One is the friendly; he allies himself socially to people who acquire an inclination to conform to his wishes, and when he goes among men, there is a spirit instantly awakened in their minds, which, if expressed in words, would be, "What can I do for you?" Consequently, as a business man, he would accomplish a great deal in a given time, and do it in a way that would not be raspy and harsh. His friendship would open the way so that people would cooperate with him readily and be glad to serve him; and as a friend, people confide in him. If he were a politician, or a lawyer, or a business man, people would feel that they could take his word, and believe that he would stand by them and their interests through thick and thin. This is born of courage, integrity, and friendliness.

His large Benevolence, blending in its action with the social elements, renders his contact with men gracious and smooth and persuasive, and if he were using acrimony, orally for instance, as a public speaker in debate, he would somehow manage to get the best of his opponent, and at the same time not give him serious personal offense. His opponent, after a debate was over, would be likely to take his arm and go to dinner and have an hour of amusement and friendly association with him. When he chooses to suppress the action of his friendly and benefi-

cent instincts, his criticism is sharp and acid-like. As a public speaker, however, he seldom becomes so exasperated that his criticisms are acrimony unmixed.

He has large Acquisitiveness, and if he were devoted to business, he would make business of it and make it pay. He might excel as a merchant, as a manufacturer, and especially as a manager of men. He reads strangers, comprehends character, and seems to know instantly what methods are best to approach each special case. If a crooked, crabbed man has one smooth, straight side, he will manage to find it and adapt himself to it, and therefore such men generally like him, because he knows how to avoid their rough side.

His Self-esteem gives him a spirit of independent selfhood. He is not so much inclined to dogmatize and domineer as he is to lift himself into an atmosphere of silent self-reliance. He feels equal to the place and the occasion without any disposition to disparage others. He is ambitious to be known and respected, but not so anxious to be praised as to be appreciated; and with his strong brain and healthy constitution, he is conscious of power enough to win respect on his own merits.

He ought to be a capital linguist, having the faculties which are required to use language with copiousness and appropriateness. He is a natural critic, remarkable for his power of analysis and discrimination, detecting flaws, errors, inconsistencies, or adaptations, not only in subjects, but in themes, theories, and character; and he reads motive, as we have said, with remarkable accuracy and intuitive readiness.

He has a decided tendency to think logically, but his percepts are so strong that his intuition often outruns his logic,

and he reaches results that are logical without following strictly the logical form. He inherits from his mother more than from his father; consequently, his mind takes the intuitional form of action, and his best thoughts are those that flash on him as lightning vividly reveals the contents of a dark room in the night, and lead him to better results than he would work out by hard, dry thinking—consequently, if he were a lawyer or debater, his best points would come to him while he was warm and on his feet; the interruptions calculated to disturb a man would be to his advantage.

His memory of what he sees and experiences, where he goes, what he does, what is said to him, is excellent. His sense of music is good, especially of rhythm; and also the sense of time—he would even count his steps in going up a long flight of stairs. His Time, Tune, Ideality, Mirthfulness, Eventuality, and Comparison, give him the foundation for poetry, humor, and wit, in combination. He has Destructiveness, Firmness, and Conscientiousness enough to give edge and severity to his writings.

He should be known as a sharp thinker, a keen, clear, intuitive observer; as capable of making mechanical combinations, and of comprehending the theory and principle of finance. He would manage business in its social, in its practical, and in its financial aspects about equally well, but his true place is where he can act on men, where he can talk to people, and bring his social and intellectual power and his courage to bear upon the individual. If he were to undertake the difficult and perhaps questionable profession of lobbyist, his opponents would dread to see him coming, because he would so urge his side of the case as to win, and he

would urge it through his social magnetism as well as through the logical phase of the subject. If he were a physician, people would begin to get well as soon as he walked into the room; he would do as much by his influence on the nervous system, and upon the courage and hope of his patient, as by his treatment; and wherever that power can be related to the influence one exerts in the community, on any topic, it is equally applicable. As a military commander, as a salesman, as a lobbyist, as a leader in a public body of men, and also as an orator, he would exert a decided influence upon others. This is due to a sound mind and a sound body and a good deal of both.

The gentleman whose portrait is given above is widely known as a humorist of the American type. His humor usually takes the form of verse in which he hits off political and social incidents with keen satirical emphasis. Perhaps his best work in this line is a recent series of partisan poems, appearing in the *New York Tribune*, known as "Bourbon Ballads." These, put into the mouth of representative Democrats, have been very widely read, and exert a marked influence as campaign documents; probably no more trenchant political thrusts have ever been made in this country lately, not excepting Nasby's letters. The *Tribune* republished some fifty of these "Ballads" in a campaign extra that found a wide circulation, and Mr. Croffut has since followed up their general purpose in an illustrated series, called "Campaign Echoes," which was furnished to twelve of the principal Republican papers of the country. We have no space for an analysis of this, or of the author's non-political verse, of which he has been a prolific writer, being ready at all times, apparently, to portray a passion or an event in harmonious lines.

Mr. Croffut is now of about middle age, and his life has been full of industry. He

was born at Redding, in the western part of Connecticut, but when a year old was taken by his parents to Orange, where his boyhood and youth were spent. His parents were of English descent, with a strong lateral influx of Scotch and Irish blood—a graft of shrewdness, wit, and alertness upon the sturdy Saxon tree. His father, Benedict Croffut, is still an active and strong man of seventy-eight, and is, as always, cheerful and fond of mirth and song.

The subject of our sketch had only a common-school and academic education, closing the latter at Wilbraham, Mass.; but being endowed with an excellent organization and a studious type of intellect, he was enabled by application to acquire the mental training demanded by an exacting profession.

He began his newspaper work in Derby, Conn., and subsequently has had editorial charge, from one to five years, of the *St. Paul Times*, *New Haven Palladium*, *Rochester Democrat*, *Chicago Post*, *Minneapolis Tribune*, and two or three other dailies, and was for four years a leading editorial writer on the *Graphic*. Besides the work he is at present doing for the *Tribune*, he writes editorials for *Frank Leslie's Newspaper* and the *American Queen*, maintains a spirited weekly correspondence with the *Indianapolis Journal*, *St. Paul Pioneer-Press*, and *Denver Tribune*, over the signature of "Jerome," and writes poems for the *Ledger*, *Puck*, and other periodicals. By this it will be seen that he is one of the most versatile and industrious of writers. It may be said of him also that he sincerely respects his profession, and seeks to elevate its tone both in the moral and intellectual sense; and though not priggish, he has no sympathy for the irregular habits of those who call themselves "Bohemians." Notwithstanding that he is characterized by uncommon buoyancy of spirits, and an earnest love of fun is a prevailing trait, he possesses a high degree of refinement and delicacy, and has serious convictions on all current questions of interest. His views,

like his experience as a journalist, are comprehensive and generous, and he is ready to defend them with vigor and effect, either in type or on the platform, where he is frequently found.

In 1862 Mr. Croffut was married to Miss Margaret Marshall, of Danbury, Conn., and three children resulted from the union, none of whom are now living.

Besides his contributions to newspapers and periodicals he has published a "History of Connecticut in the War" (1867) and a compilation for domestic use, entitled "The Helping Hand" (1869).

A hasty selection from Mr. Croffut's poetry is the following, which is part of a "Dirge on the Death of the King of the Cannibal Islands":

So generous! Oh, wasn't he? I have known him
Exhibit a celestial amiability;
He'd eat an enemy, and then would own him
Of flavor excellent, despite hostility.—
The cruelest captain of the Turkish navy
He buried in an honorable grav—y.

We grow like what we eat. Bad food depresses;
Good food exalts us like an inspiration;
And missionary in the *menu* blesses
And elevates the Fejee population;
A people who, for years, saints, bairns, and women ate,
Must soon their vilest qualities eliminate.

But the deceased could never hold a candle
To those prim, pale-faced people of propriety,
Who gloat o'er gossip and get fat on scandal—
The cannibals of civilized society.
They drink the blood of brothers with their rations,
And crunch the bones of living reputations.

They kill the soul; he only claimed the dwelling;
They take the sharpened scalpel of surmises,
And cleave the sinews where the heart is swelling,
And slaughter Fame and Honor for their prizes.
They make the spirit in the body quiver—
They quench the Lights;—he only took the Liver.

There are some hardened customers, I wot—
A few tough fellows—pagans beyond question—
I wish had got into his dinner-pot,
Although I'm certain they'd defy digestion,
And break his jaw and ruin his esophagus,
Were he the chief of beings anthropophagus.

It should be mentioned that Mr. Croffut's latest production is a comic opera, entitled "Deseret," for which Mr. Dudley Buck has composed the music. It is in course of preparation at one of our New York theaters and will be given to the public in the fall.

COMMONPLACE LIVING.

"A COMMONPLACE life," we say and we sigh ;
 But why should we sigh as we say ?
 The commonplace sun in the commonplace
 sky
 Makes up the commonplace day ;
 The moon and the stars are commonplace
 things,

And the flower that blooms, and the bird that
 sings ;
 But dark were the world, and sad our lot,
 If the flowers failed and the sun shone not ;
 And God, who studies each separate soul,
 Out of commonplace lives makes His beautiful
 whole.
 SUSAN COOLIDGE.

RUTH'S CROSS.

ONE of my earliest recollections is of a tall, slight, white-haired old man, in a partially intoxicated condition, standing half defiant, half shame-faced under the lilac-trees nodding their purple plumes over our kitchen door-stone, while grandma placed a cut of cold meat, a loaf of bread, and some doughnuts into the basket he carried on his arm.

"Alas!" sighed grandma, as he walked away with uncertain steps into the warm spring sunshine, "alas, he has seen better days!" Running into the sitting-room just then, I found aunt Ruth with the tears coursing down her fair though faded cheeks, and dropping upon the waistcoat she was making for grandpa. "She bears a cross," said grandma, sadly, handing me a seed-cake to divert my mind, when I went back to the kitchen to ask her what made aunt Ruth cry.

One day, while the air was still sweet with the lilac blooms, grandma, aunt Ruth, and I were walking along the quiet road toward the village. On a steep hillside we came upon the same poor man lying in a drunken slumber beneath the unobstructed rays of the hot, midday sun. "Poor man! It is too bad; he has seen far better days," said grandma. Aunt Ruth, without a word, raised him by the shoulders and moved him into a more comfortable position under the shade of a maple-tree near by, crushing the bright, yellow dandelions and butter-cups on the way. Then searching in his basket that had been lying by his side, a small stone jug was found, which she broke on a rock, the vile contents pervading and

poisoning the pure, balmy air. Still maintaining a silence that was oppressive to me, she took a pair of stockings from the work-bag she always carried, and taking a spray of white lilacs from grandma's bouquet, placed them in the despoiled basket. Quickly walking on ahead of us to the top of the hill, she stood and waited for us there.

"Poor soul!" said grandma, accommodating her pace to my short steps; "she bears a cross; she bears a cross." Thus, these two seemingly very inharmonious personages came to be strangely associated in my mind, and "Piccadilly's better days" and aunt Ruth's "cross" were among the first of life problems my infantile mind attempted to solve. "Piccadilly" lived alone in an inclosed shed, standing in a thicket of blackberry-bushes in the shelter of a steep, rocky ledge near a pleasant village among the beautiful hills of Berkshire County, Mass. This queer dwelling was shaded by a large walnut-tree, and near by were two apple-trees, an "August Sweeting," and a "Sops-in-wine," contracted into "Sopsy vine" by us children, who used to cross on a single plank the brook between the old shed and the road, and go shyly to the door to receive the fruit from the trembling hands of the aged man.

Some one gave him the nickname "Piccadilly" on account of a long story he was fond of telling when tipsy. It was made up chiefly of certain adventures of his, when a young man, in that locality in London called Piccadilly. My parents, however, always gave him his proper

name, Nathan Lossing, and we children were taught to treat him with respect always, and to give him food whenever he asked for it. I remember my father saying once that this consideration was at least due to his family blood, notwithstanding it had sadly deteriorated in his case and he had badly abused himself. He belonged to an old, wealthy, refined family, and at one time had been the largest land-owner in the country.

When at college he had contracted the habit of wine-drinking. After he was graduated the hitherto "social" glass came to be a necessity, and the brilliant college course that his friends had fondly hoped would be instrumental in making for Nathan a name and fame in the world, apparently resulted in nothing but evil. Aunt Ruth had been betrothed to him almost from childhood. She was noted for her beauty, intelligence, and sweetness of disposition all over the country. She was his equal in social position, although she was possessed of little or no property, and Nathan's mother, who heartily favored the match, gave the sweet young orphan girl all the maternal love she had ever known.

Ruth was greatly shocked when her lover's intemperate habits became known to her. With characteristic adherence to principle, she refused to marry him until he should have proved a reformation. She could love and yet be strong. The long months and years that now followed carried with them an exquisite pain that finally rived the heart of the devoted girl. Her love, tears, entreaties, prayers, were powerless. Although the infatuated young man adored his lovely young betrothed, and at times abhorred his evil courses, oftentimes repenting bitterly and promising better things, he lacked the will to break the iron bands that were eating into his very flesh and dragging him down to certain ruin.

Some of Ruth's friends urged her to marry him, his mother even among others. "She could then reform him," they would say. But she would reply, with a pitiful attempt at a smile: "If Nathan

can not leave off drink for love of me before marriage, he certainly would not afterward." Although she did not summarily break her engagement, she continued to postpone the wedding. The impetuous young man waxed wroth at her delay, and finally he decided to join a party of old college friends in a trip to Europe. While there he wrote regularly to his affianced, who, at the urgent request of Nathan's mother, had taken up her abode with her while he should be absent.

Every letter contained a new protestation of sorrow for his weakness, coupled with a promise of reformation, which, without doubt, the poor young man really intended to keep faithfully. Ruth's long-deferred hopes were now raised to the highest point. In April of that year he wrote to her that he would be home in time to be married when the white lilacs were in bloom, and accordingly elaborate preparations began to be made at the great Lossing mansion. Judge, then, of the bitter sorrow of the two fond, waiting, trusting hearts when, late in the following May, the son and lover arrived home one night in the daily mail-coach dead drunk! Mrs. Lossing, already in a decline, sickened, and soon died from this augmented grief and keen disappointment, and the white lilacs blossomed for her funeral.

Ruth, who had always been handy with her needle, now left the great house, and, with the laudable determination to earn her own living, she entered into a sort of partnership with Miss Louisa Beckwith, the village tailoress, to sew with her from house to house where their services might be needed. Nathan, in the meantime, when sobered from his frequent incursions to the neighboring city, near the college where he graduated, and from his excesses at home, employed himself in improving his immense farm and giving it the appearance of a fine, highly-cultivated estate. He built pretty little cottages for his laborers, and picturesque, pavilion-shaped sheds, or cots, here and there for the protection of his sheep and

cattle, not so much for utility, as for the reason that the ornamental structures would form pleasing features in the landscape. He bought horses and carriages, and in various ways tried to dazzle the eyes of plain little Ruth, so that in the glamour of his riches she might be induced to quit her lowly life and become the mistress of his elegant home. But Ruth's mind was made up. There was no pretense or argument that could have the least weight with her in the direction of her marriage with Nathan while she knew that, seldom a day, never a week passed when he was not the worse for liquor.

In those days, however deep Nathan might drink during the week, he would generally sober off Saturdays and appear in the old church on Sunday clothed and in his right mind. He would sit in the family pew through the services and gaze at shy, quiet Ruth in the singers' seats as a mortal might look at an angel; and, indeed, the simile is not far-fetched, for Ruth possessed an angelic nature, and with Nathan's present earthly qualities she was unattainable to him.

One Saturday afternoon in July, this year, after his return from abroad, he called upon Ruth at Parson Goodriche's, where she was plying her vocation as tailoress by making the parson a study-gown. The idea of Ruth's stitching away day after day, steadily refusing to place herself under obligations to him by receiving a penny from his great wealth, always exasperated Nathan; and on that day, which was oppressively sultry, it was more galling to him than ever. They had an unusually stormy time over the ever-recurring subject of their wedding-day, or rather, Nathan stormed, and Ruth wept, but still remained unyielding. The interview over, the frantic, half-intoxicated lover rushed out of the house, and following a diabolical impulse, crossed the wide, maple-shaded street to the village tavern and drank himself crazy drunk in two hours' time. He then began to rave about Ruth, and barely able to stand upright in the shameful condition he then

was, he shouted to his companions in the bar-room: "I will go out into the street and walk until I meet some woman, and I will ask her to marry me, even should she be a negro wench or an Indian squaw!"

Urged on by his low associates, he started out of the tavern with uncertain steps, swaying form, blood-shot eyes, and disheveled hair—a sorry sight indeed. The angels must have looked down with pity on the young man, with so many capabilities for good, on account of a contemptible and degrading appetite acquired when a student—a period when religious teaching and a love for the acquisition of useful knowledge should have shielded him—making himself worse than a beast, more loathsome than a reptile even.

Just as the miserable young man got in front of Esquire Morgan's house he met Emma Harkins, a shallow, rude girl, with a weak, pretty pink-and-white face, whose chief characteristics were pertness and vanity. She was a daughter of one of Nathan's hired men, and since his return from Europe had cultivated a speaking acquaintance with him. Emma was never at a loss to say something "smart" to anybody, and now she called out: "Pretty heavy loaded, ain't you, Nate? You'd better go ag'in for a last glass."

"Thatsh so, Em," blubbered and stammered the young inebriate. "I say, Em, you wouldn't *mar'y* me, would you?" "I would ef ye wanted me to, Nate," replied the bold young woman, glibly. "Well, I do, Em. Let's go right into the old 'Squire's here and have the business done."

The gathering storm broke just then, and the couple sought shelter within the esquire's house, the young woman seizing Nathan's arm and assisting him along the walk and into the door-way. When they came out into the beautiful sunshine, after the storm had passed, they were husband and wife! There never had been known such a violent thunder-storm in the village. Many of the folk

said that Nature even was provoked at the outrageous ceremony then going on at Esquire Morgan's.

The inconsiderate and unprincipled Justice of the Peace thought the ill-timed marriage a great joke, and never tired of repeating the part he took in hurrying up and performing the ceremony. It was a terrible blow to Ruth, and she made no hypocritical attempt to conceal her grief and chagrin. She was so true and sincere that no one thought of subjecting her to ridicule. "I loved the man," she said. "But I loved not his evil ways. I tried to make him better. Now he is taken out of my hands."

She appeared at church the next day as usual. Her face was as white as the plain cambric gown she wore, and she took her accustomed seat in the singers' gallery. But the Lossing pew was vacant—Nathan never occupied it again. His wife sometimes made a display of her finery by coming to church, but oftener she gave a Sunday dinner to gay friends from the city (wealth never lacks followers), and God's day was passed in visiting and in riotous mirth. Mrs. Nathan Lossing, *née* Emma Harkins, "made things fly," it was said, at the great house. There were never in Berkshire County such dinners and parties and balls. She had a dance-hall built. She had a troop of servants. She had silk and satin gowns by the score. In various ways she spent money as if there was no limit to her besotted husband's wealth. Nathan Lossing himself went from bad to worse, drinking deeper and deeper. Mrs. Lossing after a while took to drinking something stronger than wine (she had always been fond of cider, and could never be induced to give up the vulgar habit), and at other times besides at the grand dinners she gave. It was not long before it was a rare thing for one to find either the husband or wife sober. Their "respectable" followers fell off, of course, and low-lived persons in the neighborhood came to be their visiting friends and associates,

Debts accumulated, and Lossing was

slow to pay. The estate was neglected until there was very little income to be derived from it, and the railway shares and bank stock were gone. In the meantime two children had been given to the unworthy couple, a boy and then a girl. The baby girl died soon after its birth, and in a few days the inebriate mother was laid in her grave beside it.

Ruth, who all these years had been working industriously at her trade, went to the poor woman in her last days and tried to light the dark road to the grave with encouraging and hopeful words.

After the death of the poor woman, Ruth alone prepared the body for burial, and superintended all the household arrangements for the funeral. She did it, she afterward said to a friend, to compensate for any bitter or uncharitable feelings she might have harbored against poor Emma Harkins. Ruth was a woman of great native dignity and good sense and there were neither heartless smiles nor sarcastic remarks indulged in over the neighborly and Christian course she took.

Soon creditors came down upon the Lossing estate simultaneously, like a flock of vultures, and everything went by the board. Now Ruth again held out her helping hand in finding a good Christian home for poor, neglected little Tom. A creditor, more compassionate than the rest, had relinquished to Mr. Lossing the acre of ground by the brook near the road, where stood one of the ornamental sheds he had caused to be built for the protection of the stock that fed in an adjoining pasture. This framework was now covered with unplanned pine boards, and rough oak planks were laid down for a floor. There was one door and one window, both looking toward the road. Into this one room were moved a bed, a stove, with the pipe running up through a hole made in the roof, a table, an arm-chair, and a few cooking utensils. Everything else had been seized by creditors, and this miserable hut was now the only home of the brilliant college graduate, the once wealthy young Nathan Lossing now a friendless, broken-down, poverty-

stricken, degraded man, and old before his time by many years!

Now and then he would work out as a common day-laborer, receiving in payment his board and a little money, that he usually spent for drink. His enfeebled physical condition was such that he could barely earn enough to keep him in food and drink, but there were many laboring people in the vicinity, men who had been in his employ formerly, and to whom he had been kind and generous, who would never allow him to suffer.

That little hut came to be called "Piccadilly's Castle." The course of the rippling brook that ran by it was named the "Moat" by us children, and the single plank that spanned it was the "draw-bridge." The little garden plot between the brook and the hut was quite rich, and it literally glowed with hardy common flowers in their season. Many people wondered whether they grew spontaneously. Others knew that aunt Ruth's loving hands had scattered the seeds and put down a root here and there unbeknown to the unfortunate occupant. A woodbine had soon covered the rough exterior of the cabin. The ledge was radiant with many-colored morning-glories. "Bouncing Betts" vied with the black-berry bushes to see which should be the taller. There were scarlet poppies, brilliant marigolds, and gay bachelor's buttons peeping out from the grass here and there, and "butter and eggs," congress flowers, mallows and prince's feathers bent over and looked at themselves in the sparkling brook.

As soon as Tom was old enough to earn wages he paid for his father's board and washing at a near neighbor's, although the poor man insisted on sleeping and passing nearly all his time in his old quarters. Somebody, no one knew who, saw that he was comfortably clothed. Gradually he resumed his former habit of abstaining from drink Sundays and going to church. He now occupied one of the parish seats, and, as of old, looked at aunt Ruth, who still kept her seat in the singers' gallery, and whose voice the

young people—every one of whom dearly loved her—said grew sweeter year by year.

Mr. Lossing's linen was fine and soft and white, and made with high collars and ruffled fronts as in his younger days. People queried at this, and when he was approached upon the matter he would reply gravely, that his stock of shirts reminded him of the widow's cruse, inasmuch as they never gave out. His stockings, too, were always fine and warm and whole.

He met aunt Ruth occasionally. If intoxicated, he sedulously avoided her; but if he met her when sober, he gladly accepted the kind yet earnest words of exhortation she always gave to him as if they carried a hidden blessing. One day, with averted face and faltering tongue, he asked her would she marry him as poor as he now was, if he should try and amend his evil way. She replied honestly: "I never break my word, Nathan. My engagement holds good. When I am convinced that you have repented and reformed, I will marry you." She had had many offers of marriage since her lover's disgraceful union with Emma Harkins, but she would always say that a betrothal was as binding morally as a marriage vow, and that she was still bound.

Aunt Ruth became to be as much of an institution of the village as the minister, or the doctor, or the town clock. Ever ready with kind and encouraging words to all, cheerful and self-contained, nothing went on exactly right without her helpful presence. She dressed all the brides, named many of the babies, closed all the coffin-lids, and comforted the mourners. Was there joy or sorrow in a household, aunt Ruth was sent for. The doors all flew open at her approach, and she had homes by the score. Every moment of her time was utilized. There was always a bit of sewing in her work-bag for odd moments and a man's sock to catch up in the twilight. The "cross" she bore only made her dearer, sweeter, lovelier year by year.

As Nathan Lossing grew older and

less able to work, he was from necessity oftener sober, and in warm, pleasant weather would sit in the door-way of his cabin that overlooked his old estate and read the newspapers which he borrowed here and there and which his son sent to him. He sold the products of his little homestead for drink when he could, but berries, apples, and nuts were so plenty in the little village he seldom found a customer. And so he lived on until his hair was white.

One day, in early spring, the little brook was swollen to a foaming torrent by the melting ice that rushed down from the hills beyond. One of the children in the neighborhood, a little thing who was fond of the poor old man, tried to cross the icy, slippery plank placed over the brook and in the pathway leading to the cabin. The child had run away from home to carry a warm cake to his aged friend. From his window Mr. Lossing saw the little fellow fall into the water. It took but a moment for him to rescue the child and take him home, but he was thoroughly drenched, and a fever was the result. Then aunt Ruth took her place by his bedside. He rallied from the distemper, there was an interval of convalescence, then came a lingering relapse, and he died with no one near him but his early love.

Nobody knew what had passed between them, but people who saw aunt Ruth the morning after his death said her face wore a sweeter expression and bore a more saintly look than ever. "God knows," she said, "poor Nathan's mind was not strong enough to overcome the weakness of the flesh. Through his whole life he was either in a state of transgression or repentance. Both mind and body were from God—He knows." She brought a fine ruffled shirt for them to put on him before he was placed in his coffin—"one of the very same which were to have been his wedding shirts," she said. "I had them ready for him when he came home after his graduation from college." Then the villagers knew that those shirts had been patterns for

the ones Nathan had worn since his wife died. All his stockings, also, had been knit by aunt Ruth's busy fingers, and all his clothing had come from her still loving hands.

Wonderfully true, loyal, self-sacrificing soul! One of God's dear ones for whom resplendent crowns are in waiting! Tom, now a prosperous, Christian man, with a lovely family, came to the funeral, and aunt Ruth, in widow's weeds and cap, appeared with him as first mourner. "I have the right," said she to some of the neighbors who at first had looked at her in a questioning way. After the short prayer the village pastor told how, during the last days of the deceased man's life, the course of the fever having freed his system from the more immediate effects of alcohol, his mind as clear seemingly as in his early days, he had expressed deep and sincere repentance for his evil ways in frequent and importuning prayer and in his conversation, and at last indulged in a trembling hope in the efficacy of the Saviour's atoning blood. "And," said the pastor, "almost at the last hour I married the twain so long betrothed, so long parted by strong drink and principle." As aunt Ruth took her last look at the face of the departed, she exclaimed reverently: "He has entered upon a new life now; his appetite can not go with him *there*."

Ten more years of life, bearing his name, doing each day the work that came nearest her hand, and they laid her down beside him. Their names are chiseled side by side upon the marble shaft which Tom erected to mark their resting-place. And some one, we never knew who, placed a small Greek cross of Aberdeen granite at the foot of the loyal woman's grave, with a basin in the top for flowers. Upon the center is engraved:

"SAINT RUTH.

"At last her cross is crowned with flowers.

MRS. ANNIE A. PRESTON.

RELIGION: storms may rage round its base; but eternal sunshine crowns its summit.



PHRENOLOGY IN THE TREATMENT OF INSANITY.

THE State of New Jersey possesses the largest and most completely equipped Asylum for the insane in the United States. It is situated in a beautiful region a few miles north of Morristown, and being not only vast in dimensions, but also elegant in design, it is a very important feature of public attention. Dr. Horace A. Buttolph, the Superintendent, was for many years in charge of the State Asylum at Trenton, N. J., and on the completion of the new institution at Morristown, was transferred to it, the State officers deeming him the most competent person to whom so important a trust could be accorded. It is but fair to state that the plan and arrangements of the buildings inside and outside owe their admirable completeness in a great measure to Dr. Buttolph's intelligence and long experience in Asylum management. Before us lies the very neat "Fourth Annual Report" of the managers and officers of the Asylum, which we have lately received. In turning over its pages our eye lighted upon this paragraph in the introductory statement of the managers :

"The remarks of the superintendent on the subject of the 'Physiology of the Brain,' and the practical lessons therefrom drawn as they are by Dr. Buttolph, who has made the study and treatment of insanity the work of his life, deserve the most careful consideration of all who are

interested in the care and cure of the insane."

With some curiosity we turned then to the superintendent's detailed report and found the "remarks," to which allusion is made by the distinguished gentlemen who constitute the board of managers, to cover five pages, and to be an emphatic recognition of the principles advocated by this magazine.

We have taken the liberty to make the following extract, as the testimony of a physician who has devoted himself to the study and treatment of mental derangements for more than thirty years, and whose career in his specialty is unrivaled for success, possesses the highest value from a scientific point of view.—ED. P. J.

PHYSIOLOGY OF THE BRAIN.

"Strange as it may seem, yet it is no more strange than true, that correct knowledge of the physiology of the brain, or knowledge derived from systematic observation of its healthy functional action, is, at best, and in the minds of a few persons only, in its infancy; while with a still larger number, including many teachers of anatomy, physiology, and mental philosophy, a correct and proper idea of its use, as connected with the manifestation of the mental faculties, has not been admitted as a practical and important truth.

"The reason for the seemingly incred-

ible delay in ascertaining and acknowledging the true physiology or healthy function of the brain has arisen, apparently, from two sources or causes: first, that in this, as in many other bodily organs, its function or physiological use is not revealed by the minute anatomy of the tissues and parts of which it is composed; and, second, because the large proportion of eminent men in the departments of physiology and mental science and who have influenced the belief and modes of thinking of the past and present generations, have, through the influence of prejudice against the only correct method of obtaining information of its functions during life, denied or ignored the results, which comparatively few others, but equally eminent observers, have reached.

"Starting, then, with the assumption or statement which few will deny or question, that a full and correct knowledge of the physiology of the brain can not be ascertained from the anatomy of its minute structure, by vivisection, or mutilation during life, nor even by pathological inquiries after death, the question recurs, as to *how* a knowledge of the uses or functions of the different parts of the brain is to be obtained. The view taken by the writer (though not in any sense original with him) is, that the office of the brain is two-fold: first, that it is the center of sensation and nervous energy to all parts of the body, and as such, is stimulated and acted upon by whatever is passing in or through it; and second, that it is the seat of thought and feeling.

"A knowledge of the former, or its connection with the body as the grand center of sensation and energy, can be inferred and established by its anatomical connections with the body and its parts, and by the observation of symptoms in disease, acute and chronic.

"A knowledge of the latter use of the brain, or as the seat of thought and feeling, it is claimed, can only be obtained by the method adopted by Gall, the eminent German physiologist. This system, developed by many years of the most care-

ful observations and comparison, teaches that the office of the periphery or surface of the brain, to an unknown depth, is to develop and manifest the mental faculties, both of thought and feeling, and that the faculties are strong and active in proportion to the size and quality of the parts of the brain substance as influenced by health, and the temperament of the individual.

"A more extended and definite statement of the doctrine of Gall, or Phrenology, is:

"'1. That the mind is endowed with a plurality of innate faculties.

"'2. Each of these faculties manifests itself through the medium of a particular organ.

"'3. The organs of the mental faculties have their seat in the brain—the brain being a congeries of these organs.

"'4. The power of manifesting each faculty bears a constant and uniform relation, other things being equal, to the size of the organ of each faculty.

"'5. The outer surface of the skull and head corresponds so nearly with the form of the brain that the seat and relative size of the several cerebral organs can be ascertained from an examination of its outer surface.'

"The facts and inferences of this system as stated, being true, in regard to the physiology of the brain, the great importance of the discovery will be appreciated, as it furnishes the basis of a clear, full, and intelligible system of mental science or philosophy.

"By its aid we see most clearly that the disordered states of the mental faculties are only symptoms of disease of the organs or parts of the brain with which they are associated. While we judge of the nature or character of the disease, not only by the mental symptoms, but also by such physical symptoms as indicate the condition of the system in general, and of each of the bodily organs in particular, that may be in a state of suffering.

"Here, then, is a rational and practical basis for the medical, mental and

moral treatment of each and every case of insanity that may occur.

"In this connection, I may add, that under this view of the anatomy and physiology, all the light gained in regard to the results of disease of the brain in cases of insanity, and shown by pathological or post mortem inquiries, can be as fully improved or utilized as by any other view of the physiology of that organ.

"It should be remembered, however, in the same connection, that the light obtained by pathological inquiries, or the results of disease of the brain tissues, come to the knowledge of the physician in any given case after his patient is dead, and can not, therefore, be utilized in his treatment. It is claimed, however, that by the aid of microscopic examinations of many diseased brains that valuable pathological results will be accumulated, which is undoubtedly true, at least, as a demonstration of the existence of morbid results in all cases of death from

disease of the brain with which insanity has been associated, though this fact has for a long time remained unquestioned. Is it not possible and very probable, however, that the *practical or therapeutic* value of the knowledge of such morbid conditions of the brain, after insanity has run its course, is of minor importance compared with the knowledge of the location of the disease as derived from the mental symptoms in the early stages, and the nature or kind of morbid action prevailing in the brain at its commencement and during its progress toward recovery, or to the death of the subject? It may be said, also, that while the morbid action of the brain may be precisely similar in the beginning of two cases, the results, in the changed condition of the two brains, may differ widely, according to the stage of the disease when death occurs; the latter, or period of death, being influenced by causes or complications differing in one case from the other."

MILTON ON HYGIENE.

"I YIELD it just," said Adam, "and submit.
But is there yet no other way, besides
These painful passages, how we may come
To death, and mix with our connatural dust?"

"There is," said Michael, "if thou well observe
The rule of *Not too much*, by Temperance
taught,
In what thou eat'st and drink'st; seeking from
thence

Due nourishment, not gluttonous delight,
Till many years over thy head return:
So may'st thou live; till, like ripe fruit, thou
drop
Into thy mother's lap; or be with ease
Gathered, not harshly plucked; for death ma-
ture:
This is Old Age."

Paradise Lost, Book I.

A FEW HINTS FOR SUMMER HEALTH.

IT seems appropriate in the beginning of the genial summer weather to descant upon the healthfulness of plenty of sunshine and fresh air. Our commonest blessings are those we least appreciate, and of none is this more true than of the above-named. Air is poorly appreciated, and the benefits of sun-light still less so. In the country, where the air is laden with ozone, people suffer less who are not properly careful about the free ventilation of their houses. But in the city,

where the air at least lacks the vitality that is given out by the vegetation of forest and field, and from the earth turned up by the plow, the absolute necessity of getting as much fresh air as possible can not be too strongly insisted upon. It is not enough that living-rooms should be "aired" once a day. It is not enough that sleeping-rooms should have a window "raised at the bottom and let down at the top an inch or two," according to directions frequently seen. There should

always be a current of fresh air through the house, so arranged in sitting-rooms that occupants need not be in a draught. Sleeping-rooms should have the windows wide open during the day, and have a current of fresh air passing through them all night. Sitting-rooms, and sleeping-apartments in common use, should, if possible, be where at some time in the day—if attainable, in the morning—the sun-light can have free access to them. Beds should be wheeled out to where the sun can shine upon them, and bed-clothes be placed in the open window and turned over and over in the life-giving rays. The occupant of a room thus treated will be far more likely to be of a “breezy, sunshiny temper” than one whose room is on the north side of the house, and whose bed-clothes never see the sun except on wash-day. In this connection we have a word to say which will commend itself, doubtless, more to the hygienist than the so-called “model housekeeper.” It is, that bed-clothes and night garments—as well as all clothing worn next the skin—would be far better for never being ironed. Let any one inhale the perfume of newly-washed clothes just brought in from the magnetism of the sun and air. How fresh and sweet they are. Iron these clothes beautifully, so that not a crease or wrinkle may appear; hang them in the hot kitchen, where fumes of cooking fill the air; fold them precisely, as if by a carpenter’s square, and how nicely they look. But submit them to the test to which you put them before they were damped down to

soak, and ironed them and “aired” them, you will find the ozony smell that pervaded them all gone, burned out, and in its place there will be upon them a flat, dead smell. It is an instance of the sometimes difference between being and seeming.

A friend of mine, who is a practical believer in physical religion, and a contributor to these pages, lives on high ground on the boundary line between Brooklyn and the open country. At the top of her house is a cupola or observatory, four feet by about seven in area, and surrounded of course by glass windows. In this little room she has a chair and settee placed. The windows are always open in fair weather for the purpose of ventilating the lower part of the house. Does my friend desire to finish some literary undertaking, and find herself unable to get in the mood in her study, she puts on a straw hat, leaves her desk, takes her work to the sky-parlor, and closing the windows, all but enough to keep the air pure, sits in the sun-light until its genial rays magnetize and inspire her for her task. Let any one who is a little below tone, just on the verge of melancholy, ready to take somber views of life, betake themselves into a room like this. Let them sit in a loose, thin wrapper with bare shoulders and feet in the sun for a couple of hours, reading some pleasant book that requires little exercise of the intellect, and I will engage that incipient hypochondriasis will disappear like any other miasm before the searching influences of old Sol.

H. M'L. S.

A LEAF FROM MEDIÆVAL MEDICINE.

FROM an address which is published in the *Medical Eclectic*, on the progress of medicine, we copy an interesting allusion to the views of “learned” physicians regarding an epidemic disease and its origin, five hundred years ago, as follows:

“At different periods, as you know, a disease visited Asia and Europe, which, for want of a better or more scientific

name, was called ‘the plague’ or ‘black death.’ In the thirteenth, fourteenth, and fifteenth centuries its effects were terrific throughout the Old World, in some States slaying nine-tenths of the inhabitants. Now, I will not stop to say a word in regard to the nature of this disease, but quote some of this ancient, scientific lore, to show you how *intelligently* and *scien-*

tifically those ancients must have treated this malady.

"The medical faculty of Paris—the most celebrated of the fourteenth century—were commissioned to deliver their opinion on the causes of the 'black death,' and to furnish appropriate instruction. The following is an abbreviated copy of their declaration :

"We, the members of the College of Physicians of Paris, have, after mature consideration and consultation on the present mortality, collected the advice of our old masters in the art, and intend to make known the cause of this pestilence more clearly than could be done according to the rules and principles of astrology and natural science ; we, therefore, declare as follows :

"It is known that in India and the vicinity of the great sea the constellations which combated the rays of the sun and the warmth of the heavenly fire exerted their power especially against the sea, and struggled violently with its waters ; hence, vapors originated which enveloped the sun, and converted his light into darkness. These vapors alternately rose and fell for twenty-eight days ; but at last the sun and fire acted so powerfully upon the sea, that they attracted a great portion of it to themselves, and the waters of the ocean arose in the form of vapor ; thereby the waters were in some parts so corrupted that the fish which they contained died.

"These corrupted waters, however, the heat of the sun could not consume ; neither could other wholesome water, hail, snow, or dew originate therefrom. On the contrary, this vapor spread itself through the air in many places on the earth, and enveloped them in fog. Such was the case all over Arabia, in part of India, in Crete, in the plains and valleys of Macedonia and Sicily. Should the same thing occur in Sardinia, not a man will be left alive ; and the like will continue so long as the sun remains in the sign of Leo, on all the islands and adjoining countries to which this corrupt sea-wind extends, or has already extended from India.

"If the inhabitants of those parts do not employ and adhere to the following or similar means and precepts, we announce to them inevitable death, except the grace of Christ preserve their lives.

"We are of the opinion that the constella-

tions, with the aid of nature, strive, by virtue of their divine might, to protect and heal the human race ; and to this end, in union with the rays of the sun, acting through the power of fire, endeavor to break through the mist. Accordingly, within the next ten days, and until the 17th of the ensuing month of July, this mist will be converted into a stinking, deleterious rain, whereby the air will be much purified. Now, as soon as this rain shall announce itself by thunder or hail, every one of you should protect himself from the air, as well before as after the rain, kindle a large fire of vinewood, green laurel or other green wood ; wormwood and chamomile should also be burnt in great quantities in the market places, in other densely-inhabited localities, and in the houses.

"Until the earth is again comparatively dry, and for three days afterward, no one ought to go abroad in the fields. During this time the diet should be simple, and people should be cautious in avoiding exposure in the cool of the evening, at night, and in the morning.

"Poultry and water-fowl, young pork, old beef, and fat meat, in general, should not be eaten. Broth should be taken, seasoned with ground pepper, ginger, and cloves. Sleep in the day-time is detrimental.' . . .

"At breakfast one should drink little ; dried or fresh fruits, with wine, are not injurious, but highly so without it. Beet-root and other vegetables, whether eaten pickled or fresh, are hurtful ; on the contrary, spicy pot herbs, as sage or rosemary, are wholesome. Cold, moist, watery food, is, in general, prejudicial. Only small river fish should be used. Too much exercise is hurtful. The body should be kept warmer than usual. Rain-water must not be employed in cooking.

"If it rain, a little fine treacle should be taken after dinner. Fat people should not sit in the sunshine. Good, clear wine should be selected and drank often, but in small quantities by day. Olive oil, as an article of food, is fatal. Equally injurious are fasting and abstemiousness, anxiety of mind, anger, and immoderate drinking. Enemas are advised. Bathing is injurious.

"Every one should observe these rules, especially those who reside on the coast, or upon an island into which the noxious wind has penetrated."

NOTES IN SCIENCE AND AGRICULTURE.

The Moon's Craters, Cones, and Furrows—A New Theory.—The moon being near the earth, makes it a convenient as well as an interesting subject for study. For this reason more is known of it than of any other heavenly body. It is painful to be forced to different conclusions in philosophy as to observed facts, from what the observers of those facts have come to, and specially so when the observers were men prominent in their profession and well agreed among themselves; and to express such differences of conclusion seems like a rash disregard of the opinions of those who should be acknowledged authority—yet it is best to be true to our own convictions in science as well as in morals—therefore I venture to give the following views:

All observers claim that the surface of the moon is rough and broken; that nearly everywhere are cavities or circular basins of varying size and depth with cone-shaped mounds in the center of nearly all of them; that there is an elevated ridge or margin around each basin, and also that from some of them extend outward ray-shaped streams or roads, which proceed in straight lines whatever distance they may go, and this without regard to any obstacle that might be in their course. If there be a change in direction at all it is only to proceed on their way in a straight line thereafter.

These are the observed facts, and the common explanation of the cavities and their surroundings is this: That the moon was once in a liquid state and very hot; that it cooled until a crust was formed on the outside, and then the heat from within was constantly breaking through the crust in volcanoes, producing these circular cavities, which are claimed to be craters of extinct volcanoes.

I am unable to reconcile the observed facts with the explanation offered, and am compelled to accept in its place the following:

That the moon as a mass has never been in a liquid state; never been hotter than it is to-day; never has cooled off; no crust has ever formed; no melted interior has broken through in volcanoes, forming craters. Instead, the moon was produced by the union of meteors, and it is still growing by the addition of meteors to its mass. Each circular cavity, with its rim and central cone, is the foot-print of a meteor. The cone in the crater is the body of the meteor that was not scattered by the contact.

This being our theory, what are the peculiar facts supporting it? An almost entire want of likeness between the moon's circular cavities and the earth's craters, forces the conclusion that they are unlike both in character and origin. The difference in size of opening of the moon cavities and earth craters is most remarkable. While Tycho is fifty-four and Copernicus is fifty-six miles across, Etna and Vesuvius have craters a few hundred feet in

diameter—a difference sufficiently startling to suggest the inquiry as to whether they are of similar origin. The mass of matter ejected from earth craters with small openings is enormous—in fact, sufficient to make a large, high mountain, with broad base and easy, sloping sides; while a light, thin rim surrounds the moon cavities, only massive enough to fill the cavities were it placed back in them. If the moon cavities and earth craters are of the same origin and designed to serve the same purpose, there is no proportion between the work done by them—the moon craters have opened their mouths and stopped immediately thereafter, while the small-mouthed craters of earth have kept up a fiery spitting until a high mountain was produced.

Again, the central cone found in the moon cavities, compares with nothing found on the earth. If we call the cavities craters, we can not explain the cones. If we regard the cavities as the product of meteor contact, then we would say the cones were what was left of the meteor after contact with the moon, and there is no mystery. According to the volcanic theory of the origin of the moon cavities, the "rills," "clefs," or "furrows," extending from the so-called craters, are admitted by all astronomers to be inexplicable.

The most notable thing observable on the moon is Tycho, which is a cavity or depression in the moon's surface, three miles deep and fifty-four miles across, with a central cone one mile high. Radiating in straight lines from Tycho, in every direction are streams of broken matter which extend seven or eight hundred miles each way, strewing one-fourth of the moon's surface with the fragments of the meteor and the matter displaced by the contact. The body that caused Tycho, the remains of which forms its cone in the center, must have been forty miles in diameter.

The most curious appearance, and at the same time confirmatory of the meteoric theory, is that of the streams of broken matter which proceed from the cavities. They seem to pass through mountains, as by a tunnel, and re-appear upon the other side, which, of course, does not occur, but what does happen is this: the matter of which the stream is composed is thrown with so much force that part of it falls upon the farther side of the mountain, causing a break in the stream where it crosses, and making it appear as though it has passed through a tunnel.

P. T. GRIFFITH.

Improved Gaslight.—An intensified gaslight, by some called the "albo-carbon light," which is one of the outcomes of the electric light excitement, is attracting considerable attention in England at present. Its special advantages are that it economizes the consumption and improves the quality of the gas, and involves no change in mains, meters, or piping, or the general apparatus

of gas service. It is also claimed by the patentees that albo-carbon causes no obstruction and leaves no residuum; and that the evaporation of the substance under heat is so thorough, that vessels in which it is used may be replenished without any fear of accumulating deposits. A variety of interesting photometric tests were recently applied to this light at an exhibition in London; and one of the most pleasing effects produced was that of its hue, which was cheerful and sunny as well as intensely brilliant: and the shadows cast by objects within its range were of a subdued tone quite different from the intense darkness that contrasts so unpleasantly with the moonlight brightness of the electric light, which requires at present for its production elaborated machinery not needed in connection with albo-carbon. This substance used as an adjunct to gaslight, imparts to the latter a warm, sustained, and steady light, that does not, in spite of its strength, fatigue or discommode the eye. As employed as an auxiliary to common gas, the improved light consists of some properties of pure white carbon in the solid form of small cylinders, having much the appearance of sticks of pure white candy. The apparatus required to adapt the feeder and enricher to an ordinary gas-burner is so simple, that it demands a management no more skillful than that needed to fill and trim a common table lamp.

Management of Impatient Horses.—Here is a suggestion of value to our horse-loving readers from the *Congregationalist*. The writer says:

"In the spring of 1876, I purchased a horse which had this fault to an unusual degree. So impatient was he that just so soon as he felt the motion of a person attempting to get into the carriage, he would start, and if not allowed to go, he would rear, or back so violently as, in several instances, to break something about the carriage. After trying various methods to cure him, I adopted the following plan when there were others beside myself to get in:

"Springing into the carriage, I would take the reins, and when he started, I would drive him round in as small a circle as possible without cramping the carriage, and bring him to the same place again. I would then talk to him soothingly, and if he would not stand quietly for all to get in, I would take another turn and try again, sometimes going through this operation three or four times before all would get in. He soon got tired of this, and in a short time was so completely cured that he would stand quietly for all my family of six to get in. I think whipping would have made him worse."

A Strange Asiatic Race.—A correspondent of the London *Globe* writes: "That an officer, Surgeon-Major Bellew, has been examining a few men from the cantons on the south-west of Dardistan, peopled by a race, who in one respect are most interesting, for

their country has never yet been visited by a civilized traveler. In appearance and language they closely resemble the Dards, but, unlike them, have not embraced the creed of their Mohammedan neighbors. The tongues spoken in all these hills are, for the most part, Aryan; not descended from Sanskrit, indeed of earlier origin than that classical language. On the northern slope of the mountains Parsee words prevail; in the southern cantons some of the words resemble Greek, some Latin, some those of modern Europe. They make (and freely consume) grape wine, something like a crude Burgundy. Those who are not Mussulmans believe in one God, but employ the intercession of minor powers, represented by images. They also occasionally canonize great men whom they have lost by death. They are usually monogamous, opposed to divorce, and strict defenders of the chastity of their unmarried girls. These latter have blue, gray, or hazel eyes; black hair is the exception among them, and, when young, they are of such remarkable comeliness as to be in great demand in the slave markets of the adjacent countries."

Wicks of Coal-Oil Lamps.—The wicks of kerosene lamps should be changed frequently, or, if not too short, washed in strong, hot soapsuds, with some ammonia in the rinsing water. We think that the trouble with poor light from kerosene lamps arises from the wicks being full of the sediment or refuse matter which comes from the oil, and that impedes the free passage of the kerosene through the wicks.

Level Culture.—At the beginning of farm life, in order to learn the most improved methods, I employed a first-class farmer and gardener, fresh from England. He persisted in a mode of cultivation precisely the reverse of what I had been used to seeing—allowing the mangels and sugar beets, the corn, potatoes, pease, beans, cucumbers, melons, tomatoes, cabbage, etc., to go without any hilling up. The mangels and sugar beets stood high above the ground, the bulbous parts exposed to the sun, many of the mangels falling over and growing crooked. The part of the cucumbers above ground, which I insisted was rather a root than stem, should be surrounded by earth, was left entirely exposed to the sun. I thought the sun would parch the roots and they would break or be injured when the stem should fall from the upright to a horizontal position.

The Englishman would have his way, but agreed I should treat some of each sort of plants in my own way. So a few of all sorts were hilled up, and fully as well worked in other respects as his, during the season. For a few weeks mine grew as well as his, and the cucumbers, pease, etc., bloomed as early. After one gathering of cucumbers, peas, etc., and the dry season set in, mine perished, while his continued to bloom and bear and so of the melons. My potatoes made about

half a crop of small tubers, dug from dry hills; his yielded bounteously of large ones, dug from moist earth, at the same time in field. So with the mangels, sugar beets, etc. The hilled pease, beans, etc., fired early in the season, and succumbed to the drought. Without this experience, if one had said that hilling up growing plants would kill them, I should have joined in the response of a million of farmers, denouncing it as false and contrary to experience because they did not perish on the day they were hilled up. Ever since I have avoided hilling and ridging about growing plants, and cultivated the soil as levelly as possible.—*American Farmer.*

Division of Hours and Minutes.

—Why is one hour divided into sixty minutes, and each minute again into sixty seconds? This question is often asked by intelligent children; and the answer is this: We have sixty divisions on the dials of our clocks and watches, because the old Greek astronomer, Hipparchus, who lived in the second century before Christ, accepted the Babylonian system of reckoning time, that system being sexagesimal. The Babylonians were acquainted with the decimal system; but for common and practical purposes, they counted by *sossi* and *sari*; the *sossos*, representing sixty, and the *saros*, sixty times sixty, is thirty-six hundred. From Hipparchus, that mode of reckoning found its way into the works of Ptolemy, about 150 A.D., and hence was carried down the stream of science and civilization, and found the way to the dial-plates of our clocks and watches.

A New Nebula and a Lost Planet.

—Dr. Temple, of the Observatory of Arcetri, Florence, announces his discovery, on March 14th, of a new nebula, which he at first mistook for a faint comet. Its position for 1879 is R. A., 11h. 18m. 5s., N. P. D., 86° 1'-4". Dr. Temple describes it as a double nebula with two small, but distinct nuclei from 15" to 20" apart, and he adds that nebula Herschel II. 32, which is in the vicinity, is much smaller and fainter than the one just discovered. It occasionally happens that celestial bodies are lost as well as found. This has occurred several times in the case of the small planets between Mars and Jupiter, which now number nearly two hundred. There is one of these, however, which, according to Mr. Proctor, astronomers would regret to lose. This is the planet Hilda, which travels in a much wider orbit than any of the others, and can give more exact information respecting the mass of Jupiter than any other member of the solar system, coming much more fully at certain times under his influence. Unfortunately, Hilda has been searched for in vain at its first return to opposition, and astronomers begin to fear that the planet is, for the time being, lost.

The Absorbing Power of Earth.

—Without a practical test of its strength one

can hardly appreciate the absorbing power of dry earth, or the leeching effect of some kinds of soils. A writer says: "We once deepened a manure pit that had a blue clay bottom. This pit had been used for years, and there was never less than a foot of water in it. After emptying we commenced to deepen it, expecting to find a rich black earth for a foot or two, but to our astonishment, the clay two inches below the bottom was not soiled, but looked as pure and blue as it did two feet deeper.

But all kinds of soils are not as impenetrable to liquids as blue clay. By actual experience we have found that dust an inch thick over a dead animal will prevent the escape of bad smells. In hen-houses the effect is magical, preventing not only bad odors, but vermin as well. Even for old running sores and ulcerated wounds when chemical disinfectants could not be had, dry earth or dust has proved highly beneficial. The fact seems to be that neither the liquids nor gases of decaying matter can pass through two inches of earth without losing the greater part of what constitutes its peculiar characteristics, that is, its offensive or valuable portion, as the case may be. Properly used in the stables, cesspools, sink-drains, etc., dry earth will save a vast amount of valuable fertilizing matter, and prevent expensive and life-destroying disease."

Agriculture and the Professions.

—A prominent physician of Botcourt Springs, Va., in a communication to *The Farmer*, recently threw out the following, which is commended to the consideration of young men on the farm who are thinking of entering one of the professions:

"I am going to quit practice and devote my whole time to farming. With my microscopes and laboratory I can benefit humanity more than by practicing my profession. There is too much disposition on the part of our young men to dodge farm-work by studying a profession. The same amount of labor and close application to farming that it takes to make a successful physician, would make them the most prominent farmers in their respective neighborhoods. The professions are crowded, and a large majority of our professional men are not making a good living. I think if a number of professional men in each county, who are thoroughly established and making money, would go into agriculture with their own hands, it would do more to elevate farming in the eyes of our young men than years of toiling with the pen. When farming becomes a science, as it will, I hope, in the near future, it will be an honor to be called a scientific farmer. If the facts we now have with regard to plant growth and character of different soils, and the relations they bear toward each other, were arranged and classified, we would have a foundation to build upon. J. B. B."



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NOTES ON GREAT MEN OF ANTIQUITY.

L YING before us are twenty-five or more small medallion portraits of eminent men who made ancient Greece and Rome illustrious. These portraits are represented as faithful transcripts of the features of the men as they appear in the ancient busts and statues preserved in the galleries of Europe. They afford a field for entertaining study and comparison, and in examining their contours of head and face, we may gather trustworthy impressions concerning the characters of the men represented.

DEMOCRITUS, the philosopher, one of these, shows a head whose outline closely approximates the circle. The reflective region of the intellect is prominent—Comparison being particularly large. Human Nature, or the intuitional faculty, rises grandly into view. The head appears to be very broad in the upper or moral region; the organs of Spirituality, Hope, and Benevolence being finely outlined. We can scarcely wonder at the cheerful, even temper which gave him the title of "the laughing philosopher," when we consider this organization. The back-head is by no means small—the

love of home, of friends, being its strongest features. The organ of Language is well indicated; not, however, in the direction of fluency, as in the way of definiteness of expression. The look and poise are earnest and thoughtful.

Placing the eminent hero of Macedon in close contiguity with this philosopher, we note at once a striking contrast. ALEXANDER'S head and face remind us of a finished statue of a Grecian god. The features are feminine in their symmetry and beauty; at the same time there are indicated in the muscular swell of the neck strength and vitality. Democritus is rugged in face even to coarseness. Alexander is smooth even to delicacy. We note in the latter strong perceptive faculties—the reflectives being much inferior. The base of the brain is very marked, and the back-head pronounced—the whole of the social organs being specially developed. The head, however, is high, rising conspicuously in the region of Self-esteem and Approbativeness.

The portrait of DIOGENES, the cynical philosopher, which next strikes our attention, is quite interesting; the whole face has a cramped, sarcastic, sneering expression; the nose fairly turns up in scorn, as we may suppose at the follies of the times. The corrugated brow is severe. One would infer from the expression of the old inhabitant of the tub, that long years of worry and grumbling had rendered him a chronic grumbler. The reflective faculties of the intellect are finely indicated. Firmness and Self-esteem are large; Caution is also large, and there is no want of Language. We have no doubt that the old fellow was very much given to garrulity.

In marked contrast to Diogenes, is ZENO, whose plump face and smooth out-

line indicate a man of exuberant vitality. The expression is kind, even humorous, quite different from what we expect in a leader of the stoics. Whatever were his theories, aside from his platonism, they must have been based upon observation, as his perceptive faculties predominate. The central line, to which belong Individuality, Eventuality, Comparison, is prominent. Taste should have characterized his language, manner, and general conduct, as the esthetic faculties are very salient.

We have seen representations of **SCIPIO AFRICANUS** which purported to have been taken from ancient busts, but unless our memory fail, they differed somewhat from the medallion now in hand. In this case the head is very bald, and the face entirely devoid of beard, so that the outlines are very sharp. The organization thus shown, gives us the following impressions: A man of strong feelings and of ardent, affectional nature; the temperament Motive, the Vital, however, well supplementing it; self-reliant; the spirit of command, the desire for applause, are well marked. The brain appears well filled out in the region of the ears, indicating energy, prudence, and circumspection. Comparison is the largest of the reflective organs; Locality and Calculation appear to be the largest of the perceptive. The latter is remarkable. As a general inference, we would say that Scipio, the famous conqueror of Carthage, was a man of strong will, decided purposes, thorough-going, yet fond of social life and the pleasures of the senses.

JULIUS CÆSAR, whom we are able to bring into comparison with the statesman and general just described, does not quite fill up the measure of our old impressions concerning his character, and scarcely

confirms the judgment formed from an inspection of an ancient marble in the Louvre. Scipio has much the better head in contour and poise. Yet Cæsar reminds us somewhat of George Washington; the moral region is not, however, so full, and the face does not indicate that lofty balance of character for which Washington was remarkable. We are inclined to agree with Brutus that "Cæsar was ambitious." He has strong Firmness, large Approbativeness, but moderate Self-esteem. The perceptive largely predominate over the reflective faculties. Combativeness is large and full, and the side-head indicates energy, and an acquisitive disposition.

The medallion representing **CÆSAR AUGUSTUS** is a very faithful copy of old marbles which we have studied. Like them, the organization is seen to be magnificent. The region of the intellect and the organs in the superior region of the brain forward of the ear, much predominate. The face wears an earnest and somewhat anxious expression, as if the sense of responsibility did not sit lightly upon that brow.

CICERO, the orator, shows an intensity of nervous sensibility, the temperament being Mental almost in the extreme. The face is long, very much of the "hatchet" type. The expression shows sensitiveness to the degree of petulance. The side-head is full, the central region of the intellect predominating. Human Nature is large, giving one the impression that Cicero's judgment was largely influenced by his first impressions. While there is all the evidence of culture and refinement, we can not escape the thought that the great opponent of Cataline was much influenced by prejudice and personal feeling.

VIRGIL, the poet, has a delicate face, very feminine in its general contour. It is the face of one whose will is not strong. Ambition is shown, and a fair degree of caution; but there is a warmth of feeling and fondness for society and the desire for adaptation, which usually render one more the servant of others than the master of his own affairs. The profile is pretty thoroughly Greek, and we are inclined to think that it is for the most part ideal, and not a faithful picture of the man himself. It is probable that here, as in the case of Alexander, the sculptors of ancient times strove to give to their portraits of exceptionally admired men marks of the divine in accordance with their views of anthropomorphic Divinity.

ALCOHOLIC REASON.

SELF-INTEREST blinds men to facts and reason. Prejudices usually arise from some form of self-interest. Hence whatever tends to increase one's bias toward self-interest, serves to warp, unbalance, and even pervert his mental organization. In no department of business is the effect of ignorant and one-sided culture more apparent than in the liquor traffic. Daily contact with alcohol as a vender benumbs the higher and nobler feelings, and increases the activity of the passional and selfish; at the same time of course clouding the vision to what constitutes the true interests of men. We find this perverting influence in all the ranks of the five or six hundred thousand men engaged in the manufacture and sale of liquor—the educated as well as the ignorant. Recently an instance has come to our notice. In the columns of a Detroit newspaper, the *Public Leader*, words like these were printed:

"There is not a community in the State, however large, however small, in which the emissaries of prohibition have not been and are not at work to insure a control of the voting power; their activity is limitless, and, as they have no opposition, they have the field to themselves."

Without commenting upon the great untruth disclosed in this statement, we quote from a paragraph lower down the column:

"It becomes necessary for the wine, beer, and spirit interests to rise up in their might and say to the temperenzlers, (?) and those whom their mischievous agitation with hands folded, and allow their legitimate, honorable business to be destroyed without lifting a finger to protect the \$7,000,000 of invested capital which they have at stake in the State. There are upwards of five thousand dealers in wines, beer, and spirits in Michigan; there are nearly 40,000 persons deriving their means of livelihood from the trade in one way or another. And yet in all this vast army, strength enough to control the political system of the State were it united upon the principle of self-protection, there is now no organization whatever."

According to this statement, which is grammatically imperfect, but which we copy as we find it quoted in another liquor organ, the liquor dealers of Michigan differ amazingly from those of other States, where they and their agents constitute the working element of the party machine on one side if not on both.

In another publication, and this a professed advocate of the liquor dealers, we find this statement:

"The history of prohibition commenced in the State of Maine in the year 1851, whose Legislature in that year passed an act prohibiting, absolutely, the sale of intoxicating liquors to be used as beverages. It is susceptible of proof that this act was productive of more crimes, bloodshed, ill-feeling, and hatred in

cities, towns, neighborhoods, and families in the space of five years than rum had caused for half a century before."

Here is another illustration of deliberate misrepresentation and thorough unreason, and yet the writer in this, as in the first quoted paragraph, is a man of intelligence and education. He participates in the cry sent forward by the lover of alcohol and the hater of temperance that "prohibition is a failure." No facts will convert him. He is wedded to his idols and his flesh-pots. On this very subject Gen. Neal Dow said in a late letter:

"Before the law we had open rum-shops, wholesale and retail, all over the State (Maine); now, not an open one in all our territory. Then, every common grocery and common tavern were rum-shops; now, in all our small towns and villages and rural districts there are none. The traffic lingers yet, secretly and on a small scale, in our larger towns and cities, in the hands of the lowest and vilest part of our foreign population; but it will be expelled by and by under penalties that will reach such people."

The editor quoted secondly makes this further statement in the same tone, as if no argument were admissible, the facts being open to every observer and overwhelmingly on his side:

"One would think sage legislators elected to discharge their duties faithfully to their constituents, and for the best interests of the State at large, would, before insulting the common-sense of their constituents, read and profit by history. Prohibitory and all sumptuary laws are, and ever have been, distasteful to the people, and antagonistic to a republican form of government. In no single State throughout the Union, where it has been tried, has 'prohibition' achieved what its advocates so fanatically promised or expected."

By sumptuary laws the writer probably

includes legislation affecting the food interests of the people; but so far as alcohol is concerned, the question of its being food has been pretty thoroughly negatived by the highest physiological authority, therefore it can hardly claim consideration on a footing with breadstuffs. Now, quoting Gen. Dow again as an offset to the above:

"In those old rum days the people (of Maine) were poor and unthrifty; now, everything in the State, in that respect, is reversed, as the result of the vast saving, direct and indirect, coming from the law which has driven the rum-trade out. Portland in 1866 lost \$10,000,000 in a great conflagration; but its valuation is now greater than ever, having gained \$480,000 last year under prohibition, while Boston (with free rum license) lost \$70,000,000."

It seems to be nothing to these gentlemen who write in behalf of liquor-drinking that the commission of crime is greatly reduced by prohibition; that in some districts of Maine scarcely a commitment takes place in the course of a year. Take Edwards County, Illinois, in which prohibition has had effect for several years; and although surrounded by counties in which liquor is freely sold, its jails are almost empty, and criminal proceedings are rare in its courts. Its taxes are nearly forty per cent. less than the taxes in the adjoining counties. Vineland, New Jersey, a town of over 10,000 inhabitants, was started on temperance principles, and its expenses for police and the care of paupers have not averaged more than \$500 a year. Another striking evidence of the moral effects of prohibition and testimony, "right in the very teeth" of the quotations from our rummy contemporaries, is that shown by a Democratic convention in Maine last year. A

resolution having been offered by a member censuring the laws against the sale of liquor, it was voted down by a large majority. This tallies well with the assertion that "prohibitory laws are and ever have been distasteful to the people and antagonistic to a republican form of government!" Certainly the delegates to that Democratic convention must have disregarded "the best interests of the State at large," and "insulted the common-sense of their constituents." All in consequence of their being unable to "read and profit by history!"

Another brief extract from political history while we are on the subject. In 1868 the Citizen's Association of Pennsylvania made a report to the Legislature with reference to pauperism and crime, in which it was literally stated: "It will not be doubted that two-thirds of the pauperism and crime of the State are justly attributed to intemperance; and it is stated by authority that one-third of the dependent classes—as insane, feeble-minded, etc.—are to be traced to the same cause. If we apply this rule to the figures before us, we have the aggregate cost of maintaining paupers and criminals, whose condition is due to intemperance, \$2,204,244 per year; and the aggregate cost of maintaining insane, idiotic, and other dependent persons from the same cause, \$550,666."

Statistics are abundant showing the effects of liquor-drinking upon the population, so abundant indeed have they been made by philanthropic men, who have taken the trouble to reach the causes of the prevalent vice, pauperism, and crime, that they are to be found in a convenient form for the asking; yet in spite of their overwhelming declarations, we are asked to believe that the traffic of

liquor, with all its influence and bias toward extravagance, wastefulness, vice, pauperism, crime, is a "legitimate, honorable business," and must be sustained because there are \$7,000,000 of capital invested, in one State alone, for its prosecution.

THE NEW STUDY OF HEAD TEMPERATURES.

WE have taken occasion to notice in our scientific department a new phase of experiments in cerebral localization which promises to rival in importance those of Broca, Hitzig, and Ferrier. We refer to the observations with respect to the variations of temperature at different parts of the head. A recent article in the *Archives of Medicine*, to which our attention has been directed by Dr. E. Seguin, the courteous and eminent neurologist, presents in detail the procedure and results of experiment in Europe and America. It had been noticed years ago that exercise of the brain by conversation or reading would elevate the temperature of the head, while there would be a decline in the extremities; but no extended series of experiments was undertaken with respect to observing whether or not different parts of the brain would show differences of heat, until Moritz Schiff, in 1869, experimented on dogs, rabbits, and other animals, using the trephine and thermo-electric needles. He found that "psychical excitation causes the greatest fluctuations."

The eminent Dr. Broca appears to have derived the most valuable results by means of surface observations made about three years ago. "He found the average temperature of the left side of the head a trifle higher than that of the right," a conclusion which is in accordance with the

phrenological opinion that the left hemisphere is the more active of the two.

After mentioning other anatomists who have made use of the thermometer as an aid to diagnosis in pathological conditions of the brain, the writer of the article, Dr. R. W. Amidon, minutely describes his own experiments. Having in view the logical conclusions that "functional activity of an organ implies increased blood-supply and tissue-change and consequent elevation of the temperature of that organ," and that "willed contraction of muscles presupposes an increased activity of the volitional motor center of those muscles in the cerebral cortex," he proceeded to select subjects and apply his self-registering thermometers to their scalps. The results he obtains from *willed* muscular movements are tabulated, and mapped upon diagrams of head and brain, and show a striking similarity to the results obtained by Ferrier, especially as regards the centers designated for leg, arm, forearm, and facial movements.

One most commendable characteristic of these experiments in temperature is that they require no anæsthetic, no vivisection, but may be performed upon the conscious human head without giving its owner pain or discomfort, thus conducing to results at once normal and trustworthy. Our friends will doubtless look upon this new phase of scientific investigation with much favor, seeing that it is another line of evidence tending to the stronger confirmation of the truth of localized mental function.

BUSINESS CRIMINALITY.

THE value of human life is very much greater to-day than it was two or three hundred years ago, still it is much below that standard which the equal-rights principle of the "Golden Rule" has

set up. Daily, almost, the newspaper gives us an account of a catastrophe on sea or on land by which human beings were suddenly hurled into eternity; and as we read, the conviction forces itself upon the mind that the cause of the disaster lies at the door of men who, in their greed of gain, deliberately palmed off bad materials and poor workmanship for the best.

In a factory where hundreds of men and women are employed, a boiler bursts, killing and maiming forty or fifty. An examination reveals inferior metal and weak rivets. A large building used for public purposes suddenly collapses under the weight of an evening assembly, as in the Madison Square disaster, and several persons of high social rank and influence are killed and wounded. A weak truss laid in an important place is found to be the immediate cause of the disaster.

Such occurrences awaken excitement, and much indignation is expressed against the dishonest men who thus trifle willfully with human life, but the excitement and indignation prove ephemeral, and nothing is done to punish them. Yet in the retired homes which have been rendered desolate; in the hearts which have been ruthlessly bereaved, remains a quick memory of the disaster. Society appears to be content with a hasty censure of contractor and builder, and then turns its attention to the rushing current of affairs. Why this indifference to wholesale wrong and crime when the theft of a bit of ribbon by a poor boy will be followed by a summary trial and sentence to prison for months? Is it not a great crime for a man to sell me a rope, representing it to be of the best quality, when it is of the poorest shoddy, as is revealed by its breaking suddenly while my child is swinging upon it, and rendering him a cripple for life?

Cave emptor (Take heed, buyer) is a principle borrowed from the law of past ages and is not worthy of honest men, however it may be urged by the ingenious pleader in defending the nefarious dealings of a client. Men should be held to a strict accountability for language and act in the serious work of life.

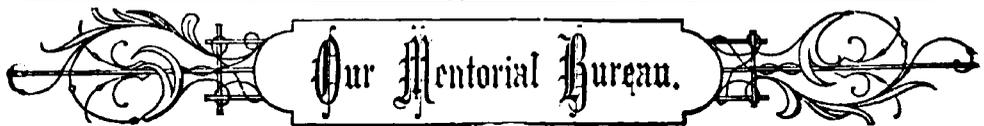
TO STUDENTS OF PHRENOLOGY.

EVERY day brings inquiries in regard to the next session of the AMERICAN INSTITUTE OF PHRENOLOGY, in response to which it may be stated that there is but one session held annually, opening this year on the first day of October and continuing for six weeks. There are three lessons, or lectures, daily, which fill up the students' time. The prospect now is that there will be a large class, of which a good proportion, and more than usual, will be ladies. Woman is specially suited to the practical application of Phrenology, and she is well adapted to mingle in families and give advice as to the training of children on the principles of Phrenology and Physiology. Do we not need in this country hundreds of such guides and monitors to instruct mothers and school-teachers how to understand, guide, and educate the growing children who are soon to control the affairs of our homes, schools, churches, legislation, and business?

The single State of Massachusetts has to-day a thousand women, unmarried and not occupied in any pursuit, well adapted to give them independence and mental satisfaction, who could become examiners or practical phrenologists,

even though they might never give public lectures; and while conferring on their patrons incalculable advantages from the careful analysis of the talents and character of their children, and pointing to proper pursuits for each, would find the business both pleasant and more remunerative than anything else they could pursue. That State has sixty thousand more women than men, the majority of whom must, in part or entirely, earn their own living. Most of the positions open to woman are crowded. Phrenology offers to her a field for the exercise of her intuition and skill; richer far than art, teaching, or mechanism. Many men who have looked to teaching or commerce for a livelihood, find so sharp competition for position, and such meager reward for their services, that marriage is rendered impossible or at least hazardous and unadvisable. Such men, in the useful field of professional Phrenology, would find ample opportunity to do good and get well paid for it.

Those desiring detailed information relative to the course of instruction afforded by the Institute, the best textbooks, expenses, etc., may obtain the "Institute Supplement" by addressing the office of this JOURNAL.



"He that questioneth much shall learn much."—Bacon.

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. But one question at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of an early consideration.

IF AN INQUIRY FAIL TO RECEIVE ATTENTION within two months, the correspondent should repeat it; if not then published, the inquirer may conclude that an answer is withheld, for good reasons, by the editor.

WE CAN NOT UNDERTAKE TO RETURN UNAVAILABLE contributions unless the necessary postage is provided by the writers. IN ALL CASES, persons who communicate with us through the post-office should, if they expect a reply, inclose the return postage, or what is better, a prepaid envelope, with their full address. Anonymous letters will not be considered.

WOMEN IN MEDICINE.—H.—Yes, one would think from the uproar in certain walks of the medical profession, that it was an entirely novel thing for women to practice as physicians.

We suspect, however, that more than half the opposition is due to the unwillingness of men to lose their opportunity to treat the invalided women of society, as they constitute the larger part of their *paying* patients. Women should treat women, we believe, especially in illness of a special character. In ages past women exercised the functions of physician as well as nurse, and many have left an illustrious record. For instance, Hygeia, who has given her name to the "natural" method of treating disease, was the daughter of Esculapius, and learned in medicine. So was Ocgroe, daughter of Chiron. As early as the eleventh century before Christ there existed in Egypt a college of physicians, who seem to have been of the sacerdotal caste, and were attended by both sexes. The "Iliad" and "Odyssey" both refer to women skilled in the science of medicine; among the Greeks, Olympias of Thebes, Aspasia, and Agnodice were pre-eminent for their ability and medical writings. The skill of Agnodice is said to have been such as to have brought about the legal opening of the medical profession to all free-born women of the State. Phnærete, the mother of Socrates, was a midwife. Between the eleventh and thirteenth centuries several women acquired widespread renown as teachers in the great school of Salerno. In the succeeding centuries many female physicians held professional chairs in the universities of Italy, especially that of Bologna. In this university, about the middle of the eighteenth century, "there was an Anna Morandi Mazzolini, whose husband held the chair of anatomy. It happened that he fell ill, and she sought to supply to him the place of his enfeebled powers. She became an anatomist, and delivered his lectures for him from behind a curtain. She became famous, and was offered a chair at Milan, but refused it. Her anatomical models in wax are still highly prized in the Anatomical Museum at Bologna.

SOMNIFEROUSNESS.—J. A. S.—We are not inclined to accept an organ for sleep, as we regard sleep a mere process of nature for the purpose of recuperating the functions of brain and body. Asleep and awake are two general conditions of nature which affect the entire human organism. One is the phase of activity, the other the phase of passivity; and being, as it were, properties of each and every member, they can not reasonably be assigned to special cerebral centers.

EARTH INCREASE.—J. W. G.—All the growth which takes place upon the earth, and is due to material and forces within itself, adds nothing in the way of weight. Plants absorb material from the soil and the atmosphere; their roots, stems, and leaves are merely the modified

or organized forms of these materials. In answer to a similar question made not long since, we stated that it has been ascertained that the earth increases in bulk from year to year by reason of the fall of meteoric matter from the spaces beyond the earth's atmosphere.

POOR MEMORY.—H. Z.—Your Individuality is small or inactive, we think; while your reasoning organs are in good exercise. Your headache is due to functional derangement mainly; perhaps the liver or the kidneys need attention.

CONVOLUTIONS AND QUALITY.—W. J. S.—The highly organized brain has deeper convolutions than one that is coarse and poor in quality. The phrenologist can judge of this almost at first sight. Culture, training, refinement, and a Mental temperament tend to increase the number, density, and depth of the convolutions, and the quantity of gray matter.

AWKWARDNESS.—R. W. N.—This characteristic may arise from large Approbativeness and large Conscientiousness, without other organs sufficiently developed to balance their action. In most cases it is due to lack of culture and experience. People who are unfamiliar with the ways of society feel out of place and ill at ease in company. There is no medicament which is applicable to the case. We would advise you to go more into society; endeavor to adapt yourself to others; to subordinate your own feelings and purposes to others. We find many awkward people in society who are specially known for their strong individuality or positiveness—the disposition to do things in their own way.

WHEATMEAL OR OATMEAL.—Both these cereals are sufficient food for man; oatmeal, however, contains more carbon, starch, or heat-producing material; cornmeal contains a much larger proportion still, while its albuminous constituents are greatly inferior to those of oatmeal, and wheatmeal, in its turn, is inferior to oatmeal in the same important constituents.

BUSINESS CHARACTERISTICS.—J.—You will find in "How to Read Character," "Choice of Pursuits," "The Temperaments," "Brain and Mind," a pretty full description of the temperaments and characteristics of the good business man or store-keeper. He should possess a well-balanced temperament, which usually accompanies a genial nature, strong perceptive faculties, and a good development of the side-head; a fair degree of the pushing element—Destructiveness, Combativeness, Acquisitiveness, etc. Of course, there should be no deficiency of the moral sentiment, particularly Conscientiousness.

ADAM'S APPLE.—H. P.—We have heard sundry attributes of disposition imputed to the larynx—that part of the vocal apparatus which is commonly termed “Adam’s apple”—but we have very little confidence in its meaning anything more than the use which nature gives it. Perhaps, however, it may be taken relatively to indicate temperament, as persons who are strongly marked in the Motive direction usually have a large Adam’s apple. In men it is more conspicuous than in women; those who are thin usually show it more than those who are fleshy.

FIRST IMPRESSIONS OF PEOPLE.—L. B.—It is a quality of human character to form judgments of people at first sight, and according to one’s mental development and experience is the correctness of the judgment. Many persons, especially those who are not cultivated in the refined sense, permit their first impressions to control their conduct. Often it happens that before we have met with a person we have heard something prejudicial to him, and when we meet him we feel an instinctive dislike, owing to the influence of what we have heard. Probably in most cases where people show a strong antipathy there is a fundamental cause. To be sure, dislikes are taken to new acquaintances on the score of peculiarity of feature—it may be the nose, the chin, or mouth which occasions the dislike. As a general thing people are impressed favorably on first sight by those who are similar to themselves in organization, although it may be said the kind and generous are most likely to attract strangers.

TUNE AND PRONUNCIATION.—W. F. P.—The correspondent is right in his inference. Tune does aid pronunciation, and the pupil who has that organ well developed may spell no better than another in whom it is comparatively feeble, yet will pronounce with much more facility.

MIND TELEGRAPHY.—A Wisconsin correspondent claims to have made a new discovery in psychology. He has been experimenting with a lady at conversation when at a considerable distance. He says that “she and he can communicate with one another twenty miles apart, and do it as intelligently as if they were sitting side by side.” This is by no means a new discovery. Many persons for generations past have made claim to a similar ability. There is a subtle force in human nature which has for one mode of exercise this of mental telegraphy. Perhaps at some future day its philosophy may be so well understood that, instead of a few, nearly all will be able to exercise it for their convenience, and thus render the post-office and the electric telegraph almost unnecessary.

ENGLAND’S WARS.—Since 1815 England has been several times engaged in war. The most important of her conflicts was that with Russia, when, together with France, she assisted Turkey in the Crimea in 1854–55. Shortly after the Crimean affair she engaged in hostilities with China; almost simultaneously the great Sepoy conspiracy broke out in the army of Bengal, and required a considerable array of British troops for its suppression. In 1868 occurred the Abyssinian war. The next in order of time were the operations in Afghanistan, which are not terminated; and last year occurred the Zulu complication. We are not able to furnish the items of cost to Great Britain which these wars have severally made; but it is stated at large that the total of the war debt of England exceeds four thousand millions of dollars. The examination of a good encyclopedia will give you information more at length.

The complete works of Bacon will cost you about \$35.00.

THE CLIMATE IN THE NORTH-WEST.—A. S. T.—The variation of temperature in the north-west quarters of the United States at different seasons is not great; but if you are looking for a region where the temperature does not vary much throughout the year, we would point you to the south, say Central America, Mexico, and the Gulf States. In Minnesota, Dakota, Oregon, Washington, there is very warm weather in summer, and although the average temperature in winter may be higher than the average temperature of the Middle and New England States, yet at times the degree of cold is very severe. So far as soil is concerned, in certain sections of the States and Territories mentioned, its fertility is unsurpassed.

W. A.—We can advise only brown bread, plenty of fruit, out-of-door life, abundant sleep, as the best means through which you may increase your stature; possibly you might rig up an apparatus into which you could hang by the head and shoulders daily for an hour, and in time become stretched an inch or more.

ABNORMAL ORGAN.—J. S. D.—We know when the organ is abnormal by its manifestation in the mental conduct. This is the only way. Abnormality includes disease, perversion, and atrophy. Disease may be productive of inflammation; hence, excitement, which tends to the predominant exercise of an organ in the mental life. Disease may also produce the opposite effect by its destruction of the organic tissue.

INFORMATION WANTED.—D. R. N. would like to know a process for de-odorizing kerosene. J. A. B., of England, wishes a recipe

or process for destroying the wood-eating insect—that which gets into furniture. He has tried paraffine, turpentine, and other things without avail.

Several ANSWERS must be deferred to the next number.



Communications are invited on any topic of interest; the writer's personal views, and facts from his experience bearing on our subjects, being preferred.

"SELFNESS."—Individuality, using the word in its widest sense and not as applied in Phrenology, is to mind and character what the bone-structure is to the animal system. Henry Ward Beecher very appropriately calls it "selfness." Some incline to attribute the results of selfness to selfishness, but selfishness is perverted selfness.

Individuality, or, to use the better word, selfness, helps in resisting the influence of others. People of much selfness are said to have "minds of their own," which is more emphatically true than could be of just as rich minds with less of this element. But sometimes this having "a mind of one's own" is construed into self-esteem, or even egotism. This is often the very greatest mistake and injustice, for persons lacking self-esteem are likely to have that defect compensated by unusual selfness.

Persons of marked selfness have wide heads. They are self-sustained. They always have a way of their own. They may ask advice, but they do not go any way till they have made it their own way. They are not clinging. They do not lose themselves in another existence, however much they may devote themselves to that other existence. They do not change as easily by cultivation as others, and are sometimes termed "hard-headed."

Selfness belongs to everybody to a greater or less extent. It is the unchangeable part of us. However much change may be made by the thousand modifying circumstances of time, a child may be recognized by this at forty. It is that which is us with golden curls, and us when there are "silver threads among the gold." Friends long separated look for this, back of the mask of change, and find their own.

This element diffuses itself beautifully through authorship. It is not mannerism, but that "something" of Oliver Wendell Holmes, by which an author is recognized even at the extremes of his style. It is the "nib of one's pen" which "makes the same mark at twenty and three-score and ten."

ELIZA J. STEPHEN.

WHY DO OUR YOUNG DIE?—So many of our young people are afflicted with difficulties of the kidneys, the throat, and lungs, or some weakness of nerves and spine, and die early, that we can but wonder why, and ask for a solution to the problem. We do not feel that we ought to sit listlessly by, only praying that *our children* may not be sacrificed by "Divine providence," and if they die, fold our hands over the broken and desolated hearth-stone, satisfied that we have done what we could. Friends talk and ministers preach on the "visitations of Providence," warning us all "to be prepared, for we know not when we shall be called," never so much as hinting at the cause behind all that has forced nature to yield to death. She has her own beautiful laws, that when firmly followed lead on to beautiful proportions and spiritual perfectness, or, if violated, still onward, it may be, to a lingering, but none the less sure consequence, of sorrow, shame, and death. There is a power behind the throne, and, as individuals, it is our duty to help on this power to its highest attainment. Every child born into the world has hereditary tendencies to contend with. The first step is, to see that our children are well-born. You who contemplate marriage pause one moment, and ask yourself these questions: Am I free from the taint of all stimulants—such as liquor, tobacco, opium, tea, and coffee, and the numberless harmful condiments of the table? Have the talents given me been improved properly? Am I physically, morally, and mentally, what God intended I should be? Am I reasonable in my requirements of others—requiring the same purity, punctuality, and honesty that I am prepared to give, no more and no less? If husband and wife can each answer in full these questions, and love each other with a love that blends the humanity and divinity of their natures into *one* grand union, they are well-equipped and prepared to rear a home and offspring that will bless and immortalize their name. But it is our portion to look at the dark side of the picture. It is the exception nowadays to find a strong, well-made man or woman, one who is not either just falling to pieces or already shattered. Some one says, "We do not die wholly at our deaths, we have mouldered away gradually long before. Faculty after faculty, attachment after attachment disappears, and death only comes to consign the last fragment of what we were to the grave." If any one doubts this, go with me over the land, and see how our institutions for healing the sick have multiplied within the last half century—the "Water-cures" and "Movement-cures," our "Hygienic Institutes," to say nothing of asylums and institutions for those beyond cure. One might almost take us for a nation of invalids. Are our physicians blind, and have they

always been so? If not, why don't they call things by the right names, rather than invent titles for diseases that have perhaps caused some inoffensive, pure wife to suffer for the sins of an impure husband, or that some son or daughter has contracted through evil example and ignorance.

As the world has been peopled during the past century, we wonder that there are not vastly more crippled minds and bodies in society. There are far too many human beings among us with the divinity slumbering in them, while the animal is left to run riot. Hence we see so much of that peculiar and not-to-be-mistaken look about the eyes—the symptoms of general languor—which brings on, first, general debility, weak spines, affected throat and lungs, and the long run of female diseases, etc. We do not say they all spring from this source, for, thank God! there are a few pure and noble men and women yet left in the world, else whence this cry for more purity and nobility that is coming from every side? But much of it does spring from just this source, and this is the part we especially wish to remedy. We must place the axe at the root of the tree if we wish to exterminate the evil; consequently we say, as the first cause is improper marriage and parentage, the first cure lies in true marriage and improved parentage. The mother's place as creator is next to God's, and the father's—barely second to hers. They are both instruments of His work. After a child is well-born, the parents should control its appetite, even from birth, by allowing it food only at regular intervals, all along the months and years, until it gets old enough to reason for itself, and then, if there is no counter-influence in the home, if the parents act in unison, he will accept the decree naturally, it having become second nature. Self-control taught in this one act of appetite, renders all other appetites more easy of control. With this, hand in hand, must go cleanliness of habit and person, and as soon as the child can understand, it must be taught due respect for, and proper care over, and the proper use of, each function of the body; must be told the consequences of abuse and the blessings of proper use of the entire physical nature, and all its powers of being and creating. When this is done, our children shall have a being morally, physically, and spiritually strong, and one that will do its part here and hereafter.

MRS. H. E. WILLETT.

INFLUENCE OF SCHOOLS FOR YOUNG LADIES.—A valued correspondent writes in a recent letter of a new and unpleasant social experience thus: "I have been made acquainted with a new (to me) type of womanhood lately. I have heard much of her before—from men—

but always strenuously denied her existence till now. Seeing is believing, and I must surrender. I must confess that there are women who flatter and cajole the people they hate (if they are capable of anything so strong as a good healthy hate, which I doubt, so perhaps should say envy); who will write interminable letters of pure and unblushing *gush*, seasoned with envy, malice, and spite; who think of nothing so much as of dress, gossip (not to say scandal), and beaux. And where do you think I have picked up this precious knowledge? I have been allowed to see a great many letters written by the scholars and *teachers* of girls' colleges and misses' schools in New York. One—a prominent teacher—writes the most *unmitigated* balderdash of any one I ever heard of, yet she is evidently a very bright—though soft—woman. Nothing could exceed my disgust at discovering that there are such women. And I believe it (their existence) to be owing to the folly of putting girls in big masses by themselves. If boys and girls went to the same schools, studied in the same classes, attended the same lectures everywhere, how they would strengthen and polish each other! It is absolute ruin, I think, to both sexes to be kept separate in everything but the frivolities of life. Work, good, hearty, earnest work together, is what both need. It would develop common sense and *reality* of sentiment in them both. Let us thank our stars that we were not brought up in a convent or a boarding-school! Mind you, the girls whose letters I have read and *spattered* over, were exceptionally bright ones, honor-girls of their classes. Yet in all those quires of beautifully written paper, there was—I speak advisedly—not *one word* with the ring of true metal. If I didn't know that nearly every old foggy had done something of the same thing since the days of Adam, I should groan and cry that these were degenerate times. But I know better. These times are better than the best that have gone before, therefore let me only have my scold out, and let us both hope for the speedy reign of his Sovereign Majesty Common Sense!

H. S.

A CLERGYMAN'S TESTIMONY.—The Rev. George O. E. C. Yiesley, of Hudson, N. Y., a minister of some prominence, writes concerning "Brain and Mind," thus: "From a hasty perusal, I think it the most excellent and convenient treatise on the subject I have yet read. I confess that at one time I had very much the darkey's opinion of Phrenology, which he expressed when he said that he did not think one could tell how many hams were in the meat-house by laying his hand on the roof. I see, however, that Phrenology is justly entitled not only to a place, but an honorable place among the sciences. The facts your books contain are many

and wonderful, and the deductions just and warranted. The book's title pleased me, and comes at a time when men's thoughts are turned to the mysterious connections between mind and matter."

PERSONAL.

THE HON. SANFORD E. CHURCH, who died suddenly of apoplexy on the 14th of May, at Albion, N.Y., first entered public life as a member of Assembly from Orleans County in 1842, and was the only member of the Democratic party in the House from the Eighth District. He took prominent rank as a debater, and displayed that prudence and sagacity as a politician which has characterized him since. In 1857 he was elected Comptroller of the State, and served the term of three years. In 1867 he was elected a member of the Constitutional Convention as one of the delegates at large. In June, 1870, he was elevated to the Chief Justiceship of the Court of Appeals. Judge Church has been a member of several of the National Conventions of the Democratic party; and at the National Convention held at Tammany Hall, in 1868, received the vote of the New York delegation for the Presidency.

If the world of jurisprudence has lost a bright star in Mr. Church, the art-world has lost this year a most esteemed representative in Mr. George A. Baker. It was in portrait painting that Mr. Baker's art found its chief expression, and in the portraits of ladies and children that his delicate tastes and refined sensibilities obtained their freest scope. His pictures in the last few years have been painted in the intervals of acute disease, which did not, however, make his touch any the less graceful nor his work less faithful and complete.

REV. JOHN C. BLISS, of Plainfield, N. J., has received the degree of D.D. from the University of New York. This is a very fitting recognition of worth, as Dr. Bliss has shown in his ministry an earnest spirit, an unflagging zeal, and a mind of high refinement and culture. Personally we have some very pleasant recollections of Dr. Bliss and his church.

WILLIAM SMOAK, of Charleston, S. C., has lived to see his youngest and thirteenth child a grandmother. He has just entered his ninety-seventh year, has one hundred grandchildren, three hundred and ninety-one great-grandchildren, and seventy great-great-grandchildren. This gentleman has evidently done a good deal toward increasing our population, but what else?

SOJOURNER TRUTH, now 104 years old, received a surprise party at her cottage in Battle Creek, Mich., on the evening of March 2d. The

old woman was in a state of bewildered delight, saying to a particular friend who came late: "They kept floodin' and floodin' in, till I just says, 'Why, bless my heart, chil'ren, war on arth did ye all com from? and when, in the name of common sense, are ye goin' to stop comin'?' "

WISDOM.

"Think truly, and thy thought
Shall be a fruitful seed."

BUSTLE is not industry any more than imprudence is courage.

THE man who is always fortunate can not easily have a great amount of virtue.—*Cicero*.

A **WEAK** mind is like a microscope, which magnifies trifling things, but can not receive great ones.—*Chesterfield*.

THE readiest way to entangle the mind with false doctrine is first to entice the will to wanton living.—*Ascham*.

IT is the man who determines the dignity of the occupation, not the occupation which measures the dignity of the man.

ANY good cause, I think, can be promoted openly; any secret association is liable, at least, to abuse and danger.—*Albert Barnes*.

HAVE Hope! Though clouds environ round,
And gladness hides her face in scorn,
Put thou the shadow from thy brow—
No night but hath its morn.—*Schiller*.

WHEN we are out of sympathy with the young, then I think our work in this world is over. That is a sign that the heart has begun to wither, and that is a dreadful kind of old age.—*George MacDonald*.

IN gazing upon the forbidden garden that crowns some lofty hill inaccessible to us, we may forget the fruits and flowers that are lying in profusion at our feet untasted and unappreciated.

AT whatsoever moment you catch yourself trying to persuade yourself that you are particularly humble, be assured that then you are farthest from humility.

SELF-GOVERNMENT is a natural right, and the ballot is the best-known method through which to exercise that right, consequently those who have not the ballot do not possess the best method of self-government.

IF men considered the happiness of others or their own; in fewer words, if they were rational or provident, no State would be depopulated, no city pillaged, not a barn would be laid in ashes, not a farm deserted.—*Landor*.

"YOUNG man," says a quaint writer, "if you are to be married, your future wife is now living; therefore, pray for her. And while you are about it, don't forget to pray for her future husband; he needs praying for as much as she does."

It is easy to advise a person, but how difficult to receive, under similar circumstances, that same advice from another, because we are so prone to believe that what we accept is truth, and that those who can not see with our eyes are all wrong.

MIRTH.

"A little nonsense now and then
Is relished by the wisest men."

How to make crockery-ware—Don't use it.

THEY were twins. The parents christened one Kate, and the other Dupli-Kate.

"JOHN, did you find any eggs in the old hen's nest this morning?" "No, sir; if the old hen laid any, she has mislaid them."

A BOY said that he liked a "good rainy day; too rainy to go to school, and just about rainy enough to go a-fishing."

"THAT'S capital ale," said a beer-drinker to a teetotaler; "see how long it keeps its head." "Aye," was the reply, "but consider how soon it takes away yours."

VALUE OF SCIENCE.—"Doctor, how is a man to tell a mushroom from a toadstool?" Scientific Authority: "By eating 'it. If you live, it is a mushroom; if you die, it is a toadstool."

RIDDLES remind us of anecdotes. We heard an amusing rejoinder the other day. "So-and-so knows what he is talking about, does he not?" "He ought to," was the reply, "he is generally talking about himself."

Mrs. PARTINGTON (supposed to speak).—"Well, I declare! Here's an ingenuous young man who has inverted an arrangement by which the deaf can see and the blind talk. Such talons as his should be reorganized by a statute."

A MAN who had \$65 stolen from him received a signatureless note with \$25, saying: "I stole your money. Remorse naws at my consheens, and I send some of it back. When remorse naws again I'll send more."

At a public gathering lately in New York, one of the gentlemen present was called upon for a speech, and this is how he responded: "Gentlemen an' women:—I ain't no speaker. More'n twenty years back I came here a poor idiot boy, and now what are I?"

SOME one who knows all about it, says that "to ride the velocipede successfully a young man should see that his hair is carefully parted in the middle, having no more on one side than on the other, in the way of balance."

"YOU'RE a nice fellow, you are," said Jones to Smith, when the latter had announced his withdrawal from the party, and his intention to vote the opposite ticket next fall. "You change your political opinion as you do your shirt." To which Smith responded, "You'd not have me wear a shirt after I found it was dirty, would you?"

"JOHNNY," said a fond mother to her boy, "which would you rather do, speak French or Spanish?" "I would rather," said Johnny, rubbing his waistband and looking expressly at the table, "I would rather talk Turkey."



In this department we give short reviews of such New Books as publishers see fit to send us. In these reviews we seek to treat author and publisher satisfactorily and justly, and also to furnish our readers with such information as shall enable them to form an opinion of the desirability of any particular volume for personal use. It is our wish to notice the better class of books issuing from the press, and we invite publishers to favor us with their recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

NUGGETS OF GOLD; or, The Law of Success in Life. In brief and pungent Lectures to Young Men; to which is added the Science of Alcoholic Medication; also the Philosophy of Labor, Wages, Capital, Money, and Wealth. By John Heermans. 16mo. pp. 381. Published by the Author at Corning, N. Y.

A book of practical experience, and valuable because of the many lessons it reads in a pleasant vein to the young with respect to the conduct of life. The author, evidently a man past middle life, does not fill his pages with brilliant periods or rhetorical flourishes, which consume many words, but convey very little of definite, useful meaning; but he is terse and direct in precept and clear and apposite in illustration. Considering every sort of honest industry as creditable to man, and some sort necessary to every one's health and happiness, he proceeds to speak on topics like these: The False and the True; Education, what it consists in; To Drink, or Let it Alone; Tobacco; Gaming; Choosing an Occupation; Marrying; Woman's Work; Style; Investments; Charity; Law; Tongue; Hospitality; Alcoholic Medication; Doctors; The Labor Problem; Money; Bonds and Bondholders.

Thus we see that Mr. Heermans' book covers a wide field, and in its treatment of these live questions is noteworthy for shrewdness of opinion and pithiness of statement.

A PRACTICAL TREATISE ON SEA-SICKNESS: Its Symptoms, Nature, and Treatment. By George M. Beard, A.M., M.D., Fellow of the New York Academy of Medicine, etc. 12mo. Price, 50 cts.

This brochure, from the pen of a physician whose name is frequently seen in our periodicals, represents extensive experiments of the author and much experience at sea. Taking the very natural position "that sea-sickness, like any other form of sickness, is an evil to be avoided," he proposes a plan of treatment which he believes will be a relief or a preventive in the majority of cases. This plan consists in large doses of the bromide of sodium, taken three times a day, and for three or four days before commencing the voyage, Dr. Beard claiming that the effect of this drug upon the nervous centers renders a person less susceptible to the disturbances to the system caused by the movements of the ship. The doctor has a right to his inference from personal observation, and those who go upon the sea and dread, as well they may, sea-sickness, can try his prescription, but for our own part we are inclined to believe, from personal observations, that a little care with regard to one's diet a few days before stepping on board, and while on board, together with a strong moral declination of the malady, will best serve one as a preventive. Not long ago we made the voyage across the Atlantic. The passage was a stormy one almost throughout, but notwithstanding a very weak head and a low vital condition, we avoided the distemper which sent many an experienced ocean traveler to his berth. A careful diet and a determined will saved us from its distressing experience. Let those, however, who will indulge a sea-appetite, try Dr. Beard's carefully described preventive, or take passage in a steamer with those admirably constructed self-leveling berths which have been recently introduced.

MUSCLE-BEATING; or, Active and Passive Home Gymnastics. By C. Klemm, Manager of the Gymnastic Institution in Riga. With Illustrations. 12mo. pp. 91. Price, 30 cents. New York: M. L. Holbrook & Co.

A novel treatise, which has the merit of offering a means of exercise at once simple, cheap, and easily self-applied. The author claims attention to his system on the ground of its successful application to other persons as well as to himself, and says that he is "in a position to prove that we can act more powerfully on the different chronic morbid deposits (as the periphery of the body) with beating and tapping, than with iodine or electricity," etc. The system offers a

species of gymnastics particularly suitable to the aged and infirm, as it gently stimulates the circulation of the blood and revives the nervous energy in parts that have been weak or semi-paralytic.

ALVA VINE; or, Art vs. Duty. By Henri Gordon. 16mo. pp. 233. Price, 75 cents. American News Co., New York.

The heroine of this romance is an American girl; a little woman of the nineteenth century, of spirit and determination, who claims her right to be an individual.

The author's nature evidently is to hold up as an example one who makes a career for herself, so that other practical and ambitious young ladies may follow without being looked upon as forward or too strong-minded.

STEP BY STEP. By Julia McNair Wright, Author of "Firebrands," etc. 18mo. pp. 92. Price, 40 cts.

A little volume for the young. The scene is laid in a mining region, where a Christian family, by example and appropriate teaching, accomplish a good work in reforming the workmen and replacing the tavern by a church. Published by the National Temperance Society, New York.

ELSIE'S WIDOWHOOD: A Sequel to "Elsie's Children." By Martha Finley, author of "Elsie Dinsmore," etc. 16mo, pp. 331. Price \$1.25. Dodd, Mead & Company, New York.

The author in her brief preface tells us that this volume is in response to a demand of the public. As in all Mrs. Finley's books, a highly religious tone prevails, and her characters are designed to instruct the young reader in the principles and practices of Christian morality, we can commend them. Now and then a scene somewhat overdrawn on the sensational side creeps in, but as a rule the incidents are natural and human-like. The principal characters have a setting of wealth and ease which makes it pleasant to write and read about them. We could wish that Elsie lived in a little plainer style — then, perhaps, the graces of Christian conduct would have a more striking effect. The masses will insist, somehow, that when one lives in comfort and ease, can travel, wear fine clothes and rich jewels, and do just as she pleases, it is an easy matter to be good! They forget the "how hardly" of Scripture precept.

PUBLICATIONS RECEIVED.

BARNARD'S JOURNAL OF EDUCATION. International series, 1880. Volume V. of this excellent publication contains a description of Froebel's Kindergarten, by Charles Hammond, and of Wellesley College, and several papers of value to educators. Edited and published by Henry Barnard, 28 Main St., Hartford, Conn.

NEW FACTS AND REMARKS concerning Idiocy. Being a Lecture delivered before the New York Medical Journal Association. By Edward Seguin, M.D.

PSYCHO-PHYSIOLOGICAL TRAINING of an Idiotic Hand. By Edward Seguin, M.D. Reproduced from "Archives of Medicine."

These pamphlets relate to a subject with which their author is thoroughly acquainted, by careful study and professional connection. The first was published several years ago, but its matter is as fresh and useful to-day as then. Its precepts concerning the causes of idiocy should be declared in every circle of society; that men and women may be awakened to a sense of their great responsibility for the mental and physical condition of their children.

The second pamphlet is an interesting sketch of the methods pursued in training the hands of idiotic children; together with very apt comments on the importance of physiological culture in idiocy in general. "We are so used to locate idiocy in the brain," says Dr. Seguin, "that the idea of an idiotic hand seems at first enunciation like a grammatical blunder. But we become reconciled to the idea the moment we see the mental dependence of the centers and the periphery, with a greater possibility of acting on the centers from the periphery than on the periphery from the centers, at least in the period of growth."

Messrs. I. K. Funk & Co., of this city, are showing considerable enterprise by the issue of folio editions of substantial authors at prices which rival the cheap paper editions of common novels. We hope that the public will avail itself of this opportunity to invest in proper reading matter and thus save money and brains. Among the volumes received are:

KNIGHT'S POPULAR HISTORY OF ENGLAND, which runs from the earliest period to our own times, complete in eight volumes, at 30 cents a volume.

IDYLS OF THE KING. By Alfred Tennyson. Printed complete. 20 cts.

LIFE AND WORK OF ST. PAUL. By Canon Farrar. In two parts at 25 cts. each. The series is copyrighted, under the designation of the "Standard Series."

GLADSTONE'S INDICTMENT OF ISRAELI, the Country, and the Government. With this essay Mr. Gladstone practically opened the recent Liberal campaign, whose result was an overwhelming victory over the administration. Published by A. S. Barnes & Co., New York, at 10 cts.

THEOLOGICAL UNREST. Discussions in Science and Religion. The character of these essays is apparent when we name the authors.

Two are by Mr. Froude, the historian. A Reply to Mr. Froude, by Mr. Tait, of Edinburgh. A Dissertation on the Conflict of Religion and Science, by the Rev. Dr. Washburne, of New York. Price 25 cts. A. S. Barnes & Co., New York.

DOUBLE-STAR DISCOVERIES, made in 1877-'78 at Chicago, with the eighteen and one-half inch refractor of the "Dearborn Observatory," presenting a catalogue of two hundred and fifty-one new double stars, with measurements, and with five hundred double stars, by Sherburne Wesley Burnham, M.A. This voluminous contribution to astronomical science is an exemplification of scientific industry. Mr. Burnham has won wide reputation for double-star observations. His catalogue proper is introduced by an interesting statement of his instruments and methods of working.

WOMAN IN THE TALMUD. A sketch of the position held by woman in the old Jewish days. By Alfred T. Story. Published by L. N. Fowler, Imperial Buildings, London, Eng. It is an earnest essay in behalf of woman, containing several quaint stories from the "Talmud," which render it doubly interesting.

THE PHRENOLOGICAL MAGAZINE, published by L. N. Fowler, of London, shows in its later numbers a progressive spirit. We infer that it is finding that appreciative support among the English people which it well merits.

THE NATIONAL TEMPERANCE SOCIETY and Publishing House of New York have published lately the following:

EVIL AND THE REMEDY. By Canon Wilberforce. Price 5 cts.

FALLACIES ABOUT TOTAL ABSTINENCE CONSIDERED. By Canon Farrar. Price 10 cts.

ADMINISTRATION OF LAW; or, The Licensing of the Sale of Intoxicating Liquors an Unlawful Perversion of Power. By Rev. Louis Merdith. Price 5 cts.

THE TEMPERANCE SCHOOL: its Object. Organized Methods. By Julia Colman. A sensible and practical little manual. Price 5 cts.

THE CHURCH AND THE LIQUOR SYSTEM. A Sermon, by Rev. D. S. Babcock. Price 10 cts.

THE AMERICAN TEMPERANCE Publishing House, also of this city, sends the following:

THREE TEMPERANCE LECTURES, by John B. Gough, entitled "Our Battle Cry," "The Force of Appetite," "The Only Remedy." Price 25 cts.

THE TEMPERANCE DRAMA, No. 1. "Out in the Streets." By S. M. Cook. A lively play representing human life with graphic accuracy. Price 15 cts.

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[WHOLE No. 451.



JAMES A. GARFIELD,
REPUBLICAN CANDIDATE FOR PRESIDENT.

AFTER a sitting of six days at Chicago, the National Convention of the Republican party concluded its work by the nomination of the gentleman whose name is given above, for President of the United States, to succeed Mr. R. B. Hayes,

and by the nomination of Chester A. Arthur, of New York, for Vice-President. This result was unexpected, as ex-President Grant and Mr. Blaine, the eminent Senator from Maine, had been strongly supported during a long series of ballotings, viz, thirty-five; but on the thirty-sixth a break occurred in the ranks of those States that had persistently returned the name of Blaine or Sherman or Edmunds, and one delegation after another named James A. Garfield in response to the call of the Clerk, the aggregate of 399 votes deciding the hotly contested field.

Mr. Garfield was present in the Convention as a delegate, and had protested at a previous balloting that his name was not in nomination; but against protest, and without formal nomination, he was elected the representative of the Republicans to contest in the approaching autumn for the chief office in the nation. Now that the strife of the friends of this man and of that is over, there seems to be a very general acceptance by Republicans of the nomination, and the impression appears to be gathering strength that he will be "hard to beat," and if elected will do honor to the exalted office for which he has been named.

But what does science say of him as represented by photography and the engraver's art? Let us see.

James A. Garfield is a man of very strong physical constitution, with broad shoulders, deep chest, and a good nutritive system, which serve to sustain with ample vigor his uncommonly large brain; standing fully six feet high, and weighing two hundred and twenty pounds. The head, which is twenty-four inches in circumference, seems to be very long from front to rear, and then the length seems

extreme from the centre of the ear to the root of the nose; it is also long from the opening of the ear backward. The whole backhead is large, and the social group amply indicated, but the reader will observe the extreme length anterior to the opening of the ears, especially across the lower part of the forehead, in which are located the organs of the perceptive intellect, those which gather and retain knowledge, and bring a man into quick sympathy with the external world, and also with the world of facts as developed in science and literature.

Perhaps there are not two men in a hundred thousand who are intelligent and educated, who will see as much and take into account so many of the principles involved in what he sees as the subject before us. Nothing escapes his attention; he remembers things in their elements, their qualities, and peculiarities, such as form, size, and color. He would make an excellent judge of the size of articles, and also of their weight, by simple observation. He has a talent for natural science, especially chemistry and natural philosophy. His memory, indicated by the fullness in the middle of the forehead, is enormously developed, aiding him in retaining vividly all the impressions that are worth recalling.

The superior portion of the forehead is developed more prominently in the analogical than in the logical. His chief intellectual force is in the power to elucidate and make subjects clear, hence he is able to teach to others whatever he knows himself.

He has the talent for reading character, hence he addresses himself to each individual according to his peculiar characteristics, and reaches results in the readiest and best way. His Language is rather

largely indicated; he would be known more for specific compactness than for an ornate and elaborate style, because he goes as directly as possible from the premises to the conclusion, and never seems to forget the point at issue.

The sidehead is well developed in the region of Order, Constructiveness, sense of the beautiful and of the grand. It is also strongly marked in the region of Combativeness and Destructiveness, which give force and zealous earnestness in the prosecution of that which he attempts to do. He is able to compel himself to be thorough, and to hold his mind and his efforts in the direction required, until he has made himself master of the subject. Industry is one of his strong traits.

He is firm, positive, determined, and the middle of the tophead indicates strong religious tendency. We seldom see so large Veneration; he is devout, respectful toward whatever he thinks sacred, whether it relates to religion or to subordinate topics; he would reverence ancient places made memorable in story and song; he is respectful to the aged; polite to his equals, and especially generous and friendly toward those who are his inferiors in age or culture. Thus young men and even children have ready access to him by his invitation and permission. His strong social affection makes his face and his voice a standing invitation toward confidence, and he has great familiarity in his treatment of the young.

His method of studying subjects is instinctive; he considers all the facts, every condition that will be brought into question, and combining these by means of his logical force, his conclusions seem clear, are vigorously stated and influential. He has a strong physiognomy; that broad and high cheek-bone indicates vital power;

that strong nose indicates determination, courage, and positiveness; the fullness of the lips shows warmth of affection and of sympathy.

There are few men who are as well adapted to comprehend the length and depth and details of business, and hold their knowledge where it will be ready for use when it is required; hence as a lawyer or statesman, he should be able to impart to people his knowledge effectively and exhaustively whenever required. He is naturally qualified to be master of turbulent men, and to meet force by force, and to stand his ground in the midst of hardships, difficulties, and opposition.

General JAMES ABRAHAM GARFIELD owes his position before the American people to-day, mainly to personal effort and culture. He was born in the village of Orange, Cuyahoga County, Ohio, about twelve miles from Cleveland, November 19, 1831. His parents were of New England extraction; his father, Abraham Garfield, was born in Otsego County, N. Y., but his family had lived in Massachusetts for generations. His mother's maiden name was Eliza Ballou, and she was a niece of the Rev. Hosea Ballou, the noted Universalist clergyman of New Hampshire, in which State she was born. James was the youngest of four sons, and his father died in 1833, leaving these children dependent solely on their mother. Mrs. Garfield was a woman of unusually strong character, and with the aid of her three older boys, managed to support herself and the family on the little farm left by her husband. James, from his earliest years, was obliged to aid to the extent of his ability in the general work about his home. He liked work, and it was said of him when a boy that there was "not a lazy hair in his head." Seeing no means of making a living but by manual labor, he applied himself to learn the trade of a carpenter, and during the sum-

mer months toiled early and late on his mother's farm, and the winter days he passed at his carpenter's bench, doing such little jobs of workmanship as the neighbors required. There was a village school, so-called, in Orange, where the citizens met on winter evenings to discuss topics of interest, and this young Garfield attended, picking up such information as he could in the capacity of a listener. In fact, he reached sixteen years without having learned to read; nevertheless, he had a great desire to obtain an education, and had only lacked the opportunity of being put in the way to get it.

The Ohio Canal passed within a short distance of the Garfield farm, and discovering that the canal-men were paid in cash and made better wages than he could realize by farming and carpentering, he determined to become a canal-man and secured a place as driver of one of the boats. His fidelity in this humble business attracted the attention of employers, and he was soon promoted to the more dignified position of holding the tiller of the boat. He continued in this business, saving what little of his earnings he could, for about eighteen months, until the fall of 1848, when he determined to advance a step and ship as a sailor on the lakes. At this time, however, an attack of fever and ague prostrated him and put an end to his dream of sailor life. This sickness, in fine, proved the turning-point in his life, and as a result of it, James A. Garfield, instead of burying himself in the fore-castle of a ship, became one of the leading men in our nation.

While sick in his mother's house he made the acquaintance of the teacher of the district school, and conversations with him inspired young Garfield's mind with the determination to make the attempt to secure an education. With the aid of some friends he managed to learn to read and to do simple examples in arithmetic, and with this preparation and a few dollars from his mother's little store, he went to Geauga Academy, an obscure institution in a country village not far from Orange, and being too poor to pay

the \$1.50 a week, which was the price asked for board, he took a few cooking utensils and a stock of provisions, and, hiring a room in an old unpainted farmhouse, boarded himself. He found employment with the carpenters of the village, and by working mornings and evenings and Saturdays he earned enough to pay his way. The summer vacation enabled him to save something toward the fall term, and in the ensuing winter he taught a district school. Thus he kept on for several years—teaching in the winter, working at the bench in summer, and attending the academy, and, later, an "Institute" at Hiram, during the fall and spring terms. He was a tall, muscular, fair-haired country lad in those days, looking somewhat like a German. Healthy in mind and body, genial in temperament, a good wrestler and ball-player as well as a good student, he was a great favorite with his comrades and teachers.

At twenty-three he considered himself fit to enter an advanced class in college, but five years of hard work and close saving had not furnished him all the money necessary to pay the expenses of the expected course. He had about half enough, and while casting about to discover how to secure the other half, a kind-hearted gentleman offered him the needed sum. As a security for the payment of the debt thus incurred, the young man had his life insured and placed the policy in his friend's hands, saying: "I shall pay you if I live, and if I die you will suffer no loss." The debt was paid not long after he was graduated by Williams College, where he passed the examination preparatory to entering the Junior class, and thus obtained his Bachelor's degree after but two years' study.

Before going to college he had joined the sect of the "Disciples," better known as "Campbellites," which had a numerous membership in Ohio, and all the Garfield family were connected with it. The "Eclectic Institute" in Hiram was the college of this sect, and it was natural that Mr. Garfield should turn his eyes to the struggling little academy which he

had left as a pupil but two years before. He returned to Hiram, where he was made Professor of Latin and Greek. Prof. Garfield, after the first year, was made President of the institution, and in this capacity he not only taught and lectured, but preached. According to the creed of the "Disciples," any person having the power was entitled to preach, and the president of the college was expected to deliver a sermon every Sunday as a part of his official duty. President Garfield preached with great force, and his fame spread all through the Campbellite settlement. It was this fact that gave rise to the story that he had been a minister, a story which he has taken occasion to deny publicly on several occasions.

He had chosen the law as his calling, and with all the work on his hands, Mr. Garfield pursued that study, although he has never been called on to practice it to any extent.

In about 1859 his political career began by his nomination by the anti-slavery people of Portage and Summit Counties as their candidate for State Senator. He was elected by a large majority, and, young as he was, he at once took rank in the Ohio Legislature as a man unusually well informed on the subjects of legislation and effective in debate. When the secession of the Southern States occurred, Mr. Garfield's course was manly, and he was among the foremost to maintain the right of the National Government to coerce seceded States; and when the time came for appointing officers for the Ohio troops, Garfield at once avowed his intention of entering the military service. He now resigned the Presidency of the Hiram Institute and prepared to place himself wholly at the service of the National Government. His military career was brief, but honorable. First he took the field as Colonel of the 42d Ohio Infantry, in December, 1861, and operated in Eastern Kentucky with success, earning promotion to Brigadier-General. He took part in the siege of Corinth, but was compelled by the re-appearance of his old enemy, ague and fever, to retire on sick leave in August,

1862. In January, 1863, he joined Gen. Rosecranz and was made Chief of Staff of the Army of the Cumberland. He performed valuable service in the battle of Chickamauga and was made a Major-General for it.

Meanwhile his rapidly-growing popularity at home had encouraged his friends to nominate him for Congress, and he was elected by a large majority. Thinking the close of the war near at hand, he accepted the important place given him at the Nation's council-board and withdrew from the army, surrendering his commission Dec. 5th, 1863.

In Congress he at once took a high rank, and from his official relations to the present time he has been an energetic, hard worker. He first served on the Committee on Military Affairs, where, by his industry and familiarity with the wants of the army, he performed very valuable service. He soon became known as a powerful speaker, remarkably ready, and effective in debate—while in the committees he proved himself an invaluable worker. His party re-nominated him by acclamation on the expiration of his term, and on his return to the House he was given a leading place on its leading committee—Ways and Means. Here he soon rose to great influence. Studying financial questions with the assiduity of his college days, he has come to be looked upon to-day as one of the ablest of our national financiers. His merits as a statesman have been recognized by the Republicans of Ohio, they re-electing him successively to the Thirty-ninth, Fortieth, Forty-first, Forty-second, Forty-third, Forty-fourth, Forty-fifth, and Forty-sixth Congresses. During these several terms he has served as the Chairman of the Committee on Military Affairs, of the Committee on Banking and Currency, and of the Appropriations Committee. This last Chairmanship he held until 1875, when the Democrats came into power. Two years later, when Mr. Blaine went to the Senate, General Garfield became by common consent the Republican leader in the House, a position which he has

maintained ever since. In January last he was elected to the Senate to fill the seat of Allen G. Thurman, who retires on the fourth of next March.

In appearance Gen. Garfield is very impressive. He is six feet in height, broad-shouldered and strongly built. His head is unusually large and his forehead remarkably high. He has light brown hair and beard, and light blue eyes, a prominent nose and full cheeks. In dress he is plain, in manner simple and unpretending, kind and genial. He is temperate in all things except brain work, and is devoted to his wife, the lady whom he married in 1857, while Professor of the classics at Hiram Institute. He has five children living, two having died in infancy. General Garfield has a house in Washing-

ton, where he spends his winters, and a farm in Mentor, Lake County, Ohio, where he spends all his time when not engaged at the capital. His farm comprises 125 acres of land, which is highly cultivated, and there he has found a recreation of which he never tires, in directing the field work and making improvements in the buildings, fences, and orchards.

He is not a man of fortune, notwithstanding his long and prominent political career; which fact in itself goes far to answer the charges of official irregularity loudly proclaimed just now by certain of his political opponents. His farm and Washington property, together with what else of value he owns, at a fair estimate would not exceed probably \$25,000.

CHESTER A. ARTHUR,

REPUBLICAN CANDIDATE FOR VICE-PRESIDENT.

THIS gentleman is well known in Eastern political circles. His father was a Baptist clergyman of Troy, where he was born in 1830. He received an excellent education, graduating in 1849 at Union College, Schenectady. While in college he was a diligent and popular student, stood high in his classes, and was recognized as a man of ability and promise. Upon leaving college he taught school and studied law, and was admitted to the bar in 1851. He came to New York city and formed a law partnership with Erastus D. Culver, afterward Minister to one of the South American States. Mr. Arthur was quite successful in his early practice. He early made himself active in anti-slavery matters, and his first important law-case was the Lemmon suit, in which he was associated with Mr. Wm. M. Evarts in defending the State in the appeal made by Virginia from the decision of Judge Paine.

During the late war he rendered important services to the State. In 1861 he held the post of Inspector-General, and soon afterward was advanced to that of Quartermaster-General, which he held

until the expiration of Mr. Morgan's term as Governor.

He took great interest in politics, and became one of the leaders of the Republican party in his State. In November, 1871, he was appointed Collector of the Port by President Grant to succeed Thomas Murphy. Upon the expiration of his four years' term, so acceptably had he filled the post, that he was reappointed in December, 1875. The nomination this time was unanimously confirmed by the Senate without the usual reference to a committee. This was a high compliment usually reserved for ex-Senators. On July 21, 1878, he was succeeded by Collector Merritt.

Mr. Arthur's wife, a very estimable woman, was the daughter of Lieutenant Herndon, of the U. S. Navy, who was lost on the *Central America*. She died in this city during the past winter, leaving two children.

The portrait indicates the possession of superior vital power. Mr. Arthur should be a healthy, vigorous man, capable of enduring fatigue of body and mind much beyond the power of men as they

average. His brain being well supported by the body indicates many characteristics of power. He is quick, clear, and decided in his impressions—the cast of his intellect being intuitive, grasping the purport of things at a glance. Hence he reads the motives and purposes of

phases of speech and manner. He usually talks to the point, so that there is not much room for misunderstanding him. Secretiveness appears moderate; hence he should be frank as well as emphatic in utterance. The upper and forward part of the sidehead appear to be



others readily, and forms conclusions with great quickness relative to his own affairs. He is spirited, proud, and ambitious; has respect for dignity and honor, and seeks preferment for himself as one of the chief objects of life. His large base of brain contributes to energy and activity, as well as to directness and em-

well filled out, giving him appreciation of the refinements and elegancies of life, and the desire to promote culture and art.

He is evidently a social man, mingling with people of taste and education, and adapting himself to the usages of convention.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER III.—Continued.

THE OCCIPITAL BONE OF GNAWING ANIMALS.

IN gnawing animals the occipital is generally composed of two pieces as in the carnivora: a superior (Figs. 110 and 112), representing the os inter-parietal; an inferior, or the occipital bone proper. In the skull of the animal which is here described the upper part is very small. It is not, however, the same in several species of the same family. We may cite, for example, the guinea-pig (Fig. 114) and the beaver. In the rat it is enormous, and forms nearly a third of the skull-cap (Fig. 115).

The exterior surface of the occipital in the rabbit is very irregular. The most noteworthy features which it offers for our study are: the wide surface, 1, 2, 3,



Fig. 110.—OCCIPITAL BONE OF RABBIT. OUTSIDE SURFACE.

showing a multitude of little cavities (Fig. 111); the superior part, 1, 1, is very much thicker than the inferior, which is covered in life by muscles belonging to the neck and head. Lower down and at the middle is seen the occipital opening, *p*, the direction of which is horizontal; its form differs a little from that of the occipital in the cat. One always sees at the middle of its superior edge, at least in the hare and the rabbit, a shallow. On each side are two condyles which articulate with the first vertebra—below is the basilar appendix, *k*.

The internal surface of the occipital (Fig. 113) shows from top to bottom, 1st,

the interior surface of the os inter-parietal, below a depression, quite wide, lodging the middle lobe of the cerebellum; 2d, on each side, 3, 3, two channels or grooves, and outside of these and on each side two broad, smooth surfaces, bounded by the margin, *o, o, o, o, o*; they articulate with the acoustic portion of the temporal as represented in Fig. 114. In front of the occipital opening is seen the basilar apophysis, *a, a*, in the middle of which is a groove designed to accommodate the beginning of the spinal column.

The occipital in the rabbit articulates, like that of the cat, with the parietals by the lateral parts of its superior border, 9, 5, 5; with the temporals by its lateral



Fig. 111.—OCCIPITAL BONE OF RABBIT. OUTSIDE—OUTLINE.

borders, *o, o, o, o, o*; with the sphenoid by the basilar apophysis, *a, a*; with the first vertebra by the occipital condyles. Glancing at the illustrations of the several parts of the skull which we have thus far examined, we are struck by the extent which the occipital bone in the lower animals presents as compared with the others; it forms, indeed, more than one-third of the bony envelope. No part of its interior surface, as in the cat, is found in contact with the cerebrum; its larger portion corresponds to the cerebellum, which forms in the gnawers more than a third, and sometimes even more than a half, of the cerebro-spinal system. Dr.

Vimont remarks that he never found in the very large collection of gnawers and carnivora which he possessed, any trace



Fig. 112.—OCCIPITAL BONE OF RABBIT. INSIDE.

of the bones which exist in man between the occipitals and the parietals, and are known as "Wormian," unless the os inter-parietal is to be regarded as such. In a dozen heads of apes which formed part of his collection he did not find such



Fig. 114.—SKULL OF GUINEA PIG.

bones, notwithstanding the ape's skull approaches so closely to that of man.

THE OCCIPITAL IN BIRDS.

The occipital in birds differs completely from that of quadrupeds in its form and the parts of the nervous system with which it lies in contact. We shall not enter here into the details of all the varieties which it presents in the numerous families, orders, classes, and species; but we shall endeavor to bring out conspicuously their general characteristics. It may be well to remark that we consider the occipital here as it appears in the adult bird, and the scope of our work renders it necessary to pass by in silence the

history of its analogies in form and situation—analogies which are far from being demonstrated—as authors generally, who



Fig. 113.—OCCIPITAL BONE OF RABBIT. INSIDE, OUTLINE.

have written upon this, are by no means in accord.

After having separated with care the heads of fourteen young birds belonging to different species, Vimont always obtained eight pieces, which are represented in order. The occipital, as one perceives, is formed in birds of two very distinct parts: one broad, indicated by the numbers, 5, 5, 5 (Fig. 117), and the letters, c, a, a; the other, thin and long, n, n, n, having the form of a triangle whose base is at the rear. The essential matters for our recognition are: first, a surface rounded and expanded at the center and above, c. This corresponds to the cerebellum, which is composed of transverse rings (Fig. 120). In the family of warblers, of which the skull is thin, one may easily perceive the cerebellar structure through that part of the skull, and also in certain species of large birds, like ducks and geese. The occipital opening, p, is be-



Fig. 115.—SKULL OF FULL-GROWN RAT.

low the cerebellar prominence. Its form is rounded in this species. Upon the sides of this opening are two rounded surfaces corresponding to the semicircular canals, which are much developed in the owl, as we have noted in a previous chapter. The middle part of the inferior border of the occipital opening presents a kind of rounded tubercle, *y*, designed to articulate with the first vertebra. The whole surface marked, *5, 5, 5*, is quite uneven, and terminates in the triangular spine, of which we have already spoken, *n, n, n*; it articulates near its middle part with the palate bone.

Observed by its interior surface (Figs. 118, 119), the occipital shows the following features: at the middle, the cavity, *c*, in

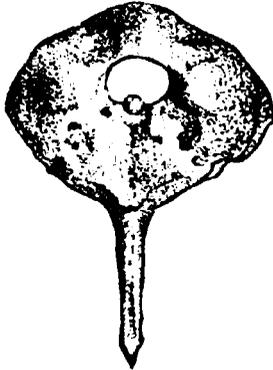


Fig. 116.—Occipital of Owl. Outside.

which lies the cerebellum, and presents transverse depressions in correspondence to its divisions. Below this fossa the occipital orifice, *p, p*, upon the borders of which and farther outward, are seen two fossæ of some depth, *k, k*; these are occupied by the posterior lobes of the cerebral hemispheres. In front of the occipital opening is a wide depression, *m*; it holds the most expanded part of the medulla oblongata and is found in contact with its inferior surface. In front of this depression is observed another very small one, *9*, which is occupied only in fresh condition by the pituitary gland. Upon the sides of the cavity containing this gland are seen two others, much larger and deeper, *b, b*; their extent is always proportioned to the volume of the quad-

rigeminal bodies which they are formed to accommodate. Outside of these cavities and at the point marked *z*, the occipital appears formed of two plates, one external and the other internal, between which is the posterior border of the temporal bone. The external plate is more salient, and forms, at least in this species, a kind of little receptacle for the orifice of the external auditory channel. The interior surface of the triangular appendix, *o, o, o*, presents nothing remarkable; upon and near its middle part lies a thin osseous process belonging to the ethmoid, and which becomes united to it in full maturity.

It appears from the foregoing observa-

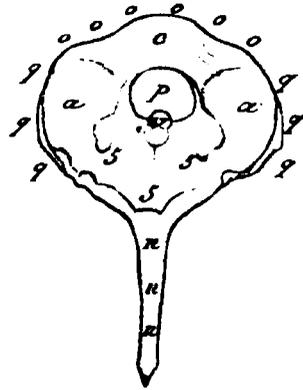


Fig. 117.—Occipital of Owl. Outside. Outline.

tions that the occipital in birds differs from that of man, the ape, and quadrupeds, especially in that it incloses parts that we do not find in the same region in them: to wit, the quadrigeminal tubercles and the organs of hearing.

TEMPORAL BONE OF THE APE.

The temporal bone of the Sajou ape (Figs. 121, 123) differs from that of man chiefly in its smaller extent and in some anatomical details of little importance. As in man, it is double, and composed of two very distinct parts, one flattened and thin, indicated by *1, 3, 3* (Fig. 122), the scaly or squamous portion; the other, hard, firm, having a triangular form, *5, 5, 5*, the petrous portion which contains the principal organs of the ear. These two

portions are separated by a bony process, the zygoma, a; at the base of this a

aperture directed from within outward and from above downward, c; this is the



Fig. 118.—OCCIPITAL OF OWL. INSIDE SURFACE.

transverse surface is seen, 9, which in life is covered with cartilage and articulates

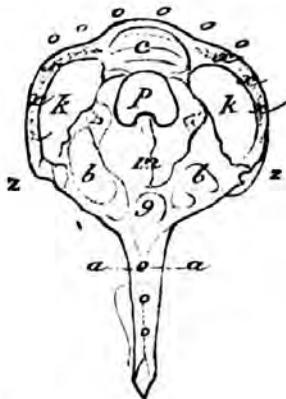


Fig. 119.—OCCIPITAL OF OWL. INSIDE SURFACE. OUTLINE.

with the glenoidal process of the inferior maxillary. Behind the zygoma is seen an

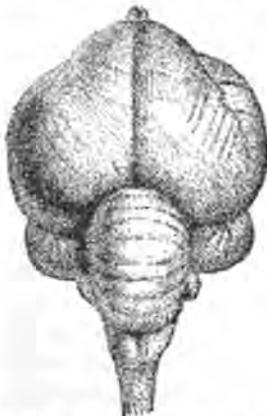


Fig. 120.—BRAIN OF DOMESTIC GOOSE.



Fig. 121.—TEMPORAL BONE OF APE. OUTSIDE.

orifice of the auditory channel, and behind the zygoma is a smooth surface, 4—the mastoid process, which is very much less



Fig. 122.—TEMPORAL BONE OF APE. OUTSIDE. OUTLINE.

developed than in man. In the latter, as we have seen, the mastoid presents a triangular-convex process.

On the internal surface of the Sajou



Fig. 123.—TEMPORAL BONE OF APE. INSIDE SURFACE.

temporal bone (Fig. 124), we may remark the following features: outwardly a rough surface, beveling, x, x, x, x, fitting into

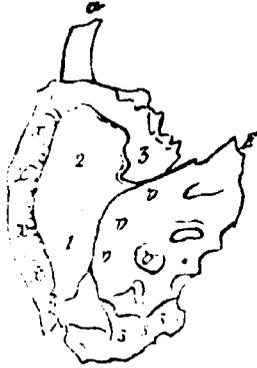


FIG. 124.—TEMPORAL BONE OF APE. INSIDE SURFACE. OUTLINE.

the lower margin of the parietal of the same side; within this articular surface there is a depression, quite deep, 1, 2, 3, where lie the mid-lateral and inferior lobe. It presents traces of arterial and venous channels. Farther in we notice

the petrous portion, the upper surface of which is smooth, marked v, v, v, and corresponding to the lower surface of the median lobe of the brain. Below is the orifice of the auditory channel, o; behind the petrous portion, a groove, s, s, s, which receives the veins of the lateral sinus.

The temporal bone of the ape articulates with the same bones as in the human skull—by its zygoma, a, with the cheek-bone; by its superior border, x, x, x, x, with the lower border of the parietal; by its mastoid process with the occipital; it fills the lateral hollow of that bone just outside of the cerebellar region (Fig. 102). The temporal bone articulates also with the basilar process of the same bone by the lower surface of the petrous portion; with the sphenoid by its anterior margin which is beveling, 3, 3; finally it articulates with the lower maxillary, of which it receives the condyle. The temporal bone of the ape contains, as in man, the little bones of the ear and the other accessories of the hearing apparatus.

ANTI-MALTHUS.

COLONIZE THE WHOLE EARTH WITH GOOD AND WISE PEOPLE; AND THUS FULFILL ITS NORMAL DESTINY.

WHAT POPULATION WILL THE EARTH CONTAIN?

This essay is not, as might be supposed, a studied effort to refute the special doctrines of Malthus. It is simply an effort toward the rebuttal of one of his main propositions, namely, that great and immediate effort is necessary toward curtailing the natural increase of the human family. Two simple questions will be discussed in this writing.

1. Is there in the aggregate, or in any large portion of the earth, a real over-population?

2. What means shall be used to fill the earth with good and wise people?

As to the first point, the facts concerning the actual population of the various countries will be at once considered.

The area of dry land upon the globe is in round numbers about 51,590,000 square miles, equaling 33,000,000,000 square acres.

The human family is now reckoned to number 1,400,000,000 or about one billion and a half. China, which is so often referred to as over-populated, has 3,742,000 square miles, much of it waste, and 446,000,000 inhabitants, according to a recent report of Prof. Schem. This gives the Chinese five acres apiece. Japan has about 150,000 square miles or 96,000,000 acres, say two and five-sevenths acres for each person.

Saxony, in the German Empire, has 3,698,560 acres and 2,556,244 people; or about an acre and a half apiece. Belgium is said to have one person for each acre.

So then, this globe, filled as to its dry land, with people, would contain about thirty-three billions if populated at the Belgic rate; twenty-two billions at

the Saxon rate; twelve billions at the Japanese rate, and six and a half billions at the Chinese rate, yet people go snuffing around, bewailing the swift coming of "the crack of doom," when we have as yet less than a billion and a half of fellow-creatures around us here; and have no evidence that the number was ever greater than that.

The greatest evil accruing from this idea is, that it gives hard-hearted people an excuse for still further hardening their hearts against their poorer fellows, and—as in the case of the attitude of some European nations toward their foreign dependencies—calmly and stolidly watching the slow starvation of millions of famine-stricken wretches.

THE CONTRADICTIONS OF MALTHUS.

As to Malthus, he was not a bad man, and he was a hard-working, careful, patient student and collector of facts. But he would see nothing except from an aristocratic stand-point: was quite firmly convinced that "the many were born ready saddled and bridled that the few might ride." As to England, for instance, it never occurred to him that millions of poor workers could comfortably subsist upon the ground wasted by the nobility and gentry in parks; and that millions more could have a comfortable living in the cities, if the factory owners would be content with a fair share of the profit upon the labor of their "hands," and by greatly diminishing the hours of labor give employment to these other millions.

A favorite statement of Malthus is, "*Population always increases where the means of subsistence increases.*" This might have been a saying of important significance at his time, when the subsistence of a community was usually gathered from its immediate neighborhood. Now, however, when the telegraph informs the ends of the earth instantly, when any species of food becomes scarce at any point, and steamers and rail cars can speedily supply the need from any

region enjoying a surplus, such a statement becomes quite meaningless.

The main *natural* checks to population, according to Malthus, are, moral restraints, vice, and misery. He seemed to put much more reliance upon the latter than upon the former. His chief critic, the celebrated Godwin, justly remarked that he should have added "bad human laws and institutions" to his list of existing checks. A specimen of the faulty reasoning of Malthus is found in his statement concerning the population of Australia. He gets his facts from Capt. Cooke, with regard to the scarcity of population on that huge island; and sagely says:

"By what means the inhabitants of this country are reduced to such numbers *as it can subsist*, is not perhaps very easy to guess." He thus takes it for granted (forming the conclusion from the supposed love that he evolved from his inner consciousness) that the straggling savages who peopled Australia, in his day, numbered exactly so many human creatures as the island was capable of feeding.

The philosopher is certainly right in the abstract, where he maintains that if human propagation were maintained at its now usual rate, after the "millennium" had arrived, and vice, disease, and misery had ceased to check it, there would be danger of a genuine world-wide overpopulation. We know that in "the good time coming" there will be some new checks. But we also know that they will be natural, and will in no sense militate against the welfare of individuals or communities. We already get an inkling of what these checks will be, in the fact that families of the highest culture and refinement are not as prolific, though they make no attempt to check propagation, as those in the same nation that are subjected to all manner of hardship and privation, short of that extreme distress that always effectually checks population.

We may be sure of one thing—at least those of us who believe in Divine Provi-

dence—that as fast as there is any actual necessity for checks (a necessity never yet really reached), the good and wise will be shown what checks to use, and will faithfully adopt them. All the talk of Malthus about the food supply of barbarians and nomads goes for nothing. Following his absurd “law” that “population always increases where the means of subsistence increases,” he doubtless gravely decided that the few wandering tribes of Indians on this continent represented fully the population that it was capable of sustaining. Nomads never really try to obtain the principal part of the subsistence that even they know to be contained in the earth beneath their feet.

HOW TO MAKE THE WHOLE EARTH HEALTHY.

O that I could send a glad cry of surprise and discovery throughout the nations: “*Increase, multiply, replenish the wide earth! Fill it with wise and good people!* It is not yet one-tenth full. It will never be thoroughly healthy and habitable until it is thoroughly filled by intelligent and virtuous human creatures, who will remove all nuisances by a wise culture and drainage of every arable acre.”

Here is an idea that is reliable, and is quite opposite to the whole tenor of Malthusianism: namely, that we should hasten to populate the globe densely, in order to make it truly habitable. “How horrible! what madness!” exclaim the disciples of this prophet of despair; “the very day the earth gets full, the people will begin to starve, if not before, in spite of your millennium.”

Our cheerful answer is: “Trust in the Lord (or in Nature, if you prefer), and do good. Commit thy way unto Him!”

There is now and then a streak of light in the writings of Malthus that relieves the murkiness of his pictures. The following from his Chapter II. really goes quite against his main arguments. He says: “It has been observed that many countries at the period of their greatest degree of populousness have lived in the

greatest plenty and have been able to export grain; . . . and that, as Lord Kaimes observes, ‘A country can not easily become *too populous*; because *agriculture has the signal property of producing food in proportion to the number of consumers.*’”

This is a practically opposite statement to that previously given, viz.: “Population always increases where the means of subsistence increases.”

Malthus pays a merited tribute to the monasteries of Europe, where, he says, the agricultural monks have done wonders in fertilizing waste and barren places. Truly here is a genuine work of use for religious devotees! The Romanist monks called Trappists have a grand enthusiasm in this direction, similar to that of the old Benedictines. Already have they made many sterile regions blossom like the rose. What a noble work to fertilize the earth for coming happy generations! If people will insist upon being martyrs, they can not select a better form of self-sacrifice. But there is really little need for such work while the greater part of the fertile land is still untilled. Beautiful, smiling wildernesses, the world over, are fairly crying out for human culture and appreciation, and proffering unbounded sustenance from their teeming bosoms.

Careful estimates show that the Valley of Orinoco alone, where an acre of bananas will feed a village, would supply nourishment for the whole population of the world. What nonsense, then, to raise the alarm about over-population. Rather let those who feel an interest in the general welfare busy themselves very specially in scattering the multitudes now gathered in a few regions throughout the unoccupied fertile places.

As the most striking novelty in this writing is the demand that the earth be really filled with good and wise people as soon as possible, in order that it may be made perfectly healthy, the substantiation of that theory must be my main object. It seems a strange statement that: *Wise human creatures are Nature's great disinfectant!* and this can be proved; and a

very important part of the proof is obtainable from the recently developed facts concerning what is called the "Dry earth system of treating sewage."

There is nothing more wonderful in modern discovery—or rather re-discovery, for Moses tried to teach these things to humanity thousands of years ago—than the disintegrating and disinfecting effect of applying dry earth to animal and vegetable refuse. The man of philosophic and philanthropic mind, who has used the same earth from six to ten times in an earth closet, and found the disinfective and disintegrative effect as complete the last time as the first, has visions rise before him of the future blessedness of our race and the redemption of the earth under our feet that are quite joyous. Such a man stands aghast as he beholds the waste going on around him, in the destruction of soils and the materials that would recuperate them.

I believe that by the help of this system every living creature can be made to give back to the earth an amount of fertilization, that, added to that derivable from air, sunshine, and water, will fully equal what it takes from the earth. In this fact, if a fact, we have a solution of economical and agricultural questions, worth all the libraries that have been written about the preservation of soils. It explodes also some of the theories of Malthus.

PROPER COLONIZATION.

Now as to the methods of distributing the population of the earth, some say that the poor and foolish can not be organized into successful colonies. Such point to the failure of Robert Owen. But a colony is not necessarily a socialistic community. Ancient and modern history are full of accounts of colonies that were successful. Every migration of portions of tribes has been of that nature. Even socialistic colonies, such as those of Shakers, etc., have been very successful in our country.

Those who establish harmonious colonies do a work like that of Sisters of Mercy on a battle-field; the latter move over

the field, soothing the wounded, without considering the nationality of the combatants or the cause of their quarrel. So the founder of a colony need not consider the politics of the people he removes to an improved situation, nor the politics of those among whom he puts them. We should remember when we wander through the miserable slums of a city, that while the inhabitants of these places are half starved, the humming insects and the singing birds are the sole occupants of millions of fertile acres, which would afford these suffering humans happy homes and abundant sustenance. Many will reply that thousands of these people are so shiftless that they would do no better on the soil than they do in the slum. Here comes in the reorganization of society again, and the time will come when men who are able financiers and industrial managers will feel themselves as much bound to exercise their peculiar gifts for human advancement, as a few clergymen, and also some artists, literary men, etc., now do to exercise their peculiar gifts to that end.

As the steam-engine, telegraphy, and discoveries and inventions are rapidly making "all the world akin," the fact of being our brother's keeper is more and more forced upon the conscience of Christendom. The time will be when men and women who are not wise or energetic enough to put themselves in fitting surroundings will be persuaded to suffer themselves to be organized into some sort of association by the wise and good, who will lead them to the green pastures and beside the still waters of the less populous parts of the country. Then we shall have such grand work done all over the land as glorious William Penn did, when he drew a multitude after him to the sylvan land of Pennsylvania and the city of Brotherly Love, and made it the model city of the world, though that is not saying much.

The possible majesty of an organized colonization movement is seen in the fact that in 1878, when very few European emi-

grants came to the United States, 800,000 of our people went west of the Mississippi. Through lack of just those elements that colony migration would have given them, these isolated settlers endured fearful privations. Thousands, having lost the savings of a life-time in the universal destruction brought upon us by our rulers, between 1873 and 1878, had gathered up the wrecks of their fortunes, and some in wagons, some on foot, pushed for the wilderness—an incoherent multitude. Thousands who had money enough and brains enough to make very valuable and successful members of skillfully-organized colonies soon found themselves out of money, health, and hope, living in holes in the ground. They had staked their last dollar on this great risk, and were now forced (when past middle age in many cases) to return East and begin life again as "hands" in factory, shop, and store. The money they wasted would have taken them, under a true co-operative system, in palace cars to palace homes on the prairies. What a grand work to organize such, and save them from such destruction! What a blessedness! Let each rich philanthropic man say: I will be an Industrial Moses! I will stand right here in my lot and organize my employés in co-operative workshops like Godin's, or lead a multitude, in shape of a thoroughly-equipped colony, into the new country.

THE MOUNTAINS AND DESERTS TO BE
TILLED AND FILLED.

And now to return to the means of getting the whole earth ready for an immense population. Whoever even admits the truth of the "dry earth" doctrine will see that we have small occasion as yet to fear over-population. When such means are in thorough use, there need be no waste, no malaria. All available food material will be used. But the world's population must be held under very strict control if there is to be at no place either famine or over-production. Many new expedients will be adopted. The earth will be gathered by great machines from

the vast alluvial deposits, where it is wasted (for instance, from the deltas of the Amazon, Nile, Ganges), and deposited on the barren plains. This very work was done on a large scale by the "mound builders," who once peopled this country.

Great discoveries will be made in agricultural chemistry. Many materials now wasted will be replaced by others that are cheaper and more available. We used to say, "The fire-wood will be used up"—then came the coal; we said, "The whales will all be destroyed"—then came coal-oil; now we have been saying, "The coal and coal-oil will run out"—and here comes electricity to take their place.

In the future the world's work will be done, more and more, by machinery; therefore, human creatures will need much less food than now, as their energies will not be so exhausted by hard work. All the wildernesses, deserts, and mountains, up to the snow line, will be turned to use in some way for human sustenance. The waters of the ocean will be ransacked for edible fish, and its inedible monsters will be exterminated (as will be all those of the land). All inland seas, lakes, ponds, and streams will be stocked with fish, and vast water spaces will be covered with human habitations, as in China.

A thousand or ten thousand years from now, a Central Council or a "Pantarch" will probably guide the movements and actions of the earth's twenty or thirty billion inhabitants, just as the wonderful train-controller, perched high at the north end of the Union depot in New York, controls, by manipulating rows of buttons connected with the telegraphic instruments, all the trains of the three great railroads centering there. Whereas now able men control the distribution of money, produce, goods, etc., over the world, in a way that suits their selfish aims, so then will the same thing be done by men actuated by pure benevolence. That Central Council or Bureau will be in electric communication with every corner of the earth, and will be continually sending forth messages of information, warning, and exhortation.

S. LEAVITT.

PROGRESS OF PHRENOLOGICAL TRUTH.

THE student of Phrenology is at a loss to account for the slow progress that phrenological truth has made in the world during the last fifty years. We have watched its progress for more than forty years; and from the close of the year 1838 to the close of 1851, gave our almost undivided attention to the promulgation of the truth of this science, by lectures, and by writing for the press, etc. It is true that a majority of the professional men of our country, now in the heyday of life, admit the first principle of Phrenology, viz: that the brain is the organ of the mind, but deny that it consists of a congeries of organs, equal in number to the faculties of the soul, as manifested in the present life. That this should be the case, is accounted for by the fact that psychology, as taught by the metaphysicians of the old school, continues to be taught in most, if not all, of our schools, from the university to the high-school; and thus the errors of those metaphysicians, who reasoned with no other basis but their consciousness, have been perpetuated. Moreover, the teachers of Christianity have feared that the phrenological theory would come in collision with the theory of some theologians who have not stopped to consider that the truths of Revelation and science must act in harmony. All this only corroborates what Dr. Rush said, viz: "Truth, whose first efforts should always be vigorous and alone, is often obliged to lean for support upon the hand of time."

But we do not lack the stimulus of great names to show the importance of phrenological truth and mark the era of its progress. When George Combe, the learned jurist of Scotland, author of "The Constitution of Man," and a friend of the human race, was in the United States giving lectures on Phrenology, he formed an acquaintance with Horace Mann, and they proved to be congenial spirits. In speaking of Mr. Combe, Mr. Mann says: "I have never enjoyed, and at the same time profited, so much by the society of

any individual with whom I have met as by that of George Combe; so that as a traveler, I can hardly have a greater misfortune than to miss him." At another time, in speaking of Mr. Combe, he says: "He seems to me to understand, far better than any other man I ever saw, the principles on which the human race has been formed, and by following which, their most sure and rapid advancement would be secured. I have never been acquainted with a mind which handled such great subjects with such ease, and, as it appears to me, with such justness. He has constantly gratified my strongest faculties. The world knows him not. In the next century, I have no doubt, he will be looked back upon as the greatest man of the present. But he has a mind fitted for this extensive range. I have no doubt it would cause him great pain, were he to believe that his name would never emerge into celebrity; but he has an extent of thought, by which the next age is now present to him, and he sees that his persecuted and contemned views will then be triumphant; and, with that assurance, he can forego contemporary applause."

It will be remembered that this was written in 1840, and the progress of phrenological truth, since that time, has been slow, but sure. It has gained a footing among the common people, which in the near future will place it permanently in the archives of religious, political, philosophical, and humanitarian works. Literature and science will be its handmaids, and benevolence, justice, and humanity will crown it with a diadem of light and glory.

Horace Mann, by the aid of Phrenology, laid the foundation of a system of education in Massachusetts, which now is the praise of the whole civilized world; and shows to the unprejudiced mind, the utility of Phrenology in advancing a true system of instruction, as well as the progress that this science has made during the past forty years.

P. L. BUELL.

WHAT I KNOW ABOUT MOSQUITOES.

MANY people hold with Josh Billings that this interesting creature is of no imaginable use. Some, however, find a degree of utility in the creature which they define as keeping people from taking up their abode in the swamps. I have my doubts whether that is not actually a demerit. I know many persons who, I think, would benefit their kind by going in the most malarial period of the year to live in a swamp. That period is just when mosquitoes are thickest and most earnest in their efforts.

Five years' residence in this State (New Jersey), on the margin of the meadows, have enabled me to make several observations on the habits of this familiar associate, which I will commit to writing, that I may, on the principle elaborately set forth by Mr. Frederick Harrison, enjoy an immortality after I am dead and vanished into spiritual nonentity. When a boy, and living in Western New York, I supposed that I knew pretty much all about mosquitoes that was worth knowing. There they thronged the woodlands, came home with the cows, and nightly visited the sleeping apartments. They were veritable Bacchanites; they observed the *Nyktelia*, or *Pannychis*, and if they did not, like the prophets of Baal, also perform the charic dance (1 Kings xviii. 26), it was because wings enabled them to make the sacred circles by flying.

My first interview with the New Jersey mosquito took place in the city of Elizabeth in 1864. I was on my way as a correspondent to the Democratic National Convention in Chicago, and was accidentally detained by a mistake in regard to two railroads, both having the one name *Central*. While reading the *Atlantic* a burning sensation on my arm aroused my attention; and, lo! four mosquitoes had alighted, each of which had made way through four thicknesses of cloth, one linen, one woolen, and two cotton; and I almost regretted that I was not a pachyderm. They were very tame; I dislodged them and they did not scare

worth a cent, but resumed their place and industry.

Since that I learned, that when the Swedes endeavored to settle this State, they established two forts; but the mosquitoes compelled them to abandon one of them. I regret it. If New Jersey had been peopled by more Swedes, Finns, and Danes, her importance in the American Union would have been vastly greater. They were the old-time Yankees of Europe; and their blood is the best now on this Continent.

The proboscis of a mosquito is like eloquence, incisive. It is also tubular like the fang of a rattlesnake, and injects into the wound it makes a poisonous fluid not greatly different in character from that supplied by that ophidian; only the dose is infinitesimal. The blood thus infected will not coagulate; it sucks out easier. The poison is acid; hence mosquito-bites readily succumb to any alkali, and, indeed, I find water a sufficient restorative. Camphor, carbolic acid with glycerine, and spirits of ammonia are favorite remedies. Pennyroyal is said to drive mosquitoes away; perhaps so, but I am skeptical.

As a scientific study, the great strength of the mosquito is exhibited. It may be called the strong point. The generic name is *Culex*, the Latin for gnat. It is not viciporous, but "comes in by the hatch-way," not unlike a burglar. Nor is it born to the condition of life in which we find it. Its habits are analogous to those of the frog. The maternal mosquito deposits a myriad of ova in still or stagnant water. Swamps afford her this facility, but she will take up with any pool or puddle. Cisterns and troughs holding rain-water, standing stagnant for future drinking or washing purposes, are her delight. I have observed swarms of "wigglers" in such places, and admired the three little spots on their back. I have also noticed their great activity, not imagining, however, that each one had a history.

The wiggler is the real scavenger-teacher. It is very greedy, and devours waste, foul, and unwholesome substances that it finds in its childhood's home. Bad as is miasma from stagnant water, unfit as such water is for human use, it may be rendered wholesome by these juvenile mosquitoes. Few insects, perhaps, are more useful to mankind. It is really hard to imagine how we could do without them.

In a few days the wiggler is agitated by the instincts and ambitions of adult life. Like the tadpole, it becomes conscious of a higher nature. Climbing from the water, often by the aid of a spear of grass, a floating stick, or a membrane of scum, it dries itself in a moment; wings appear; it soars into a new element and a new life—a mosquito! Imagine the pride that must dilate its little bosom as it perceives its newly-developed powers to soar into an unlimited universe. This is evolution.

I can not pursue the story of its adventures, its loves, and disappointments. Its life in the new mode of existence is, indeed, but as a hand's breadth. It makes up for this as all "lower animals" and lower tribes do, by great activity and fecundity. We need never fear an extermination. The suggestions of Malthus are not heeded; they all marry and have large families. After a brief period the mosquito forsakes the region of its nativity, and tries "green fields and pastures new." It retains, however, its tastes for arboreal lurking-places. We may be sure, in late summer and autumn, to find it, wherever there is dense foliage, whether trees, shrubs, or herbage. A patch of weeds is sure to be full. It shuns the bright sunshine, but is attracted by "the midnight lamp" and "a dim, religious light."

The masculine mosquito is of a quiet, retiring character. I judge that he is a kind of drone. He seems to disturb no one; but makes luscious food for swallows, bats, and even toads. But my recollections are not so kind in regard to the "gentle sex." The female mosquito

does all the biting. It is noticeable that this analogy extends farther. The female emmet is fearfully belligerent; the female bee is the only one that stings. About all insect pests that annoy us seem to belong to that "other half" of creation. I have sometimes ventured a guess as to whether the belligerent disposition, or, perhaps, I should say, the aggressive, followed a similar law in *higher* races. But that is "a great moral question," and must not divert attention from the more important matter under consideration.

The transcendent usefulness of the mosquito must be acknowledged. The insect is a scavenger, purifying our pools and swamps; and when its work is done then it goes elsewhere to die and decompose. Generally a few days constitute its term of winged existence; yet it will stiffen with the frost, lie apparently dead for days, weeks, and months; then thaw out in warm days and go about as though nothing had happened. Its social habits are somewhat like those of the dog. I have noticed large swarms following me for great distances in spring-time, without any felonious attempt; but in summer and autumn it is hard to escape so fortunately. Every one then has "an eye for business." I could wish their love for outdoor life to be more intense; but I suppose that people who "camp out" never think that a mosquito cares to enter a house. I cheerfully bear testimony to their many virtues; still I confess with Thomas Campbell—

"'Tis distance lends enchantment to the view."

ALEXANDER WILDER.

ROSEVILLE, N. J.

HOWEVER high we may build the wall
 Between our lives and the Father's care,
 There shineth a star that will pierce it all,
 And brighten the desert of man's despair.
 And Faith will come with her tear-wet eyes,
 Her soft hand laid on the iron gate,
 And peace drop down from the bended skies
 To the souls that labor and love and wait.

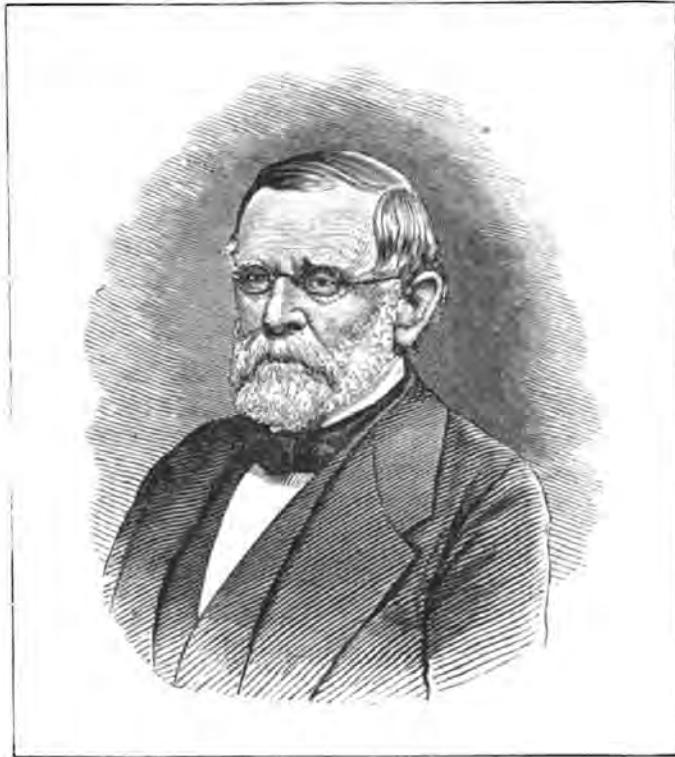
E. C. T.

CHARLES C. FROST,

SHOEMAKER AND SAVANT.

THE portrait, from which we draw our inferences, indicates a man of harmony and balance; one who is of fine quality, with good health, patience, and endurance. He evidently inherits from the mother his features and his physiological conditions. The former are com-

artist or student; not an artist in the sense of imagination and display, but of fine criticism, discrimination, and patience to elaborate that which he undertook. He would have made a very fine steel-engraver; his Ideality was large enough to give a sense of the beautiful



paratively small, and the whole countenance indicates general delicacy of structure. The head is high from the opening of the ear and eye, showing a massive top-brain, and gives the idea that his feelings were under the domination of the higher sentiments and intellect, rather than of the propensities. The sidehead appears to be rather flat, and we judge the head not to have been very broad in the region of the selfish propensities. His was the organization of the

and perfect; his large Order gave him a systematizing tendency, a desire to organize and classify; his large Comparison made him very discriminative and critical; and his strong Causality qualified him to study relations and combinations. He evidently had a good memory for facts, places, and things. His Language was fairly developed, and his talent to write would be better than that of speaking. This is a good head for a teacher. He had a decided inclination to philos-

ophize; a strong sense of the elegant and beautiful; power of perseverance and application, and the desire to finish whatever he set about. The head, from the opening of the ear forward, is massive, showing a strong tendency to intellectual effort, and while he was a practical and critical observer, he was also a solid and massive thinker. If he could have been placed in channels of culture he would have taken on general scholarship, and might have been an ornament in any department of investigation. He would have been quite as likely to have followed theology as botany, but, limited by circumstances to a small field of observation, and being when a youth without opportunities for broad education, his mind took a special direction, and though we can see in him particular adaptation to scientific employments, and especially the profession of medicine, he would doubtless have been heard of as a general writer and speaker on themes relating to morals and the philosophy of life, had opportunities brought him into so wide and high a plane of operations.

This gentleman died in March last, at his residence in Brattleboro, Vermont. Although a modest, retiring man, entirely inconspicuous amid the world's masses, he was intellectually among the foremost, and in the particular branch of science which he had devotedly studied during nearly half his life, he was probably the peer of any man of the day. From materials placed at our disposal by the Rev. Lucius Holmes, we glean the following synopsis of Mr. Frost's useful career.

He was born in Brattleboro, Nov. 11, 1805. His father before him was a shoemaker, the first who ever opened a store in Brattleboro, and he learned the

trade, and pursued it as his calling to the close of life. He early developed a wonderful aptitude for mathematics and the physical sciences; at the age of nineteen had mastered Hutton's whole course, and from that went on in the study of astronomical mathematics, took up chemistry, and learned very much of natural sciences in every department, all the while, however, attending to his business as a shoemaker.

How he became interested in the study of botany is worth relating, as it contains an item of reflection for those who, in their earnest pursuit of knowledge, forget to observe the laws of health. He became dyspeptic to such a degree, that he was so weak he could scarcely stand upon his feet, and he came to New York and consulted an eminent physician, who told him candidly that he could do nothing for him, but said, "You can do very much for yourself." Observing that he was fond of flowers, he advised his patient to walk one hour in the morning and one in the evening, looking for flowers. He followed the suggestion, and his health rapidly improved. He ordered Fries' book of botany from London, and paid \$12 for it, not knowing till he saw it that it was written in Latin, of which tongue he was ignorant. He bought a Latin grammar, and in six months could read his new book with facility. In the same manner he acquired German and French.

In course of time his early adopted rule of giving fixed hours to his studies in the morning and evening, and of catching up a book whenever there was a moment to spare, made him profoundly versed, not only in botany and entomology, but also in astronomy, chemistry, geology, and meteorology, and he was a recognized authority in Europe in some of those departments. In fact, it was said that Mr. Frost had more friends among the educated people of Europe than he had in his native village; for in Brattleboro he was better known as a dealer in boots and shoes than as a savant, although there were a number of intelligent and well-

read men who found it always a pleasure and a profit to drop in at his store for an hour's conversation. The degree of A.M. was conferred upon him by both Dartmouth and Middlebury Colleges.

It doubtless seems remarkable that so learned a man could have contented himself in the prosecution of a plain, monotonous business for forty-nine years. His own answer to a question prompted by this impression was—

"Why, it is the business of my life. Whatever I have acquired of science came in the search of health and mental entertainment. *Science* is not my profession—*shoe-making is.*"

He was not ambitious to be known as learned; rarely did he publish a paper on any subject, but attended to his store, and read and studied in his wide range of scientific investigation because he found enjoyment therein. What he acquired was the result of systematic application and inquiry, and in this respect his career is a shining example to youth who would be great.

He was through all a Christian man, attentive to the services and work of the church society with which he was connected for thirty-five years. In this respect he offers a marked contrast with the indifference to religious things exhibited by many prominent scientific teachers. The minister of his church, in the course of a sermon preached at his funeral, appreciatively said:

"In a word, Mr. Frost was a *pure scientist*, for he studied for the sake of the *knowing*, not the *showing*. It was sincere and intense desire to know that kept him for so many years over the great Nature Bible, and the little commentaries which men have made upon it. He loved the simple, innocent flowers of the hills and fields, and often, even in old age, he has risen early to gather them moist from their dewy bath. Now, we believe, he is in the heavenly fields and among the lilies that grow by the still waters. He studied the gray and seamed rocks of our Vermont hills, and they told their old, old story to the

eager questioner. Now, we believe, he has seen the Great World-Builder, who laid under chaos the corner-stone of this and every universe.

"He loved and talked of his lichens and mosses as his little children, and they seem to me to be, in many respects, a fitting emblem of his life. . . .

"It seems to me that the great results which Mr. Frost achieved as a scholarly scientist, voice the fact that time well improved will yield a large return. To the young men and women of to-day the example of such a life-method as Mr. Frost's is eminently valuable. Minutes make hours, hours days, and days years. If we improve the moments we shall round out the hours and days and years with honest and satisfactory toil. Genius and talent are great gifts, but of themselves accomplish little or nothing. Mr. Frost reached his scholarly eminence mainly by hard study in the early morn and late night. By improving the spare moments of his life he reached an elevation whereon he might deservedly have rested in earned enjoyment.

"Again: Mr. Frost's life shows clearly that the force of a steady purpose is more effective than the fire of ambition. Ruskin says that he who truly progresses does not see dreams, but realities. Mr. Frost never followed the vain images of a gloomy ambition, but made one mastered fact the stepping-stone to another. Into the retirement of his studies came flattering offers of professorships, and the announcement of conferred honorary degrees. The professor's chair was politely declined, and the degrees not esteemed worth the usual fee for their forwarding."

HOW SHALL I BECOME RICH? This is what the great majority of young men are anxious about at the present day, little thinking of the moral and physical issues getting rich involves. Were we asked by an ambitious youngling the question, we could scarcely make a better reply than that given by a Western writer, thus:

"You can probably be rich, my son, if

you will be. If you make up your mind now that you will be a rich man, and stick to it, there is very little doubt that you will be very wealthy, tolerably mean, loved a little, hated a great deal, have a big funeral, be blessed by the relatives to whom you leave the most, reviled by those to whom you leave less, and vilified by those to whom you leave nothing. But you must pay for it, my son. Wealth is an expensive thing. It costs all it is worth.

If you want to be worth a million dollars, it will cost you just a million dollars to get it. Broken friendships, intellectual starvation, loss of social enjoyment, deprivation of generous impulses, the smothering of manly aspirations, a limited wardrobe and a scanty table, a lonely home—because you fear a lovely wife and a beautiful home would be expensive—a hatred of the heathen, a dread of

the contribution-box, a haunting fear of the Woman's Aid Society, a fretful dislike of poor people because they won't keep their misery out of your sight, a little sham benevolence that is worse than none; oh, you can be rich, young man, if you are willing to pay the price. Any man can get rich who doesn't think it too expensive. True, you may be rich and be a man among men, noble and Christian, and grand and true, serving God and blessing humanity, but that will be in spite of your wealth, and not as a result of it. It will be because you always were that kind of a man. But if you want to be rich merely to be rich, if that is the breadth and height of your ambition, you can be rich if you will pay the price. And when you are rich, my son, call around at this office and pay for this advice. We will let the interest compound from this date."

ST. AUGUSTINE.

AN allusion to Florida suggests incidents of more than three hundred years ago, when the Spanish adventurer sought conquest and gold in the countries of America bordering on the Gulf of Mexico, and left traces here and there of his medieval civilization. Such an allusion, too, brings with it the perfume of orange-blossoms and the soft, enervating breezes of a tropical clime.

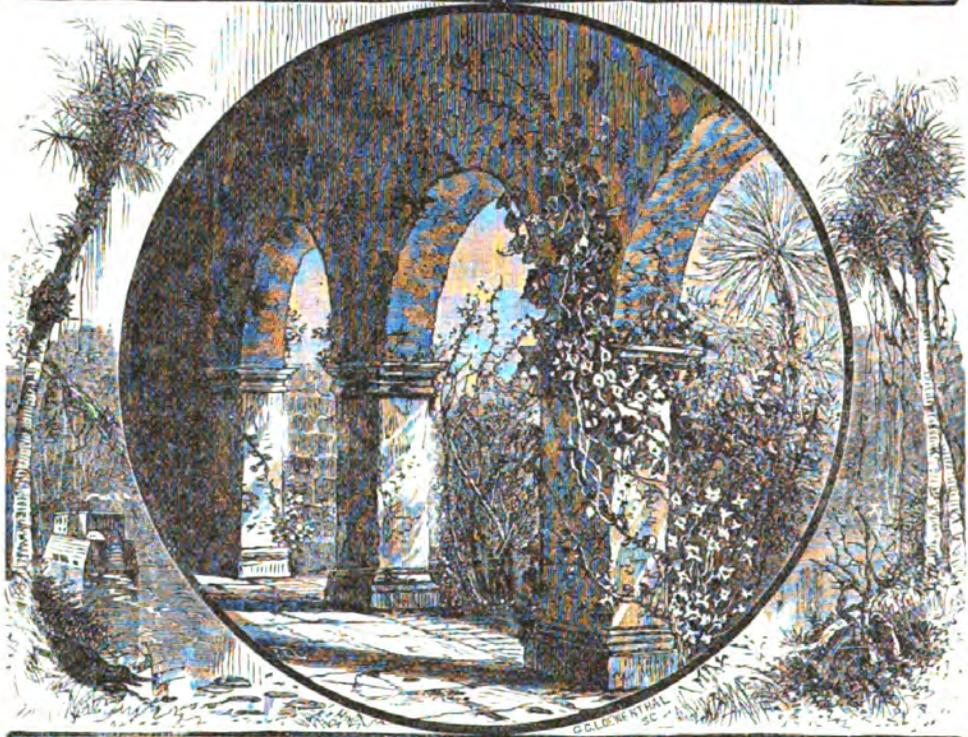
Northern settlement and enterprise have done much toward converting the Florida country into a region available for all the purposes of traffic, and the stories told in our school-boy days of untraversed forests and impenetrable swamps which covered nearly the whole State, and made it entirely unfit as a dwelling-place for man, have been dismissed to the realm of fable. There, however, remain certain monumental records which have a romantic attraction for the traveler. Chief among these is St. Augustine, accounted as the oldest town in the United States. Here, it is said, Ponce de

Leon landed in 1512, vainly endeavoring to find in the primeval forest of Florida that stream which would impart perpetual youth to him who drank its waters. Then three or four hundred Huguenots from France sought refuge there from persecution, and had already made good progress toward a permanent settlement when a band of Spaniards landed, and in the name of the Inquisition fell upon the peaceful Frenchmen and ruthlessly murdered them. Here was erected a fortress by these blood-hounds for the purpose of establishing Spanish authority. This was about 1565, and during the next two hundred years the region had in turn Spanish, British, French, and Indian rulers—a history of discord, invasion, and bloodshed, indeed, that will almost vie for change with the history of some of the old German or Italian cities.

The old fort, which has undergone transformations in the course of centuries, is now known as Fort Marion, and in it hangs the old Spanish coat-of-arms.

In the accompanying engraving are representations of the sea-coast as it appears to the visitor, and some old arches

the ancient Spanish wall, which extended across the peninsula to protect the city on the north, is in ruins.



SCENES IN FLORIDA: ON THE COAST—OLD ARCHES—OLD GATEWAY AND WALL.

as well as the old entrance gate to St. Augustine, the massive side pillars of which are in good preservation, while

St. Augustine occupies a peninsula formed by the Matanzas and the St. Sebastian Rivers. Along the east front of

the city is a sea-wall four feet wide and extending about a mile. This was built by the United States Government at a cost of \$100,000, between 1837 and 1842; it affords a pleasant promenade in the moonlight for the inhabitants. The Franciscan

Convent, now used as barracks; the custom-house, also an old building; the Cathedral, which was built in 1793; and the old fortress, are among the most interesting objects to the visitor. D.

PHRENOLOGY MISINTERPRETED.

"Balance of parts and strength of wholes."

FROM a scientific point of view nothing seems more inconsistent than the position of many educated and professional men in regard to Phrenology.

The opponents of the system established by Gall invariably measure a man when living by the prominence of his forehead, and when dead by the size and weight of his brain. And yet they are quite loth to acknowledge that this brain practically has much to do with a man's ability.

They will, however, to a certain extent, admit that the intellectual power of man lies in the brain; and they have a notion that a large brain should go with what is called a great mind. Poetically and figuratively they like to speak of "large brains," "colossal heads," "commanding brows," and of the "intellectual foreheads" of certain noted persons. Thus far, one would think that they were believers in the system established by Gall and expounded by Spurzheim, Combe, Fowler, Wells, and others; but, no, they soon give you to understand that you must not take it for granted, because they have thus spoken, that they have the least faith in Phrenology. You must not presume too much by such expressions from them, for they are very ready—and almost too much so—to undeceive you. They delight in using these fine expressions, but have little faith in what would naturally be inferred as their belief in the only system that deals practically with them and treats them in a scientific manner.

Let two persons, one with a high and prominent forehead and the other with an apparently low forehead, enter a crowded hall and walk up the center

aisle to the speakers' platform, and note the admiration indicated for the one and the indifference and almost contempt for the other.

None will be so carried away with the "intellectual look" of the one and repulsed by the inferior look of the other as the intellectual person who talks about "brain power," "fine foreheads," and "noble brows." If these people who are at present non-believers in Phrenology and these subjects could stop here, Phrenology would undoubtedly receive many new converts—but they can not (for *their* reasons)—neither can the world, the phrenologist in particular.

Now let these two men advance to the stage and prepare to speak. From the "intellectual brow" we have the first speech and a commonplace, dry speech it is, making the whole audience feel as though their seats were most uncomfortable. They are sorry they came to see such an exhibition as this man is making of himself. He finally sits down and they are glad of it. They look at their watches and find that he has been speaking almost twenty minutes; it seemed like two hours. They wonder what the other man will say and wish that he could in some way be induced to close the meeting. The second man rises. In a few pleasant and apt words he changes the feeling of the whole audience. He proceeds. The audience no longer think of their seats, their eyes become fixed more and more upon the speaker. Now he creates a wild burst of applause by eloquently rounding a fine sentence with reference to some grand moral idea or noble act;—now he convulses them with

laughter by the humorous presentation of his subject or the ridiculous position of his adversary; or he makes the blood flush to their faces with indignation for some moral outrage upon society. The audience listen with the utmost attention. He leads them on playing upon the different chords of their nature which respond in more than mere pleasing approbation. He leads them with his flow of wisdom and good sense up to his grand climax; and ere they are aware, he is about to take his seat—thinking that he had said enough—

Cries of "Go on!" "Go on!" come from the whole house. He takes out his watch and good-naturedly remarks that "It is getting late," he "would not detain them longer." "Go on!" "Go on!" comes the cry with renewed vigor from all over the house—from the wise and learned as well as from the young and commonplace.

His speech is a treat to all—to the intellectual as well as to the average mind. They are not thinking of his forehead now. He has already been speaking an hour and a half. They know it is late, yet they cry, "Go on!" He continues for fifteen or twenty minutes longer, when he closes his remarks and pleasantly tells them that he would gladly continue but that his practical nature tells him that he must stop—not only for his own good, but more especially for theirs.

On going out of the hall, the phrenologist who has been a quiet listener and made his mental notes of the occasion, falls in with one of the intellectual non-believers of his hobby. The non-believer is now very combative and quite ready to make stinging comments then and there. "Don't tell me any more about the high foreheads, and large heads, etc.; just compare these two men we have heard to-night. From your intellectual, high-headed man we got nonsense; from the low-browed man we got the best of wisdom." The phrenologist does not then and there care to enter upon a conversation that requires keen thought and attentive ears. He says little but quiet-

ly remarks: "I think that your first judgment passed on the two men was as much out of the way as is now your second or after-judgment—please look at the two men as wholes and not as parts—look at their whole make-up."

But ere he has chance to say all he would they must separate for the night. Some rougher, yet good-natured fellow puts in a witty remark about "that bullet head beating the Apollo all to thunder! Where are you now with your large heads and all that?" The result is a hearty laugh of approbation for the opponent of Phrenology and against the phrenologist. He has little "show" there.

Time passes and with it is obliterated from the minds of the many the impressions of this night in regard to these two men.

The high-forehead man has the advantage of the best position in society. He was born to a position; was brought up and educated in a "regular" way, and in due course of time succeeded to a high and honorable position—a position which, if left to himself, he never would have attained unto. He is a good man, highly respected, and looked up to as authority in regard to certain rather commonplace matters of routine in life. He is a good-natured, easy-going man, but very strict about the minor details of life, such as bowing correctly, observing certain cast-iron rules of etiquette—all of which he regards as characteristic of greatness.

The other man through the misfortune of his parents received few early advantages. He fought his way up to eminence. The mere etiquette of society, beyond being kind and gentlemanly, did not trouble him much. His politeness was the natural instinct of kindness, rather than adherence to a code, that must be conformed to, in order to be acknowledged and accepted as "a well-bred" man. This being the case, he was kind and polite to all, and so through the channels of nature, and not through mere form or art. After a while, these two men die, and certain scientific men, or rather men of nar-

row scientific views, are at once interested in obtaining their brains for the purpose of weighing them. They don't seem to care for the skulls, unless it be merely to measure their circumference. They measure and weigh the brains, and to their great delight discover that the brain of the high-forehead man weighs the most by little over an ounce. He, therefore, had the greatest mind; at least, so far as they now think, notwithstanding they held such different opinions of the two men while alive. And in this respect they do not seem to regard the weight of the body—that with them is quite non-essential in the case. They don't seem to see the absurdity of this superficial act and the conclusions drawn therefrom. It may be well enough to weigh a man's brain after death, but if we are really interested in obtaining information of any scientific value, we want to do more than this. Then the weight of a man's brain in death, when necessarily the greater part of the blood, if not all of it, must be removed, seems most absurd, that is, if we would thereby claim any superior intellectual ability; for what might have been the heaviest brain in life might not be the heaviest in death when the blood was changed and removed. This mere weighing and measuring the brain in death is a most absurd and superficial test of a man's ability in life. For weight simply depends upon the size and not the texture. We might as well weigh two galvanic batteries and say that the heavier was the most powerful, for any man of sense must know that it is not mere size that makes strength in such things; and the human brain nearer resembles a battery than anything else we know of in the arts.

The phrenologist is interested in the weight of the brain as well as the opponents of Phrenology, but with him this by itself is a small matter. If he were called upon to give his opinion of the strength or power of a battery he would not merely inspect its size and report upon that, for science—facts that are open to all—teaches him that a battery of a cubic foot may be more powerful than one of double

the size. He will not merely regard size, but will examine the texture of the metallic surface exposed to the action of the acid. If the plates are simply a few large, thick pieces of metal, there will not be as much surface exposed to the action of the acid as if the plates were divided into thinner pieces.

On this principle the phrenologist is not merely interested in the weight of the brain, but in the texture of it—its fineness or coarseness of quality—and more than this, is he interested in its shape and the power of the body to maintain it. If an expert is called on to testify or to give his opinion as to the relative merits of two steam vessels he is not satisfied merely to see that one has the sharpest and best bow. For experience has taught him that that would be no test at all. He will examine the whole "run" or sides, bottom and stern, for these are as essential as the bow. So a phrenologist not only looks at a man's brow, but is careful to examine his side and back head. After taking a careful view outside, in examining the vessel, the expert makes an examination of the material of which the craft is built, whether it be oak or pine, iron or steel. He next examines the power. One vessel may have a powerful engine, but a boiler by far too small and weak for it, while the other may have an engine of inferior size, but its boiler may be of the best quality and of a superior size. So some men may have better bodies than others. One may have a fine mental organization, but not sufficient strength of body to support it in laborious action, while another may have an inferior mind, but a body wherein all the members act with strength and harmony. One man may have a superior forehead while he has a most inferior side and back head.

We see the same idea in the relative proportions of animals. The experienced horse jockey does not choose his horse on any such principles as these people pass judgment upon a man. He is not led away by any one point of excellence; he examines a horse well in all his parts and decides accordingly.

In our Battery, during the war, we had a good illustration of this forming a favorable opinion of a horse, that bore a relation to a man, with a high and noble brow. A new horse was received from the corral. He was a most noble-looking animal—built more like a lion than a horse—large, powerful head, neck, and fore-shoulders. To the most of the men he seemed a prize and most all wanted him. He was certainly a noble-looking beast, at least if one did not see too far into his general make-up. The man who obtained him to drive thought he had a prize and he was given an important position in the team.

A few weeks after this the spring campaign of 1865 opened. Horses and men were called upon to exert themselves to the utmost in the hard task of war. Lee was driven from his long-held stronghold about Richmond and Petersburg.

On the morning of the 2d of April began the arduous pursuit over the most trying roads. The ruts were as deep as the hubs would allow; the wheels rolled as much on the hubs as on the rims. Every now and then, a team was stuck in the mud. It was trying to men and horses to make head-way along such roads.

There was much faith in this noble-looking horse to do a superior part in extricating our gun carriages from the mud-holes of a Virginia soil, but this faith was not well founded. This prized animal was one of the first to give out and had to be abandoned by the roadside; simply for the reason that he was not well built, nor well balanced.

It was a lesson to me in regard to horses. No good judge of horses would have chosen such a horse, and the chances are that the man who owned him was very glad to get him off his hands.

The great maxim of the phrenologist is, "Other things being equal, size indicates power," but it seems a most difficult statement to make people understand. They are so blinded or over-awed by mere size that they neglect to bear in mind the full guiding point of this pertinent saying and rule of the phrenologist.

In passing judgment upon a man we want to look not only to the height of the forehead, but to the width, and to the form of the whole head, and to the ability of the body to support it.

Then there is nothing so deceiving in this matter as the relation that the hair bears to the outline of form. In one man the hair grows low down on the forehead while in another the line of the hair is carried far back, either naturally or by the person being bald. So in order to pass a fair judgment in regard to the size of the fore part of a man's brain we must invariably see him in profile and measure the head from the center point of the ear, and not be satisfied with a mere front-view, which, as the artists would say, "fore-shortens"—giving the appearance of great height of forehead when a practical profile view will not reveal anything extraordinary as to height of brow.

Then in regard to weighing the brain, it is all-important that the size of the body be taken into consideration and the health of the person. To ignore these things and to simply weigh the brain without relation to the other parts which influence its weight, is most absurd and no criterion whatever of the relative intellectual capacity of the brain.

In man as in all other branches of nature, whether animate or inanimate, and in art as well as in nature, we want, in order to judge rightly, to make ourselves familiar not only with one part or branch of a subject, but with the whole and the relative balance or proportion of the subdivisions or parts which go to form the whole. We need to observe the quality as well as the quantity. Then we must not neglect to study with care the balance of parts, for unless the parts are well balanced the mere superior and over-strength of one part may be detrimental to the strength of the whole.

In this matter, as a guide to correct judgment in all things, from the lowest to the highest—in art and in nature—in all grades even unto the intellectual part of man and all that makes him the high-

est of all created things, what we must understand is the balance of parts and strength of wholes. Let this be our guide and motto, and we will do much to ad-

vance nature and art to a commanding eminence and perfection.

ISAAC P. NOYES.

Washington, D. C.

THE CURSE OF CIVILIZATION.

NOT long since I heard a clergyman of much note call drink the curse of civilization.

This is no doubt true. Intemperance is the great curse of the human family—civilized, barbarous, or savage. But that drink is a greater curse to civilized nations than to savages is a statement which may well be questioned. It is a statement usually put forward by those who think that civilized people are overdoing their brains, and that some special brain help is needed, and that this help can be found in alcoholic drinks. Some of them call it a stimulant or aliment, and others a sedative. They say that it either nourishes the brain or puts it into such a condition that it can take nourishment, and if it does not give sleep directly, it puts it into such a condition that it can sleep and thus be recuperated. But then even this use leads to excess, and so this great brain activity, which is working out such wonderful results in this nineteenth century, is bringing its own destruction with it. Poor civilized human brain-owner! He is in a bad fix, isn't he? Wonder what he will do about it?

While he is cogitating this knotty problem, we will look around at his enterprising neighbors and see how alcoholic drinks are related to them. We may remark in passing that it does not seem to be those individuals most largely endowed with brains in our civilized communities who most frequently use the drink. If we could see the drinkers and the non-drinkers arrayed, one against the other, we think it would be a very instructive sight. On one side would be bar-tenders and rowdies, and hoodlums and loafers—in fact, we believe the great majority of the illiterate and very poor, with, of course, some who make pretensions to

literary and business ability, especially in the political and commercial line. But on the other side you find the majority of the learned professions—certainly the most of the teachers and the ministers are there—and a vast number of well-to-do farmers and business men, who, we will venture to say, use their brains quite as much as the politicians and the pettifogging lawyers that figure largely on the other side. It is true we do not have *all* the reporters and penny-a-liners on the right side. "It is said" that in the offices of some of the city dailies a large proportion of the editorial staff indulge, and we are disposed to credit the assertion. They are often subject to late hours, fatiguing work, and irregular and excessive demands, and when exhausted, instead of resting their tired nerves, they are rather prone to *silence* them with a dose of alcoholic poison and fancy it does them good because they do not feel so bad directly afterward. They have poisoned the organs of feeling, but they do not know that; they have not exercised their brains far enough to find that out. I suspect that just here originated the idea that the "immense brain work" of our civilization demands the help of alcoholic drinks. But we will leave these civilized nations with the remark that in spite of all this alcoholic poisoning they live, spread, increase, and improve, visibly, from decade to decade. There are those who think they do it in spite of the alcoholic liquors they use. Now let us see what alcoholic liquors do for uncivilized peoples.

Unfortunately we are not obliged to go far to find proofs; and we find to our amazement that, as we remarked in a recent article, "it mows them down with the certainty, if not with the swiftness, of pestilence." We believe no intelligent

person denies the fact that whisky has played by far the largest part in the destruction of the North American Indians. We do not know that the same amount has any worse effects, only that the savage is less defended against it. He gives himself up to it as long as he can get it to drink and asks no greater good. His small amount of intellect does not lead him to defend himself. His characteristic tendency is well expressed by one of the number, who said he wished for all the whisky in the world, and then all the tobacco in the world, and then more whisky. The relatives and friends of the drinker, instead of remaining sober and caring for him, come in for a share of the drink. To some extent the squaws drink, at least much more frequently than white women. And when drunk, Indians are quarrelsome and kill each other, and their all getting drunk together aggravates that difficulty greatly.

And the extent to which this is carried is astonishing, even among the partly civilized tribes, where they have begun to hold their own in point of numbers. It is almost impossible to keep even the converted Indians (with *very* few exceptions) from an occasional spree. Some have said that the Indian has a natural appetite for liquor. But they seldom, like civilized sots, imbibe all the time. They have their sprees and then stop, and yet they are very susceptible to the temptation to drink. It is the common practice of Government agents when taking Indians through New York, to have them put up at the Hygienic Hotel, so that they may be somewhat secure from temptation. It is possible that their "natural appetite" is born of tobacco, for they inherit the effects of that from uncounted generations.

If we go to the Sandwich Islands we find a frightful record. The population of 400,000 melted away to 150,000 in fifty years after their introduction to the use of liquors. The native tribes of New Zealand and of Australia and of Africa are disappearing with similar rapidity and from like causes. It is the liquor that does it. In common parlance, "they

melt away before the vices of civilization." So we see that the curse of civilization becomes doubly the curse of barbarism when it comes in contact with it. The barbarous tribes have their own intoxicants and use them as opportunity offers, but the supply is not constant and usually not strong. Here is the power of civilization. It provides as constant and as strong a supply as it does of other things for which there is a demand. Christian civilization enables man to resist to some extent the ready facilities which commercial civilization puts in his way. The barbarian and the savage can not or do not resist, and they are consumed by it. So if drink is the curse of the civilized, it is doubly and trebly the curse of the uncivilized.

The Mohammedans are often quoted as having made a more successful fight against drink than the Christians, and their case may be properly considered another branch of this same subject. We meet the objection frequently in this country, and our missionaries in Mohammedan countries meet it still more frequently. There it has been true that only foreigners—"Christians," the Mohammedan calls them—get drunk; so to get drunk is to "turn Christian." To us who know the saving power of true Christianity in changing the heart and subduing the appetites, to us who know that our temperance work is all the outgrowth of the highest type of Christian sentiment, this seems absurd enough. To some it seems that the Turk has the advantage of a real abstinence which the Christian has not; but properly we may compare the Turk to a child with his hands tied. His prophet definitely forbade him to use *wine*. Here are his words: "O true believers, surely wine and lots are an abomination, a snare of Satan, therefore avoid them. Satan seeketh to sow dissension and hatred by wine and lots; will ye not, therefore, abstain from them?" (Koran, v. 7). It does not trouble the conscience of the Mohammedan much to get drunk on whisky or malt liquors, or rum or gin, or in North Africa on the native palm

wine, because, forsooth, these are not made from grapes; but wine and brandy are pollution, because by the interpretation which he puts upon the word "wine" in the prophet's injunction they mean the product of the vine. He abstains from pork for precisely the same reason. So it is not the getting drunk that is forbidden nor the self-indulgence, but the grape wine. Indeed he indulges freely in hashish and opium without fear of incurring the displeasure of the prophet or forfeiting his prospect of Paradise, where a large share of enjoyment will consist of sensual pleasures.

There is no doubt that the prohibition has been a definite advantage to the Turk; but being only a literal prohibition, it is destined to succumb to circumstances, to go down before the influx of a variety of alcoholic drinks which are not wine, and therefore are not forbidden. The Christian idea of temperance, on the other hand, is bound to be successful, because it is founded on a principle which adapts itself to all circumstances and rises to all conditions. It is not a dead letter, but a vital growth. Public opinion in our Christian land says that being addicted to opium is as bad as the use of alcoholic liquors. Tobacco is also beginning to come under the ban, and there are those who, recognizing evil and enslaving effects from the use of tea and coffee, renounce them also. Here is the difference between Mohammedan and Christian abstinence. The former is not true Temperance; it is simple prohibition of a single article. It is satisfied with the observance of the letter of the law—not to use wine. It uses intelligence and ingenuity to evade the law and indulge in the alcohol or the intoxicant in other shapes. Christian temperance seeks intelligence in order to keep even the unwritten law, to keep it in its spirit as well as its letter, in order to obtain from it the best results. How far it will go I do not know. *This* high aim I have already heard expressed: "To present your bodies a living sacrifice, holy and acceptable unto God, which is your reasonable service."

How like the pealing of a clear-toned bell that sentence sounds out through all the jargon of dispute, the pleadings for self-indulgence, the threatenings of the law, the anger of greed, the growlings of offended medical dignity, the hilarity of the hoodlum, the stupidity of the beer-monger, the brawls of the tavern, and the free fight of the whisky-shop. In fact, it is so clear and pitched so high, that I fancy only those have heard it who have in their habits begun to get above the broil and the babel. I think, however, it gives the key-note to those melting Gospel songs which sing the beginnings of Temperance into the hearts of many a one who had been well-nigh given over to work out his own destruction with greediness. I think, too, it owns relationship to that purity of right living which aims to keep the body in the best condition for all right and true service. And of these there are many, in this land of Christian civilization—many who begin to see the advantages of thus keeping the body, and the implied obligation to do so. If this is a part of Christian civilization, how can drink in any special sense be called the curse of civilization more than the curse of barbarism?

But that they are a proportionally greater curse does not follow if the temptation is offset by a proportionally greater intelligence and conscientiousness with regard to their use. So as we might expect, we find civilized communities, who, by various methods, are conquering this evil and putting it away from them, while in the uncivilized it conquers the people and does away with them. It is easy to see, then, that while it is indeed the greatest curse of civilization, it is a still greater curse to barbarism.

Only in this way we think, and we have hinted at it already. It is the prerogative of civilization to put you in the way of getting what you want in the quickest and most effective manner. We may not have thought of it before in just that way, but the reverse is often expressed. When you are in a place where you can not get what you want, you call it a wretched, out-of-

the-way place, "on the outskirts of civilization;" in short, a ready facility of supplying one's wants is an essential element of civilization, and if those wants happen to lie in the line of intoxicants, the appliances which supply other things to meet the demand, supply these. So it follows that drinks are much more easily obtained in what we call civilized communities, and if the demand for them is great they are much more abundant.

And now before dismissing this subject, please observe that the barbarian's remedy is simply prohibition. No dependence is to be placed on intelligent self-denial and this proves a miserable failure when brought face to face with the facilities afforded by civilization. Mohammed's prohibition is becoming a failure in their presence, though backed by the strongest religious inducements. The prohibitory law of Paradise proved a failure. Men wanted to be wise—they wanted to understand the reason of things. They were taken at their word, and though they have had to wade through seas of trouble to obtain it, they will probably yet find themselves on a firmer foundation than the mere discipline of a prohibitory law in Paradise would have placed them.

We believe that theologians are mostly agreed that the best type of a Christian under the present dispensation is a stronger man than Adam could ever have been. "And what the law could not do, being weak through the flesh, God sending His own Son in the likeness of sinful flesh and for sin condemned sin in the flesh."

These, we take it, are the relations of the law to the Gospel in Temperance work: the law would take away alcohol from you if it could; the Gospel would make you put it away intelligently of your own accord.

Where the despot can be found in this free country who can make a law and execute it in opposition to the will of the majority we know not. But where the majority will be developed who will eventually put it away and win their neighbors to a higher and purer life, by intelligence, by persuasion, by conviction, and by the ballot rightly used, we shall soon find out if we keep on with our Christian Temperance work; and Christian civilization shall eventually have the credit of banishing alcoholic liquors and all other intoxicants from its confines.

JULIA COLMAN.

FASHIONABLE GIFT-GIVING.

SOME time ago we read this sketch in the *Country Gentleman*. It contains certain practical suggestions which must command the approval of every reader:

"Well, what was to be done about it?"

"Mrs. Waters looked ruefully at the five-dollar bill reposing in solitary state in the inner compartment of her pocket-book, and pondered. In the first place, there were the muffs for the girls. It would take the whole of the five for them alone, to say nothing of the other things. Clearly, they must be given up, and she had been promising for so long a time to get them, too. It was too bad!

"Then, there was the scarf for Clara,

and the fur gauntlets for herself, and Mrs. Weeks' bill, and the balance on Kitty's birthday gift, and a dozen other things, all to be paid for out of that paltry five dollars. No wonder Mrs. Waters groaned as she contemplated these impossibilities!

"'Why, I could use fifty dollars this very day, and then not get half we need,' said she, despairingly, tapping her foot nervously on the fender. 'But I can't get any more from John, for he said when he gave me this bill this morning, that I must make it hold out as far as possible; he positively couldn't spare any more for a month to come; his bills were falling due, and he would be dunned to death,

for he could not collect anything that was coming to him. Oh, dear! it's a dreadful thing to be so stinted,' and the little rocking-chair on which she sat rocked back and forth excitedly.

"Mrs. Waters was by no means an extravagant woman, and her complaints and wishes on the morning in question should not be so construed. In fact, her husband proudly declared her to be the best wife in town. She was economical and industrious, as the neatly mended garments of her children often testified, while her worn-out dresses were transformed into stylish frocks for the little ones by her own deft fingers. A wasteful woman, or one less skilled in household management, never would have been able to 'keep up' so respectably in every particular as did Mrs. Waters. Perhaps pride and ambition had something to do with it, but if so, it was certainly a pardonable pride, and an ambition not wholly unworthy, which made this mother so careless of her own ease, and so cheerfully endure many sacrifices, that the family might always, as she expressed it, 'put the best foot foremost.'

"But she could not sit longer thinking over the best disposition of her finances. Time meant something in that busy household, and here it was almost ten o'clock, and the dusting to be done yet; and at any rate, thinking the matter over forever did not make the problem more clear, she argued.

"'I'll pay Mrs. Weeks what I owe, and the balance due Mr. Todd, and with what is left I'll try to get the scarf, and the gloves too, if they are not too dear. I'll have Kitty go at once and pay those two little bills, and then they'll be off my mind.'

"'Here, dear,' she said to her little daughter, 'put on your cloak and tippet, and go down to Mr. Todd's book-store, and give him \$1.50 I owe him. He will give you the change out of this bill, and from there you can go around to Mrs. Weeks, and pay her \$1.75 out of it, and bring back to me \$1.75 or, stay—it is such a long walk for you to both places

in the rain, you may pay Mr. Todd and then come directly home. I will send Clara to pay Mrs. Weeks, or will perhaps go myself this afternoon. Now, be careful and don't get in the mud; the walking is so bad on this side of the street, perhaps you had better go past Dr. Gross', it's nice and dry down that way. Ah, oh, goodness! that reminds me that I promised to send my dollar for the missionary society to Mrs. Gross early this week. It was due last month, but I couldn't possibly pay it, and it won't do to let it run on any longer. So, Kitty, you'll have to stop there and give her a dollar. I don't see that there's any other way,' and with a sigh at the remembrance of this unexpected debt, Mrs. Waters took her dusting cloth and went to work, soliloquizing: 'That ends the chance of buying Clara the scarf; but it would never have done to let that missionary money go unpaid. Mrs. Gross is president now, and they say she has made a rule that if any are in arrears she will read out their names before the whole society. I don't believe in anybody being so fierce, for my part!'

"She went on vigorously with her work, and had just completed her dusting when Kitty returned with the change, and a somewhat ambiguous message of thanks from Mrs. Gross that 'she was much obliged for the dollar, as it was better late than never,' which only elicited from Mrs. Waters a dry 'ahem!'

"'Well, Kitty,' she said, after a pause, 'you may run and play now. This afternoon you can go with Clara to pay Mrs. Weeks. I feel really ashamed to think how long I have kept that poor woman waiting for that trifling amount. She told me she needed it to pay on her winter's coal, and her rent would soon be due too, and she scarcely knew how she was going to get along. If we could afford to hire our sewing done, I would always employ her, for she seems so conscientious and anxious to please. I've been trying to interest some of the ladies in our set in her behalf and secure work for her.'

"And just here I must reveal to the

reader that this fact of being regarded as a member of this same 'set' to which she had just referred, was a source of infinite satisfaction to Mrs. Waters. It was a sort of panacea for the inconvenience of having a limited purse—a soothing balm for all life's annoyances. This coterie consisted of the wives of nearly all the well-to-do men of the village, as well as a few others of more slender means, whose geniality and general respectability, like that of our friend Mrs. Waters, gave them a footing.

"Counting over the money that Kitty had placed in her hand, she was in the act of dropping it into her purse when a peal from the door-bell announced an arrival.

"'Who can it be this drizzly day?' she ejaculated. 'I wonder what brings people out so early in the morning! I do hope it is no one to call on me, for I'd almost as soon see a sewing-machine man or a book agent coming, as a lady caller this time of day.'

"The visitor proved to be Mrs. Judge Jones, the acknowledged leader of the *ton* of Millville, who, after the usual exchange of compliments, apologized for her unseasonable call. 'Of course you have heard that we are going to lose Mrs. Wilcox,' she began, 'and I told some of our ladies that it wouldn't do to let her go away without making her a present. We have been talking of a nice water-set. What do you think of it?'

"Mrs. Waters was aghast. She was expected to contribute toward a silver water-pitcher, goblets, and salver! How could she confess to her fashionable friend that she had not a cent to give—that the little pitiful sum in her purse belonged to another, because she *owed* it to another? Fortunately for her, Mrs. Jones did not wait for a reply, but rattled glibly on. 'I have headed the list with \$5; Mrs. Gross and Mrs. Richards each gave me \$3, and Mrs. Martin, \$2; but what do you think? Mrs. Elgin would only contribute a dollar! I declare I wouldn't act as small and as mean as that for anything. I didn't dream she was so stingy, although I did hear once

that she wouldn't allow her hired help to eat butter. Well,' glancing over the list which she held in her hand, 'I've done pretty well for a stormy morning. I have \$14 already, and if you have \$5 to give it will help matters along nicely,' and she beamed a gracious smile on Mrs. Waters.

"Poor Mrs. Waters! To have turned away an importunate book agent or troublesome peddler, with the confession that she had no money or 'couldn't afford it,' was an easy task, but to acknowledge to Mrs. Judge Jones, above all persons, that she was too poor to aid in making this present, required an amount of moral courage of which she was not capable. Confused thoughts of Clara's shabby tippet, contrasted with visions of the bright new scarf she had been promised; the new gloves she herself needed; the child's magazine to which, for weeks past, Kitty had been begging her to subscribe; the recollection of the twenty-five cents she had reluctantly furnished last week for little Ralph to give to the fund gotten up to make his Sabbath-school teacher a Christmas gift; the dime given to Clara the week before for the same purpose; the remembrance of her own remark at the time, that it was nothing but 'give, give all you had,' and the consciousness that here sat Mrs. Jones, who never had known in all her life what it was to want for money, asking as sweetly for \$5 as though it were the merest trifle—all these thoughts, and a host more, fitted rapidly through her brain in a jumbled-up mass as she sat gazing at her visitor.

"'We are all to meet at Col. Wilcox's to present the gift the night before they leave for Florida,' pursued the lady, adjusting her damp ruffles as she spoke, 'and as we will have to get the water-set from the city, we must order it as soon as I am sure of all the money, and I believe you haven't yet told me what you will give; only, *please*, dear Mrs. Waters, don't follow Mrs. Elgin's example,' and she laughed heartily.

"Mrs. Waters' hand nervously went

into her dress pocket. 'She will go away and say uglier things about me than she has about Mrs. Elgin, if I refuse,' was her mental comment. 'It would look mean, too, I dare say, when I've always professed such friendship for Mrs. Wilcox—though, dear knows! Mrs. Wilcox could make me a present of a fifty-dollar gift better than I can afford to give fifty cents toward getting *her* one.' Then mustering up a smile, she said aloud: 'I'm somewhat short of money to-day. Where there are children there are so many calls on one's purse, you know,' and she smiled again as if to make her visitor fully understand that her contribution was a matter of course. 'But here are two dollars—all that I happen to have just now—if you choose to accept so small an amount!'

"'Accept it? Certainly, with thanks,' responded Mrs. Jones gaily, taking the proffered silver and dropping it into her own plethoric pocket-book. 'And now I must be off.'

"Mrs. Waters bowed adieu to the judge's wife with a smile on her lips, but a feeling at her heart akin to guilt.

"'What a coward I am,' she said, sinking into the nearest chair and covering her face with her hands. 'How can I ever face poor Mrs. Weeks and tell her again that she must wait?' And then, in a more energetic tone: 'It seems to me that the Millville people are running the "giving" business entirely into the ground lately. If a man moves out of town his entire circle of acquaintances feel bound forthwith to buy him a gold-headed cane, with all the donors' names inscribed on it, and have a big presentation speech, and have it reported in all the newspapers; or if a school-ma'am gets married, or a Sabbath-school teacher happens to have a birthday, or a married couple celebrate a wedding anniversary, heaven and earth must be moved to raise money to get them a silver-plated gimcrack of some sort! Even the children are infected with the mania; Clara and Kitty each must have a quarter at the end of every school term, to help

buy the teacher a brass napkin ring or cheap pickle castor. And to think of Mrs. Jones asking me for five dollars! I wonder if that woman thinks I'm made of gold? I ought just to have been independent, and told her frankly that I couldn't give her anything, and let her think what she pleased; and if the facts were known, I'll warrant that, with the exception of Mrs. Richards, not one of those ladies on that list but gave her money reluctantly. I'm ashamed to tell John about it. Men have just such trials, however, as well as women, for I've heard John say a score of times that he is often forced to contribute to objects that he knows he really can not without defrauding himself or his creditors, and that he has to do it or be considered mean-spirited. Dear me, if the secret history of many of the gold-watch and silver tea-set presentations that sound so imposing in the papers were written up too, I'm thinking that the background of how the money was raised would tarnish a good deal of their lustre.'

"'Mother's eyes are as red as if she'd been crying,' whispered Kitty to Clara that evening at supper, while little Ralph, in childish pity, feeling that something was wrong, slipped his hand caressingly into that of Mrs. Waters, and said:

"'I won't make a speck of noise to-night, mamma, if your head aches.'

"'Dear child!' thought she, 'head-ache is easier to endure than heartache.'

"The night appointed for the giving of the water-set duly arrived. The residence of the Wilcoxs' was surrounded, surprised, and taken possession of by a laughing party of ladies and gentlemen; cake and creams were ordered from a neighboring restaurant by the gallant colonel; the presentation speech was made in his most happy style by Judge Jones, and the whole affair pronounced 'a perfect success.' One person alone seemed sad and *distrail*. Between herself and all the gaiety and laughter, the shallow jokes and real witticisms, there came to Mrs. Waters the constantly recurring vision of a patient, pale-faced needle-woman, whose outstretched hand seemed to ask, *not* charity, but for that which was rightfully hers, and whose white lips seemed to say, 'You have sinned.'

HOME THE TRAINING PLACE FOR CHILDREN.

DEAR EDITORS, JOURNAL:—So rarely do you publish anything that I am not in sympathy with, I hope you will allow space in your columns for a few criticisms upon the article in your May number, entitled "A Society for Guiding Children." We are told by the writer that Blinton is a very pleasant place, but was once quite the opposite, being, before the society was organized, inhabited by boys who were left in idleness, who became an unbearable nuisance, . . . running about the streets, throwing stones at each other, . . . and often quarreling violently among themselves."

I would like to ask how those boys had been trained from their childhood? Had the parents commenced then to teach them the meaning of the words "mine and thine," would not human beings, cats, dogs, lamp-posts, etc., have escaped molestation?

We need not go to Blinton to see buildings in which every pane of glass is broken by rude boys. They are too common a sight in our cities and towns, as well as broken-down gates and defaced fences, certainly by boys who had never been taught the meaning of "mine and thine." Having always supposed that the marriage relation was instituted for the express purpose of an orderly home, the training of children being a chief element of that, and that parents alone were held responsible for this, the idea of a *society* for it struck me as quite a new departure. Would not the "ounce of prevention," proper training, be worth the "pound of cure" this "society" furnishes against their "ruffianism"?

I have a friend who, when she requires anything of her children and they refuse, or disobey orders, at once drops all work, however pressing, and follows up that command until obedience is secured. That same friend had a little girl, who was once tempted by a cousin of the mother's, a teacher from Boston, to disobedience. She had marveled at the child's loving observance of all commands,

and thought she would see if it would be the same in the mother's absence. They were at tea. Strawberries were on the table, and as the child had been ill the mother refused them to her. She stepped into another room for something, and at once the cousin, taking a spoonful from her plate, said, "Here, Sallie, taste of Lucy's."

With an astonished look she replied: "Mamma says no."

This was the *principle* of obedience, to my view the only obedience worth the name. The cousin was satisfied and said to the mother:

"If I could secure such obedience had I children, I should be more than satisfied."

Much of disobedience on the part of children is owing to the carelessness or indolence of parents. A mother is at some stitching or flouncing or reading, and looks up to issue an order, and instead of seeing whether it is obeyed, goes right on with her work, considering *that* of more importance than her child's well-being here and hereafter.

To me one of the saddest signs of our present civilization lies in the fact, that there is so little reverence for law, human or divine. An eminent preacher of our country has said: "We were trained with the rod; I train my children with sugar plums." Alas! and this "sugar plum" training is showing itself in our religion, schools, and homes. Where do we see that sturdiness of principle that characterized the "rod" age?

Not that I am an advocate of the rod, for rarely should it be used. In my own case I have found that shutting my children away from the family in their own room—never in a dark closet—resulted soonest in repentance and submission. Sometimes it would require a half hour, sometimes nearly a day, according to their varying dispositions. Their meals were sent to them, with the message that they could not come out until repentant.

I seem to hear some soft-hearted mother saying:

"I could never be so cruel. I love my children too well to make them so unhappy."

Yes, and I loved mine so well, that I went, sad-hearted, often weeping, about my duties, but I wanted God to love my children, and to see that by submission to my authority they came to reverence Him and obey His laws.

How often is the exclamation, "Boys will be boys," made the excuse for their destruction of their own and others' property! Who wonders that they destroy when the first thing put into their hands as a plaything is a whip, and they are told how to use it on the cat, or dog, or perhaps a sister? Oh, why not instead of developing the combative organs, seek to bring out benevolence, kindness, sympathy for others? I am a total unbeliever in the doctrine that a boy or girl, in order to be happy, has got to be always making others unhappy, or that in order to be *natural* they must be constantly noisy. Let them play, but teach them ever that others have rights as well as they.

But to go back to the "society." We are informed that from disagreeing—they seemed to have a great deal of that—about "flogging," they passed a law "that the children should be kept on their own grounds, unless accompanied by some grown-up person," that this "act provides that one man or woman should, each afternoon of every pleasant day, take the children out for a ramble, on their return from school."

Now, if these children had been taught the *principle* of obedience, would it have been necessary that a man or woman should have been detailed, as in the case of the poor insane people I often see pass the house, to guard them from trespassing? One man asked:

"How shall I keep my children from swinging on the gates?" "Give them a good licking," said one of the floggers.

"Give them something better to swing on," was answered, "and out of that grew the gymnasium."

Was not the question of that father, a

virtual admission that he had no control of his children? and the reply of the anti-flogger seems to embody the whole gist of modern teachings. *Buy* the child off. If he will swing on the gate, don't compel him to desist, but hire him with a gymnasium to obey.

I am glad that this society has done so much for the elevation of "drunken, profane, and idle men." Perhaps this *lumping* of responsibilities, works better with them than with those educated to believe that no society or union can take the place of parental responsibility.

However much we may deplore it, and however Communism may futilely attempt to make straight what is crooked, we must conclude from the whole tenor of Scripture, that He who made man and knows what is in him, sees that a certain amount of isolation from the mass is for his good. What are the facts? Take an army in camp, how soon do they approach barbarism! In large schools for boys, what watchfulness is necessary in order that they become not nuisances to the community. Ah, I've had my dreams of communities, have always had an admiration for the Shakers, but every added year convinces me that the community of the family is the only safe one. Even when Christ comes, "every man is to sit under his *own* vine and fig-tree." No "societies" even there to *lump* responsibilities.

Were I not fain to believe Blinton and its children purely an imaginary case, I should be deeply saddened that such ruffianism existed as to call for a combination to put it down. Though the society's age is stated, I'm going to hope my supposition true and that the author of "A Society for Guiding Children" has, in despair at the unruliness of the children in her town suggested this as a remedy. COUSIN CONSTANCE.

LIFT thy head, shake off thy sadness,
Never let the joy-bud chill;
If thou nurse each bud of gladness,
Gladness all thy life may fill.

(From the Danish.)

LYDIA M. MILLARD.



PHYSIOLOGICAL ANTITHESIS.

TRUTH is dual—is the combination of radically opposed ideas, the resultant from the correlation of antagonistic forces. To be able to believe contradictions; not to demand that the universe shall be one-sided for our easier comprehension thereof; or make our philosophy partisan, to agree with a line of half-aspects; this is the key-moral of observation and thought. Language, as it exists, is mostly an inheritance from pre-scientific times; has been modeled more into the unitary form suitable to the story-teller (for narration is the principal use made of language) than into the dual form necessary for the use of the scientist and thinker. Our language is so loose and indefinite, that in most branches of science it has been found necessary to invent a technology; is there none possible for physiologists?

The glaring defect of language is that in it we are forced by the fate of dramatic unity to regard the polarizations of a force (extremes of qualitative comparison) as forces or qualities differing in essence. It is the tendency of language to confound quantitative difference, terms of comparison, relatives of degree or volume, with prime substantives of quality. Vital force, for instance, we are obliged to compare by sub-vitality and its correlated term hyper-vitality, or disease and health; and these we get to consider as radically diverse ideas; losing sight of the fact that they are compared degrees

of the same dynamism; in short, we come to regard words as entities. Health means comparatively greater strength, happiness, and longevity, than disease. They are the positive and negative of vitality, and can never have any but a relative signification, yet are used as definite descriptive terms.

Leaving complaints of language and using such as comes to hand, we may say that disease is not an enemy to life—unless health is, for they are both in the same category; *the conditions that produce disease are the real enemy*; after they have done their work on the organism, all that is possible toward prolonging life is to prevent their recurrence and to allow the disease (natural process of cure or attempt thereat) to take its course.

All individual forms of life, whether called healthy or diseased, are alike the best possible efforts of the vital property to prolong its existence, the resultant movements from the meeting of external stimuli and internal vital impulses; and all functional and structural type-deviations, whether so-called healthy or diseased, have been shown to be alike the vital instinct endeavoring to preserve itself in new or unfavorable conditions.

But what do we mean by natural or favorable conditions, as compared to their logical opposites? Not contrasts of quality, but of degree. We find that we can not classify the conditions of life into

natural and unnatural, favorable and unfavorable—absolutely—but only comparatively. We can say of no external quality or force that it is absolutely favorable to life, but only relatively, and by help of its opposite—that is, the plus or minus of itself.

The relations of the living body to its surroundings may best be described as a harmonious conflict, an antagonism, within certain bounds (widely varying in individual cases) productive of strength, happiness, and duration of life; beyond those bounds tending to less strength, happiness, and shorter duration. Life is dual; consists half in harmony with its externals, half in conflict with them. A race may deteriorate by becoming too completely adapted to its conditions; and the type be changed and improved by being placed in new and unnatural conditions. Full life can not be maintained without regular alternations of condition, which, considered by themselves or too frequently recurring, must be considered unfavorable, such as hunger, fatigue, thermal extremes; in short, depletion by various modes, stopping short of the degree that would produce lasting injury. To be periodically injured, within due bounds, seems to be the necessity of life. It is an oscillation between opposing menaces of destruction. And that adaptation of the organism to its environment, which is with self-evidence declared to be the aim of all functional or structural variation from the type, is, in half truth, a tendency to harmonize with the surroundings; but in full truth is the attempt of the organism to equip itself for that struggle against external influences which life is, and which within certain limits is health: beyond them, disease. Evolution, by variation from the type in response to novel influences, rests, like the evolution most uniform through many generations, on the instinctive motive, *adaptation of the whole animal economy to the work of keeping up as long as possible the vibration between unfavorable impactions from without*; for all the conditions that surround life are in them-

selves assaults upon life; no so-called favorable condition is so if enhanced beyond a certain degree; no one is essentially favorable or can long consist with full life, but must be corrected by its opposite.

Vitality is an integral dynamism flowing through many modes of expression. It manifests itself through resistance to cold (production of heat from food); resistance to heat (activity of absorbents and excretories, by which cooling evaporation is kept up); muscular, intellectual, reproductive, or assimilative exertion; in short, all the modes of which life is composed, and all are alike drafts upon the interior manufactory of force; life, like time, is perceptible only by its loss. To illustrate the central idea of life, as far as it may be comprehended, a consideration of its relation to thermal influences is sufficient. Heat and cold are poles of external influence, between which life holds its sinuous career, and all vital conditions are as distinctly polarized in fact, if not in phrase, as heat and cold.

It would be false to say unqualifiedly that heat is conducive to the best possible development of any individual life, or to say, unqualifiedly, that cold is. All tender (sub-vitalized) organisms, whether so from youth (under-development), old age (over-development), or disease (unbalanced development) are, in proportion to their tenderness, incapable of enduring, or profiting by, wide thermal extremes. The *foetus* is kept nearly at an even temperature; but after birth all animals, in the best conditions that happen, are surrounded by media of more or less thermal variation. Does any one suppose that the fullest possible development of any animal would be attained by its being enveloped all its life in a medium kept at 98°, or at any other unvarying point? I do not. Alternating variation of all paired influences, never going too far either way from a mean, seems the general statement of nature's method of vital sustentation. Vital force is spent in the act of its creation; is evolved and destroyed by the efforts of the animal energy to repel as-

saults from without. The moderate depletion of the animal forces by cold, that is to say, the abstraction of heat, stimulates to increased efforts to evolve heat, and the succession of these struggles for self-preservation becomes a habit of stronger, fuller life than would otherwise be—an element in type-formation. But just as necessary to the production of the noblest animals in their noblest estate,

is the alternation of the direct stimulus of heat (condition relative to personal habit when heat is absorbed from surrounding media or is in less degree abstracted from the body by them). All motions, internal and external, are variable, alternating, and polarized; and any satisfactory biological nomenclature will be a reflection of these inhesions.

G. E. TUFTS.

WALL-PAPER IN BEDROOMS.

THERE is no method of decorating rooms more convenient and cheap than that of papering them—hence it is not strange that people in all ranks of society make use of it. Two or three dollars will in this way render a cracked and unsightly wall beautiful. But there are considerations in this matter of papering walls which render it of grave moment to the housekeeper who would have a home at once neat, attractive to the eye, and healthful. An anonymous writer in one of our exchanges indicates some of these considerations in terms of appreciative emphasis like these:

“When the air of the room is damp, the paper gets damp. In the damp state it absorbs readily the dust that is in the air. When the weather gets dry and warm, or when the room is warmed by a fire, the dust becomes dry on the paper, and is then easily wafted and distributed through the air of the room, while if the paper be at all rough or raised, the small irregular spaces are at all times receptacles for dust. This is a strong objection to the paper covering for the wall.

“Another objection to the paper covering is the mode in which it is put on the walls. As a common practice, layer is laid on layer until six or seven or more layers are sometimes put one over the other. And I have recently seen a room stripped of no fewer than ten layers of paper before the wall was reached. By this plan the room becomes lined with coating after coating of paste, which in course of time is decomposed, is turned

into fine organic dust, and is itself, whenever the paper is torn away so as to allow of an escape of dust, a decided source of danger to health. Let sickness take place in a room, the walls of which are treated in the manner now described—let the particles of the poison of a contagious disease disseminate in such a room, and almost of a certainty some minute portion of the particular poison will be cased up behind the new paper that is laid on, to remain a source of danger for after-occupants of the room for years and years to come.

“For these reasons—and I think they are sound and good—I think the common system of paper for the walls of the bedroom is not the best. If a paper could be invented, which, once laid on, would present a permanent surface, and a surface that would admit of systematic cleansing by means of soap and water, or by dry scrubbing, then I should not have a word to say against it, and such an invention will, I should hope, one day be brought into common use.

“The nearest approach I have ever seen to perfect success in the direction named was in the house of a friend of mine, who had his room very carefully papered with a good fine paper of oak pattern. This paper he coated with coachmakers’ varnish until the entire surface was in truth as hard as the panel of a carriage itself. This wall could be washed with the greatest ease and was as perfect as need be. Sometimes in the halls and on the staircases of houses we see oak and marble papers which are

varnished and which bear to be washed very well; but I have never seen those walls so perfect as the walls of the room I specially name, and certainly I have seen no approach to anything of the kind within a room.

"Presuming that paper is used for the walls of a bedroom, there are certain rules which ought to be followed in respect to the process. The first of these is that the paper selected should not be a flock paper; next, it ought not to have a raised or rough surface; thirdly, the pattern should be of the plainest possible kind, and, if I may so express it, patternless: the color should be gray or a sea-green; and lastly, the paper should be frequently renewed—it should be changed every three years at least. Moreover, in changing the paper there should be no slipshod method of putting on a new paper before the removal of the old. The old paper should be entirely stripped off, the wall should be well cleansed of dry paste, and the new paper should be put on with paste that is quite fresh and pure. The

introduction of a little alum into the paste is always a good practice.

"In cases where a person has suffered from any one of the contagious diseases and has occupied a room, the walls of which are covered with paper, there should be no hesitation, when the room is relieved of its occupant, in clearing every particle of paper from the wall at once, also making the clearance as complete as possible. I usually direct in these cases that the paper, while it is still on the wall, should be saturated with water that is at boiling heat, the water being applied with a small flannel or woolen mop. In this manner two purposes are served: the heat disinfects and the paper is made to peel off with readiness and completeness. When the paper is thus removed down to the solid walls, the walls may be fumigated with sulphurous acid vapor, and afterward washed down, sponged, and allowed to dry. After such cleansing the new paper may be laid on, the ceiling having been previously cleansed and colored."

SEEING AT GREAT DISTANCES.

[THE following was communicated to the editor of the PHRENOLOGICAL about two years ago. The views of the writer have a prophetic significance, now that it has been ascertained that objects at great distances may be rendered visible by electric current.]

IT is possible that thoughts of one individual may be transmitted from his eyes to the eyes and mind of another individual by a telephone without the medium of sound. The knowledge which we have acquired through the eye, where it is remembered or we are conscious of it, is reflected from within upon that organ, and is attended with a motion of it, as thought is a mode of motion, or is attended with motion. It is possible that this motion may be transmitted as well as that producing the sensation, sound, by a machine for the special purpose; and "sight seeing" accounted for, as it is commonly termed, by a magnetic wave

or current passing between the eyes of two individuals naturally and without the aid of an artificial machine. I do not believe that the above proposition is impracticable on account of the delicacy of the vibrations, when it is considered that the actinism of light-ether and magnetic force have sufficient power to disintegrate the most solid bodies. I think that the motions of one person's eyes, expressed thus upon the eyes of another, should not cause a community of thought any more than that the thoughts of an orator expressed by sound cause a community of thought. The state of mind of two individuals being the same, the same configuration of motions upon the mind of each must cause the same thoughts in each.

The reasons why "sight seeing" is naturally rare are, that it is seldom that two minds can be found in a proper state;

and that it is then only a magnetic wave or current connects them. The impressions by the *teleform* would be scenic, and so far a natural language. They would be the pictures of the drama which had been formed upon the retina of the eye of objects which had been presented to it; whereas the sounds of words are mostly significant by impact. They would be a *natural* and therefore a *universal* language.

That the eye of one individual operates to convey thoughts to another individual, and thus performs the office of the *teleform*, who can doubt? That an *artificial* machine may be constructed to perform the same office, I believe to be possible. The mind, with the use of the eye, can picture the drama of its thoughts in time and place at will, as man can by the use of the magic lantern. The picture, in both cases, is composed of motions, which I do not believe it impossible to transfer by magnetic influence. The intensified brain of the maniac shows more clearly and definitely the power of its motions, configured through the eye, in space, to pass for realities. As all our thoughts are continually changing, motion would be indicated, which, in animated nature, is a sign of life. The picture would be more than a mere pho-

tograph taken at one instant of our thoughts. To transfer these changes as they take place, is not above the velocity of the light-ether and that of the magnetic force. Although we can not see the pictures of the thoughts of another in his eyes, as we see other objects, we may feel them; because it often occurs that we anticipate them before they are expressed in words of sound.

This theory, notwithstanding it opens a new and wide field for investigation, experiment, and discovery, and promises to throw much light upon psychology, a subject so dear to humanity; also upon the history and philosophy of hoary antiquity, rendering that which was before obscure, clear, and that fact, which was before believed to be fable, yet, to the multitude, may appear as "the mere shadow of a dream." The "seer" is found throughout the history of man, even in that of the most highly cultivated and intelligent. Truly, he commands the attention of the philosopher. As the Deity Himself employs means to attain His ends, is it not reasonable to suppose that the "seer" does likewise, and that as we feel it a duty to analyze the workings of the former, we sin not by an effort to analyze those of the latter?

J. F. G. MITTAG.

WINTER AND THE FOLLOWING SUMMER.

A PROMINENT Savannah physician, Dr. Falligant, writes sensibly as follows:

"So many questions have been asked and so many opinions expressed, by many persons, concerning our prospective sanitary condition during the summer of 1880, because of the prolonged moderate weather of the present winter, that it may be well to reflect over some facts, and some false conclusions incident to hastily formed views, and see whether we have any real reason for anxiety for this season beyond others, and whether any real causes of disorder are likely to arise, not

incident to seasons generally, or growing out of influences not within our own control.

"Unreflecting people argue in this wise: First. A cold winter kills all the vegetation and makes a succeeding summer healthy. Second. A warm winter fails to kill all (or so much of) the vegetation, and makes the succeeding summer unhealthy.

"Now the real fact is that when the cold weather kills the vegetation so extensively, there is more dead vegetation; and if the mere *quantity of dead vegetation* controlled the ratio of its disease-producing influence, then the summer following an

extremely cold winter ought to excel in unhealthiness.

"For the opposite reason, the mild winter, leaving a large proportion of the vegetation in a condition of life instead of death, ought to be followed by a healthy summer.

"Neither of these conditions, however, are the real factors governing our climatic sanitation, but *cleanliness* and *dryness* govern the whole. Thus, for instance, in our own city of Savannah, proper sanitary government in the city itself, and proper drainage of the adjacent low grounds, not allowing moist or stagnant or putrid accumulations or surfaces, will insure our general good health, whether a summer succeeds a moderate or a cold winter; the moisture, putridity, and consequent

poisonous evaporative capacity being the elements of its dangerous nature, and these elements being removable at our own will by proper hygienic treatment."

PREVENTION OF BOILS.—A St. Petersburg physician, Dr. Sieven, commends a very simple treatment for the prevention of this painful form of abscess. He claims that if the skin be superficially scraped with a small knife, so that a drop or two of blood may be pressed through the epidermis as soon as the peculiar stabbing or pricking sensation and slight induration announce the commencement of the boil, it will not be further developed.

APPLE-TAPIOCA PUDDING.

THE apple as a part of our dietary is extensively used, to be sure, but I think that its merits are not sufficiently appreciated. It can be so easily adapted to cookery, and in every case supplies so desirable a constituent, that I feel myself warranted in urging its merits on all occasions. I have already given one or two forms of pudding in these columns, in which apples take a prominent place, and now I am asked, How do you make an apple-tapioca pudding? I think a tapioca pudding in the plainest form an excellent dish, but a few apples prove a delicious adjunct.

RULE.

- 1 tea-cup of tapioca.
- 1 tea-spoon of salt.
- 1½ pints of water.
- 6 apples.

Wash the tapioca well and put it in a clean dish. Add the salt and the water; mix well together. Put it on the back part of the stove—or anywhere so that it will keep warm, and soak for four hours. Peel and core the apples and put them in a two-quart pudding-dish, with a pinch or so of sugar in each apple where the

core is taken out. Now add a little water and bake them until tender; then pour the soaked tapioca over the apples and bake one hour. This dish is to be eaten warm, with sauce if preferred.

Below is a simple method of preparing a sauce which may be served with any pudding:

- 2 table-spoons of fresh, sweet butter.
- 1 cup of sugar.
- 2 table-spoons of flour.
- 1 pint of boiling water.

Mix the butter and flour, with a spoon, well together or until it appears creamy; then mix in the sugar, and just before serving add the boiling water. If you wish a flavor, the juice of one lemon will supply it.

Here is one of the common recipes for a sauce:

Melt two ounces of butter in a saucepan. Mix with it a tea-spoonful of flour. Add salt and pepper to taste, then a cup of cream. Now boil the whole for a minute or two, then add mace or lemon-juice for a flavor.

The housekeeping reader can judge for herself which is better for health and convenience.

MRS. H. S. D.

NOTES IN SCIENCE AND AGRICULTURE.

Action of Light upon the Eye.—At a meeting of the Buffalo Microscopical Club, Dr. Lucien Howe presented the subject of the undulations of light and their perception by the eye. Mention was made of different theories, accounting for the phenomena of optics previous to the present century. The difficulties of this subject were first solved by Thomas Young, who satisfactorily explained the undulatory theory of light. He showed that what we call light is impressions produced upon the retina by the wave-like motion of the particles of matter. Subsequently the lengths of these waves were measured. It would take 36,918 waves of red light, or 64,631 waves of violet light, placed end to end, to make an inch. From the known speed of light, it is proved that at least four hundred and fifty-one millions of millions of these minute waves flow into the eye and dash against the retina in each second. Dr. Howe, in a description of the microscopical anatomy of the eye, more particularly relating to the "layer of rods and cones," stated that these were in reality the terminal filaments of the optic nerve. These are shaken or acted on by the waves of light, and it is especially these with which we see.

Growth of Population.—The Registrar-General has completed his estimates of the population of some of the largest English towns, dating to the middle of this year, and calculates that London has increased from 3,254,260 in 1871 to 3,664,149 in 1880. Similarly, Brighton is said to have increased from 90,011 to 107,321; Portsmouth, from 113,569 to 134,224; Norwich, from 80,386 to 85,827; Bristol, from 182,552 to 213,536; Plymouth, from 68,658 to 74,993; Wolverhampton, from 68,291 to 75,970; Birmingham, from 343,787 to 394,738; Leicester, from 95,220 to 129,912; Nottingham, from 86,621 to 173,627; Liverpool, from 493,405 to 544,056; Manchester, from 351,189 to 763,130; Salford, from 124,801 to 185,786; Oldham, from 82,629 to 115,413; Bradford, from 145,830 to 197,196; Leeds, from 259,212 to 318,929; Sheffield, from 239,946 to 304,938; Hull, from 121,892 to 149,627; Sunderland, from 98,242 to 116,730; and Newcastle, from 128,443 to 149,366.

Making the Deaf Hear.—The audiophone recently invented is a rather simple affair, consisting of a fan of vulcanized rubber, the upper margin of which is slightly bent and held in tension by a silken cord. When in use this margin is placed in contact with the upper teeth, and the thin rubber fan receives the vibrations and conveys them through the teeth. Hon. Joseph Medill, of the *Chicago Tribune*, gives the following testimony to its efficacy in a recent number of that paper:

"It is known that the editor of this paper has been deaf for a number of years, and that

during that time he has used all the devices for improving his hearing that he could hear of or that were brought to him. None of them were, however, satisfactory. He has tried the audiophone for some weeks, and finds that it not only improves his hearing, but restores the sense of hearing to him. Not merely does it answer when engaged in conversation with a person who is a foot, or a few feet from him, but it answers perfectly at a concert. Each note of the musician and each tone of the singer come as clearly and distinctly as they did before the sense of hearing was impaired. Others have also tested this instrument, and have expressed themselves satisfied with its workings."

An Ancient Document.—The oldest official document in the archives of New York is the Indian deed for Hoboken (Hobocan Hacking), dated July 11, 1630. In it Hoboken is called the "land called Hobocan Hacking," while in an Indian deed for Ahasimus, south of Hoboken, made November 22d of the same year, Hoboken is called an island. A writer in the *Magazine of American History* says: "I believe it was an island, as Manhattan is an island to-day, the Hoboken Kil and the Jan Evertsen Kil, with their marshes, cutting off the communication with the mainland." An old map of New Netherland, made in 1616 for the States-General of Holland, settles the question definitely by giving Awiehaken, Hobocan Hacking and Ahasimus, now Hudson County, N. J., as a peninsula formed by the Hackensack (Hackingkasanig, Achkin-keshaky) and the Hudson.

Luminous Flowers.—Among the elegant novelties of the hour offered for sale on the Paris boulevards are phosphorescent flowers, which glow with a lambent light in the dark, and almost rival their natural tints. They are rendered luminous by coating the petals with transparent size, and then dusting them with a phosphorescent substance, such as Canton phosphorus (sulphide of calcium) or Bologna phosphorus (sulphide of barium). Canton phosphorus is the best, and yields a soft yellow light. According to M. Becquerel, a good quality can be made by mixing 48 parts of flowers of sulphur with 53 parts of calcined oyster shells, and raising them to a temperature of between 800 and 900 degrees centigrade in a crucible. After exposure to sunlight during the day, or to the electric or magnesium light, the flowers thus coated become brightly luminous in the dark.

Counsel on Sugar Beet Culture.—The *New England Farmer* warns farmers who may be cultivating the sugar beet as an experiment, that if they cultivate this crop as they have been accustomed to cultivate other farm crops in the past, they will surely fail, and will curse the industry and every one who

has been instrumental in introducing it into the country. Twenty tons of good sugar beets to the acre can not be grown in the same slovenly manner that has sometimes brought a small crop of winter rye or even a decent crop of potatoes before the advent of the Colorado beetle. Beets require not rough, coarse, farm methods, but nice, careful, garden culture, and if the introduction of the sugar beet into this country shall teach the common farmers an improved method of culture, and shall make garden culture take the place of rough field culture for all crops, the country will be well paid for all the cost of the experiment, even though sugar-making should prove a complete failure. The weeds must be well looked after if the beets are to have fair play and a chance at success. The ground may have been never so well manured, plowed, harrowed, pulverized, and smoothed, and the seeds may have come up vigorously and even, but if the young beets are allowed to be overrun by weeds that are even more vigorous, and so thick as to cover the ground as with a mat, the prospects for success will by no means be flattering.

The Bagdad "Date-Mark."—Bagdad is noted for a mysterious malady which affects everybody in the city, whether citizen or stranger. It is a sore, called a "date-mark," because after it has healed it leaves an indelible mark about the size and shape of a date. It generally comes upon the face, lasts a year, then disappears. The cheek of nearly every man and woman in Bagdad shows the inevitable mark. Sometimes it settles upon the nose, and then the disfigurement is great; sometimes on the eyelid, when blindness is the result. Strangers are attacked even after a very brief residence; but fortunately, if they are adults, the sore is more apt to come on the arm. In every case the attack runs its course for one year. No treatment, no ointment or medicine is said to have the slightest effect upon it. Once the sore appears, the sufferer knows what to expect, and may as well resign himself. The Arabs say that every one who goes to Bagdad must get the "date-mark;" or if he does not get it while in the city, he will be followed by it—have it sooner or later he must. Dr. Thom, of the American mission, states that he has examined the ulcer under the microscope, and found it to be composed of a fungoid growth; but nothing that he had ever tried had proved remedial.

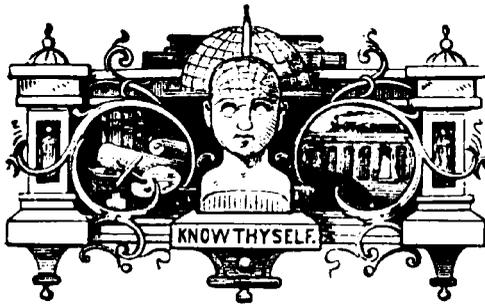
A Proposed River between Manchester and Liverpool.—A meeting has been held in Manchester for the purpose of considering the expediency of the proposal for the construction of a tidal navigation for seagoing steamers between Manchester and Liverpool. At this meeting Mr. Hamilton Fulton, the engineer, explained the nature of the proposal, and stated that the length of the channel between Manchester and Liverpool would be about 36 miles. The minimum width of the navigation would be 200 feet, and the minimum depth at low water spring tides

would be 10 feet, or about two feet more water than exists at low water over the bar at the mouth of the Mersey. A basin would be provided at Manchester end of 81 acres with 16,000 lineal feet of well-constructed wharves, and all requisites for shipping accommodation on a large scale. The estimated cost of the undertaking is £3,500,000. Mr. George Hicks, of Manchester, presented a statement as to the probable revenue, which, if realized, would give a large return upon the proposed outlay. Owing to the inability of several members of Parliament and others to attend, the further consideration of the subject was adjourned.—*Warrington Guardian*.

Liquid Manure for Plants.—A Baltimore florist sends the *Boston Journal of Chemistry* the following formula for a liquid manure for flowers. The materials may be had at any blacksmith-shop: Put one bushel of the clippings from horses' hoofs into a barrel, and fill it up with water. Let it stand for a week, when it is ready for use. Apply it with a watering-pot. All bedding plants can be watered with it every day, if they are not pot-bound. Re-potted plants should be watered every week until they have plenty of working roots to take up the manure. It will also be found good for hard-wooded plants if used once or twice a week. Two or three weeks after the plants have been watered with the manure the foliage usually turns from a green to a yellow, moving from the stem down to the leaf, which, however, lasts only for a few weeks, when it changes to a dark, glossy green. Plants under this watering grow very strong. The flowers are very large and bright in color. Plants thus treated can be kept in very small pots for a long time without being transplanted. Flowers watered with this liquid manure will bring twenty-five per cent. more than otherwise.

Success in Corn.—An exchange tells of a man who plants, two or three weeks after the crop is planted, a new hill of corn every fifteenth row, each way. And this is the reason: If the weather becomes dry after the filling time, the silk and tassels both become dry and dead. In this condition, if it should become seasonable, the silk revives and renews its growth, but the tassels do not recover. Then, for want of pollen, the new silk is unable to fill the office for which it was designed. The pollen from the replanted corn is then ready to supply silk, and the filling is completed. He says nearly all the abortive ears, so common in all corn crops, are caused by the want of pollen, and he has known ears to double their size in this filling.

Leaks in Gas Pipes.—To detect leaks in gas pipes, it is recommended to apply soap suds to the suspected leaky joint. The formation of bubbles will show an escape. This is safer than trying the joint with a lighted match. If the leak occur in the branch of a bracket or chandelier, it is repaired by soldering with plumber's fine solder; if it be a very small one, heat the piece first, with a spirit lamp, and fill the aperture with cement.



MRS. C. FOWLER WELLS, *Proprietor.*

H. S. DRAYTON, A.M., *Editor.* N. SIZER, *Associate.*

NEW YORK,
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OUR FAMILY TROUBLES.

IN the *North American Review* for June appeared an article on "Divorces in New England," from the pen of Dr. Nathan Allen, who has for many years given attention to the sanitary condition of that section of our population. The statistics he arrays, and the conclusions drawn from them by a mind long accustomed to trace the relations between physical states and mental phenomena, are in many aspects startling enough. In the six New England States there are nearly two thousand divorces every year, and their number is increasing. These forcible disruptions of the most sacred of family ties prevail almost entirely among the native-born and Protestant population, as the Roman Catholic ordinances do not allow civil divorces, or proceedings in the State courts for the separation of husband and wife. After subtracting the number of marriages performed by the Roman Catholic priests in 1878, the ratio of divorce to marriage for that year is found to be as follows: In Vermont, 1 divorce to 12.3 marriages; in Massachusetts, 1 to 14.6; in Rhode Island, 1 to 8; in Connecticut, 1 to 7.8.

When it is considered that this state of social affairs exists mainly in the classes favored with education and social privileges, it is certainly alarming to contemplate. How inharmonious and disorderly must be the community wherein one hundred families in every eight hundred or in every twelve hundred, are broken-up by legal process!

If we look at the list of causes, real or alleged, for these, we find them to be mainly of the criminal type—adultery, cruelty, intoxication, desertion, and we instinctively ask why and how these originate?

Evidently one grand source of this most unhappy condition in the land once the home of Puritan simplicity and the closest domestic intimacies, is the insidious creeping in of false and pernicious notions concerning the character of the marriage relation. The divorce laws of the New England States have been modified to suit, in a great measure, these notions, until they have become so lax that it is comparatively easy for the disaffected husband or wife who lives in one of these States to secure the freedom desired.

Another prime cause of divorce, which has a more direct connection with the act than that to which we have just alluded, is the unfitness of many who marry to enter into that responsible relation. This cause is not peculiar to New England, but has an extensive prevalence in all parts of our country, irrespective of religion and education. Young men and young women who are not old enough to comprehend the duties of life, are permitted to marry; many, very many, jump into this most serious of bonds with scarcely a thought of its requirements—a temporary humor, a trivial fancy, is enough to lead some who are

physically weak or diseased to the minister or the magistrate. This being the case, the spectacle of a large proportion of our people living in domestic inharmony and wretchedness is only what should be naturally expected.

Dr. Allen, whose acquaintance with mental science is extensive, as may be inferred from the fact that he was editorially connected with this magazine as far back as 1839, points to the education of the masses in the principles and practice of physiological and moral law, as an indispensable method of correcting the evils in family and social life. Appropriate legislation is also needed to help along reform. It would be difficult in the start, we know, to prescribe general rules for the correction of marriage abuses, but legal checks would be obviously proper upon the disposition of certain classes or persons to marry; for instance, the diseased in body, the feeble and erratic in mind, the notoriously vicious.

The importance of this matter of marriage is so great to State and nation, that it should have the systematic attention of our best physiologists, and a body of law framed in accordance with their observations would, in time, practically comprehend the requirements of public peace and happiness, in so far as marriage is concerned.

Sparta in her day of glory had marriage laws, and certainly with our present knowledge of physiology and social economy, it would not be difficult for a few gentlemen, among whom Dr. Allen should have a prominent place, to draw up a system of rules which, if put in practice, would exercise a most salutary effect upon domestic morality.

GEORGE RIPLEY, LL.D.

IN the recent death of this eminent author, American literature regrets the loss of one who has been among the foremost to develop into vigorous activity the spirit of authorship, and to impress it with a national character. Dr. Ripley was born on the 3d of October, 1802, and dying on the 4th of July lacked but three months of being seventy-eight years old. Of this long life, its entire maturity was spent in literary pursuits. He entered the ministry of the Unitarian Church in 1827, but remained therein only four years, leaving the pulpit to visit Europe, where he studied the literature of France and Germany for several years. Returning to America, the fruit of his studies appeared in a series of volumes entitled "Specimens of Foreign Standard Literature," published from 1838 to 1842. He took a deep interest in social reform, particularly the co-operative side, as advocated by Fourier; and warmly enlisted in the celebrated "Brook Farm" experiment, in which Emerson, Hawthorne, Margaret Fuller, Alcott, and Thoreau, with other gifted minds, participated. He invested his entire fortune in this more poetical than practical undertaking, and lost it.

In 1849 he became literary editor of the *New York Tribune*, and held that position until his death. Besides his professional work, as a reviewer and critic of other men's books—a sphere in which his superiority is beyond question—he edited, in association with Mr. C. A. Dana, the "New American Cyclopaedia," the publication of which was begun in 1853 and completed about 1858. He also was joint editor with Mr. Dana of the revised edition of this important work;

which was completed in 1874. He also published three or four other books, as "Discourses on the Philosophy of Religion" (1839); "Letters to Andrews Norton on the Later Forms of Infidelity" (1840); and a "Handbook of Literature and the Fine-Arts" (1854), the latter being prepared in association with Mr. Bayard Taylor.

Dr. Ripley was not only a scholar of the highest order, but a man whose genial nature, delicate taste, and refined morality won the esteem of all who were favored with his acquaintance. For the science of Phrenology he evinced a sympathetic consideration, and as occasion would permit, his pen traced an appreciative comment on the periodical or new book which illustrated its principles and truths.

METAPHYSICS AND PHRENOLOGY.

WE have had frequent communication with two young men—one pursuing a post-graduate course in philosophy at a prominent New England university, the other also a post-graduate student in philosophy and theology at an eminent institution in one of the Middle States. The theme of this communication was chiefly mental philosophy. Each of these students had chosen from personal inclination the study of metaphysics, and while pursuing it had used opportunities for obtaining a knowledge of Phrenology. From the first of their examination of the Gallian system, they had been deeply impressed by its clearness and reasonableness, and they could not help but contrast its principles, and the mode adopted by its teachers in their application of those principles to the phenomena of mind, with the methods of reasoning

in vogue among metaphysicians of the schools. We were assured by them that in spite of the closest attention to the lecturers of their respective institutions and their earnest study, they were unable to extricate themselves from what appeared to be a muddle of assertion and speculation. They found that they must take the dicta of eminent writers on trust if they were to obtain anything like perspicuity of view. If they attempted to reason out a postulate or an inference in accordance with the rules of analysis or positive logic, they became at once involved in a maze. On turning, however, to Phrenology, they found no trouble. Its definitions were clear, the descriptions given of the action of the faculties were logical, the reasoning was harmonious, pointed, leading directly to certain conclusions. One of these gentlemen remarked that the ex-phrenological philosophy as commonly discussed was all *a priori*, vagueness, but when he turned to Phrenology it was all *a posteriori*, directness and coherence.

The student connected with the Middle State university has enjoyed the advantage of sitting at the feet of one of the most eminent metaphysical authors and teachers living. But at a personal interview he remarked to the writer that Dr. So-and-So was very delightful as a lecturer, but in the midst of a discourse on some intellectual topic, he (the student) could not help but acknowledge to himself how vain and impracticable are all these views in comparison with the teachings of phrenological science. Most of the adherents of the old school appear to be controlled by the idea that it is impossible to treat of mind by the inductive method. That it is not amenable to processes of analysis in common use with

physicists; in other words, that the one and only way to discuss intellect and feeling is by the old medieval process, designated as *a priori*—by observation of the inner self, by reasoning founded upon consciousness. A few are candid enough to acknowledge the difficulties constantly arising in such discussion. Prof. Bascom, for instance, while he holds to the view that it is improper to consider the phenomena of mind after the manner of natural science, admits the difficulties which beset the metaphysician; and in his text-book on psychology counsels the reader against being misled by erroneous inferences and unwarranted assumptions. The new as well as the old treatises on metaphysics abound in assumption—necessarily because their authors will not accept physical data. It appears to signify nothing to these gentlemen that phenomena of mind are directly related to the brain; that it is a matter now of common demonstration that mental derangement is occasioned by disease of brain tissue. A man may be confined in an insane asylum and constantly exhibit some peculiar phase of lunacy, and after death the surgeon may examine his brain and point to a tumor, an ulcer, or lesion as the existing cause of the derangement, and show that it was in perfect accordance with a diagnosis made during the life of the lunatic; yet facts like these, which are recorded by the hundred in the annals of surgery, have no persuasive influence upon the ordinary metaphysician: he clings to his idols of the German, French, and Scotch schools, and seems to wax fat in the atmosphere of the hypothetical, and to be fearful only of being reduced to dry bones, should he permit the light of the positively demonstrable to illumine his mind.

THE AMUSEMENTS OF THE CHILDREN OF THE POOR.

IN our walks we are much given to visiting the quarters of our great city where live the poorer of the working classes. Their humble vocations and their modes of adapting themselves to the pinch of want offer very interesting subjects for contemplation. The children, always numerous, in such quarters specially command our attention, for they enlist at once our sympathy for their helpless destitution, and set in motion a current of thought regarding the life of toil and sorrow which the future has in store for the most of them who survive the years of childhood.

But in the most squalid neighborhoods the edge of our sadness has been taken off by scenes of hearty, thorough enjoyment on the part of children there. Despite the filth of the street and the dilapidation of the tenement; despite surroundings of vice and associations of crime, groups of little ones are to be seen playing with all the expressions of delight, and all the innocent abandon of children in the elegant and retired neighborhoods of the well-to-do.

A day or two since we passed through a street in one of the worst parts of the city; the sultry weather had apparently driven all the grown people from their close lodgings to the windows and stoops, while the children in all degrees of dress or undress flocked on sidewalk and street. Here and there a group sat upon the curb engaged in playing "Jack-stones" with those odd-looking little metallic castings which are to be found in the petty stores which exist in the vicinage of the public schools. Now and then I encountered a ring of urchins, who, with hands clasped,

were singing a merry-go-round with persistent earnestness. On a narrow, creaking stoop we descried a wee colored girl arranging some bits of china on a little bench. She was "setting table," and her mother, we presumed, a tidy-looking young woman, was leaning against the door-jamb observing the child's play with an expression of enjoyment.

We could have counted fully one hundred children within the space of three squares, and all earnestly bent on play. There was noise enough; some were shouting in high keys, as children will when earnestly at play, but we saw not one instance of ill-humor or quarrelsome dispute.

Who could entertain so harsh a temper as to look upon the amusement of these poor children with coldness? To us such scenes encourage the thought of better days in store for them. We somehow associate their little happiness with the character of our national institutions,

which afford to the lowest and the poorest opportunities for mental development, and point to fortune, honor, and power as attainments for which poor as well as rich may strive.

AMERICAN INSTITUTE OF PHRENOLOGY.—Our readers who contemplate becoming members of the next class of the Institute, will not forget that the time for opening is on the first day of October. No one should be a single day behind; for in the course of instruction the plan of the carpenter is followed, who first lays the foundation, puts up the frame, and then completes the structure. The apprentice who comes to the work after the frame has been erected, will learn how to finish a house, but will need further instruction before he can build a house. It would be better to lose two weeks at the close rather than half a week at the beginning of the session.



"He that questioneth much shall learn much"—Bacon.

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. But one question at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of an early consideration.

IF AN INQUIRY FAIL TO RECEIVE ATTENTION within two months, the correspondent should repeat it; if not then published, the inquirer may conclude that an answer is withheld, for good reasons, by the editor.

WE CAN NOT UNDERTAKE TO RETURN UNAVAILABLE contributions unless the necessary postage is provided by the writers. IN ALL CASES, persons who communicate with us through the post-office should, if they expect a reply, inclose the return postage, or what is better, a prepaid envelope, with their full address. Anonymous letters will not be considered.

DANDRUFF.—H. W. S.—Within the year we have given suggestions in regard to the treatment of the scalp for dandruff, and would repeat, that most of the preparations recom-

mended by druggists are unfit for use, as they rather increase the trouble or produce disease which is worse than the dandruff. Sulphur is one of these injurious "remedies." A little "green soap," as it is called, or fine Castile and tepid water, used twice a week in cleansing the scalp, will be far better; or a little borax would be serviceable, meantime let your diet be pure from all substances which serve to embarrass the functions of the cuticle.

SHALL AND WILL.—These words are used interchangeably by a great many educated persons. Macaulay once said, "Not one Londoner in a thousand ever misplaces his will and shall." Nevertheless, that sage critic and writer, Dr. Johnson, who was a Londoner, did occasionally use them inaccurately. In this country the confusion in their use is becoming more and more conspicuous, and as a general rule for the

proper use of words, we would say, that *shall* should be applied in the first person, and *will* in the second and third (just as you will find them in the conjugation of the verb *to be* in your grammar), when the simple idea of future action or occurrence is to be expressed. When, however, the idea of compulsion or necessity is to be expressed, *will* is the term associated with the first person, and *shall* with the second and third. As an illustration of the first method: "I *shall* be at the railroad station to-morrow to meet you." "I *will* perform my obligations." "Of course you *will* come to the wedding." "You *shall* have that book which James promised you."

SPIRITUALISM, CLAIRVOYANCE, MESMERISM, ETC.—W. G. S.—Nearly every number of the *PHRENOLOGICAL JOURNAL* has an article or paragraph on one of these subjects, or on themes kindred. Each, however, is very comprehensive in its relations, and could not be fairly treated in a single article. The best kind of "fortune-telling" is that which is based upon science; in other words, upon the organization of a person. It may not be the sort of fortune-telling which you mean, but it is the best, as it shows the capability of the person, and indicates the nature of his possible achievement.

MORAL DEVELOPMENT.—M. L. C.—*Question*: When the moral or spiritual region is wanting would it give a flat appearance to that part of the head?

Answer: It depends upon how the brain is organized; for instance, if Constructiveness, Ideality, Sublimity, Caution are large, and the moral organization small, the top-head will appear low. If the upper lateral range be marked, the top-head may appear rounded and yet the organization be of moderate size, while the basilar region and range of organs in the vicinity of the ear will predominate. The true way to estimate development is by observing the distance from the surface of the head to the centre, which is fully described in "Brain and Mind."

DEAD CONSCIENCE.—G. A.—*Question*: When the conscience is said to be seared in all things, is it comatose? is the germ still there, or is it destroyed root and branch?

Answer: "Seared with a hot iron" is a figure of speech, intended to convey the meaning of destruction. Hence, a seared conscience would neither be inactive nor comatose, it would lack even germinal existence. We believe that such a moral state is possible, but as observers of men we have rarely met with one who indicated so lamentable a condition. Most men who indicate a want of it in their life, are perverted in conscientiousness. Very few, indeed, are totally devoid of the sentiment.

COLOR OF EYES AND HAIR.—Color as a physical expression bears relation to temperament, and as temperament has its connection with the expression of character, therefore color must be taken as bearing upon character. A strong, emphatic, robust character is usually associated with the motive or bilious temperament, and persons of that temperament usually have the dark complexion, and dark eyes and hair. Persons of feeling, sentiment, susceptibility, and poetic feeling, have a predominance of the mental temperament; and usually light or sanguineous complexion brown or sandy hair, and blue or light brown eyes. This subject is fully discussed in "New Physiognomy" and "The Temperaments."

ANIMAL MAGNETISM.—H. E.—There appears to be a relation existing between this force and electricity, but they are not identical. We think it is a very important auxiliary to medicine, and the more it is recognized by physicians the better for their patients. So far as the accomplishment of cures is concerned, we think it just as efficient as the treatment of skillful physicians. The time will come (so many are the observers of to-day who are studying it) that its nature and laws will be defined sufficiently for practical purposes.

THE LOSS OF A LIMB AND MIND.—D. W. B.—The loss of a limb should not affect one's mind necessarily, we think, although, in the majority of cases, the mind is impaired in some degree. This is probably due to anxiety and a morbid regard for appearances. We know persons who have lost an arm, but whose minds are as sound as any of our acquaintances, if ability to support large families by the practice of a profession requiring excellent mental judgment is an evidence of mental integrity.

SALT WATER AND GRAY HAIR.—H. S. J.—We think salt water would not be productive of the condition you mention. Sailors, or "old salts," as they are commonly termed, do not gray earlier than other men; in fact, as a class, they keep the color of their hair longer than most men. As for the hair turning gray on the temples, that is where it usually begins to blanch first. Perhaps if you use the water very salt it would have the effect of drying up the hair follicles.

TO KILL POTATO BUGS on tomato plants, especially as the time approaches for ripening, use very strong manure water. One of the cheapest and best methods of applying paris green, is to dissolve it in water and sprinkle with a small broom.

Several ANSWERS must be deferred to the next number.



Communications are invited on any topic of interest; the writer's personal views, and facts from his experience bearing on our subjects, being preferred.

HOW HE FOUND THE LIGHT.—Editor PHRENOLOGICAL—*Dear Sir:*—About four years ago I met with the first work that I had ever seen on Phrenology. I was calling on a neighbor, and, while examining his books, I observed a number of magazines. Taking one down to examine it, the first thing that engaged my attention was the title PHRENOLOGICAL JOURNAL AND LIFE ILLUSTRATED. Here was a discovery! Can it be, thought I, that I have at last found something that will answer those questions that I have so long sought in vain an answer to? For from my fourteenth or fifteenth year such questions as, What is the mind? and where and in what way is it connected with the body? had often occupied my mind, and being unable to solve the problem for myself, I had appealed to those older than myself for light on the subject. But, to my surprise, I found that none of them seemed ever to have given a thought to this, to me, momentous question. Finding my efforts vain in gaining information by this mode of investigation, I adopted another. I read all the books to which I had access that in any way related to man, but I could not find anything that would satisfy me. In this way I hobbled along until I met with the PHRENOLOGICAL JOURNAL. I borrowed some of the numbers, and took them home to read, and, to my great joy, I found them all I had so much needed; and I drank in their contents as freely and as exultingly as the sun-scorched traveler of the desert does the delicious waters of the oasis. Finding them so well adapted to my wants, I borrowed all the numbers my friend had—a considerable pile, as he had been taking it for several years. These opened my eyes, and I looked at life in a different light from what I had ever looked at it before. My defects, on which I had gazed in almost hopeless despair, I now saw how to remedy. Although I occupy no exalted position in life, yet what I am I feel that I owe it to Phrenology.

J. W. RENEAU.

PERSONAL.

THURLOW WEED was one of six veterans of the war of 1812 who ate dinner together July 5th. They had fifteen at dinner last year, but twelve have died since then.

DAVID MURRAY, Ph.D., LL.D., has been elected Secretary of the Board of Regents of the University of the State of New York. The re-

tiring Secretary, Dr. Woolworth, has held the position twenty-five years.

MISS LILIAN WHITING, on the editorial staff of the Cincinnati *Commercial*, is a close and faithful worker, and has proven by her work that a woman can do well on a daily paper.

PRINCE LEOPOLD, of England, is in Canada, visiting his sister and brother-in-law, and at the same time making good use of his opportunities to see the country and the neighboring parts of the United States.

THE election of Dr. Alice Bennett as Medical Superintendent of the Women's Wards of Norristown (Pa.) Hospital for the Insane, is regarded by the Philadelphia *Ledger* as an excellent and most commendable step, both on account of the lady's ability, and the propriety of a woman occupying such a place.

WISDOM.

"Think truly, and thy thought
Shall be a fruitful seed."

NEVER refer to a gift you have made or a favor you have rendered.

THERE is always room for a man of force, and he makes room for many.—*Emerson.*

FROM indolence, despondency, and indiscretion, may I specially be preserved.—*John Quincy Adams.*

GOOD manners is the art of making people easy. The three sources of good manners are good nature, humility, and good sense. Good sense and integrity, if we are sure we possess them, will not make good manners unnecessary—the former being but seldom called out to action, but the latter continually.

WERE half the power that fills the world with terror,

Were half the wealth bestowed on camps and courts,

Given to redeem the human mind from error,
There were no need of arsenals and forts.

—*Longfellow.*

To be selfish and sordid, and hence indifferent to the wants and necessities of others, is to make ourselves just about as truly miserable as we have the capacity of being.

CHEERFULNESS is just as natural to the heart of a man in strong health as color to his cheek; and wherever there is habitual gloom there must be either bad air, unwholesome food, improperly severe labor, or erring habits of life.—*Busk.*

MIRTH.

"A little nonsense now and then
Is relished by the wisest men."

WHY are blushes like girls? Because they become women.

It is easy to breakfast in bed, if you will be satisfied with a few rolls and a turnover.

AN advertisement of cheap shoes adds: "Ladies wishing these cheap shoes will do well to call soon, as they will not last long."

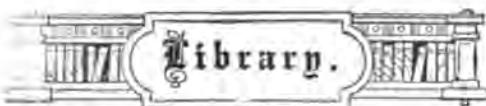
A HUSBAND telegraphed to his wife: "What have you for breakfast, and how is the baby?" The answer came: "Buckwheat cakes and the measles."

PATERFAMILIAS—"I can not conceive, my love, what's the matter with my watch; I think it must want cleaning." *Pet Child*—"Oh, no, papa, dear, I don't think it wants cleaning, because baby and I had it soaking in the basin ever so long."

LITTLE EMMA, from Washington, was sent on a visit to her cousin, who was an officer at Fort Monroe. She became homesick at last, and said, "Cousin A., please put a postage stamp on my forehead, and send me home on the cars."

A LIVING skeleton applied at a drug-store in this city yesterday for a situation as prescription clerk. "What do you know about drugs?" asked the proprietor. "Everything, sir; everything. I was a juror in the Hayden case." He got the position at a large salary.—*Cincinnati Enquirer*.

"Now, Mr. Robinson," said a fair young city visitor to the kind-hearted farmer, "won't you show us your watermelon orchard?" "I haven't a watermelon tree on the place this year, ma'am; they were all winter-killed," and his questioner wondered why he smiled so pleasantly as he answered.



In this department we give short reviews of such New Books as publishers see fit to send us. In these reviews we seek to treat author and publisher satisfactorily and justly, and also to furnish our readers with such information as shall enable them to form an opinion of the desirability of any particular volume for personal use. It is our wish to notice the better class of books issuing from the press, and we invite publishers to favor us with their recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

OTHER FOOLS AND THEIR DOINGS; or, Life Among the Freedmen. By one who has seen it. 12mo, cloth. pp. 284. Price, 75 cts. New York: J. S. Oglivie & Company.

The success of the "Fool's Errand," as publishers have expected, has produced numerous imitations in so far as the attempt to treat life in the Southern States under the form of the

political novel is concerned. This is one of them, and has the merit of plunging at the beginning right into the questions which have made so much agitation and given trouble to white and black in the South ever since the war. The situation is laid in South Carolina, and the time in the term of Governor Chamberlain. The incidents related are near enough to actual occurrences to be taken and adapted to the recorded history of the period, as minor or preliminary parts in the vivid drama. In fact, it is claimed that the writer furnishes from his own experience an account of the "Hamburg massacre," which excited no little interest throughout the North. The book, as a whole, is vigorously written, and well illustrates Southern life, particularly the part taken in it by the freedmen.

SUCCESS WITH SMALL FRUITS. By Edward P. Roe, Author of "Barriers Burned Away," "Play and Profit in My Garden," etc., with Illustrations. pp. 313. Fancy cloth. Price, \$5. Dood, Mead & Co., New York.

In finish of composition, paper, and binding, this new book has good claim to consideration as one of the best specimens of American book-making produced this summer. The publishers are to be congratulated upon a decided success, in so far as their part in the work is concerned. As for the subject and its treatment, the author has become too well known as a writer of very readable novels and as a practical horticulturist, for us to hesitate in pronouncing the first timely, and the second able. Mr. Roe has made the strawberry a specialty in his fruit-growing, and devotes, therefore, a large proportion of his book to its consideration. Very properly, too, as a general view of the fruit market and of the tastes of people prove that the strawberry is the prime choice among the small fruits. Raspberries, currants, gooseberries, and blackberries, also receive practical attention at his hands, for the work is intended to serve as a handbook to the owner of a farm or a garden. Mr. Roe brings to play, with marked success, his resources as a *litterateur*, for, although dealing with a prosaic theme, he makes his instructions as captivating as an excellent novel, interspersing them here and there with spicy incidents and personal experiences. Many varieties of the fruits are discussed, their peculiarities clearly pointed out, and their differences in quality and productiveness shown. In treating of methods of cultivation the author gives to the reader the agreeable impression that he is reading the results of long experience which have been furnished with conscientious thoroughness, and that one has but to go and do likewise to secure an approximate measure of success. Upward of a hundred charming illustrations decorate the elegantly printed pages, and make the volume suitable for a niche in our best room or for the library table.

PHRENOLOGY VINDICATED: Being a reply to an article by Dr. Andrew Wilson, entitled, "The Old Phrenology and the New," which appeared in the *Gentleman's Magazine*, January, 1879. By A. L. Vago. London: Simpkin, Marshall & Co.

The reader of the *PHRENOLOGICAL* who is familiar with our pages since January of last year, will remember the article published in answer to Dr. Wilson's criticism, and how it was shown that out of his own mouth, as it were, that *litterateur* was convicted of ignorance, not only of Phrenology, but also of Physiology, as recognized by advanced thinkers and investigators. Mr. Vago, an Englishman and advocate of Phrenology, deemed it important that some special notice should be given to Dr. Wilson's libel, and prepared this little book. He fairly and candidly exposes the errors and weaknesses of the critic, but is scarcely severe enough upon his many blunders. We almost wish that our friend Vago had read the article above referred to, which was scientifically accurate and severe without, however, being unjust toward a man who indulged his prejudices rather than a fair expression of warranted disagreement when he attacked Phrenology.

Mr. Vago has published recently another book, entitled "Orthodox Phrenology," which, in general, is a straightforward treatment of the principles of mental science, keeping in special view its relation to Christian ethics.

GROUND-WORK OF CLASSIFICATIONS: With a Panorama of Evolution, and an Exposition of Darwinism and Theology conciliated. By Charles De Medici, New York.

This effort is an abstract from a system of the universe termed the "commensurational," and is evidently the product of much thought on the part of the author. As represented by the abstract, this system is elaborate. Certain peculiarities incident to most novel conceptions appear both in the generic and specific names, and the method of illustration.

Our friends who sympathize with extreme Darwinism will find their views sharply illustrated, while the orthodox religionist has a relative representation which may not be altogether satisfactory. We think, however that both sides will scarcely agree that the author, in spite of his honest and learned endeavor, has "conciliated" science according to Darwin, and revelation according to the Bible.

PUBLICATIONS RECEIVED.

MESSRS. I. K. FUNK & Co., of New York continue the publication of their valuable "Standard Series," of which we have lately received the following:

"Alfred the Great," by Thomas Hughes, au-

thor of "Tom Brown's School-Days," etc., printed without abridgment. Paper, 20 cents.

"The Salon of Mme. Necker," taken from Documents among the archives of Coddett. Collected and edited by her great-grandson, Othenin D'Haussonville. Parts I. and II. from the French. Price, 15 cents.

"Out-of-door Life in Europe: Sketches of Men and Animal, People and Places, during two summers abroad." By Rev. Edward P. Thwing, Professor of Rhetoric and Vocal Culture. Price, 20 cents.

"Rowland Hill: His Life, Anecdotes, and Pulpit Sayings." By Vernon B. Charlesworth, with an Introduction by C. H. Spurgeon. Complete. Price, 15 cents.

"Town Geology." By Chas. Kingsley, Canon of Chester. Complete. Price, 15 cents.

FIFTEENTH ANNUAL REPORT of the National Temperance Society and Publication House, presented at New York on the 14th of May, 1880. A voluminous exhibit of the work done by the Society during the past year.

TWENTY-FIRST ANNUAL REPORT of the Trustees of Cooper Union for the advancement of science and art, May 20, 1880. Mr. Cooper has lived many years to witness the benign results of his great charity, and year after year the influence of Cooper Institute expands. It has educated thousands of young men and young women, and sent them forward in directions of usefulness which they probably would not have entered upon had not its gratuitous and liberal training been afforded.

TOWN GEOLOGY. By the Rev. Charles Kingsley, Canon of Chester, with an Appendix by Prof. Huxley on Coral and Coral Reefs. Paper. New York: J. Fitzgerald & Co., Publishers.

THE THEOSOPHIST for May comes promptly from its publishers at Bombay, India, and is replete with matter of interest to those who are inclined to the examination of Oriental questions, particularly the religious and mystical philosophy of Asia. Price per number, 50 cents.

A LIBERAL HYMN-BOOK and collection of Liberal Songs, adapted to Popular Tunes; for use in Liberal Leagues and other Meetings, and in Liberal Homes. Edited by Eliza Boardman Burns. Price, 25 cents. New York: Burns & Co., Publishers.

THE TEMPERANCE GEM.—A collection of Temperance and Gospel Songs, with Popular Tunes designed for use in all Temperance organizations, Bands of Hope, etc. Price, 10 cents. American Temperance Publishing House, New York.

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[WHOLE No. 502.



WINFIELD SCOTT HANCOCK,

CANDIDATE OF THE DEMOCRATIC PARTY FOR PRESIDENT OF THE UNITED STATES.

THE National Democratic Convention was held in Cincinnati, Ohio, on June 22d, 23d, and 24th, occupying but half the time which the Republicans at Chicago found necessary to use before making choice of a candidate. There

were 738 delegates, and the two-thirds vote required for a nomination therefor amounted to 492. The struggle among the supporters of the eight or ten men whose names were offered for the consideration of the delegates, was attended with great enthusiasm, but was surprisingly brief, as it was decided on the third ballot by the exhibition of 708 votes for Gen. Winfield Scott Hancock.

The portrait of Gen. Hancock indicates a predominance of the Vital temperament; his chest is broad and deep, his neck uncommonly large, the cheek full and heavy—he is said to weigh 230 pounds or more. The features are relatively small, as if he inherited his mother's mental and physical constitution. He evidently has too much flesh for perfect health, for the promise of long life, and also for the best mental conditions of clearness and vigor. He has such strength of digestive power, that whatever he eats is converted into nutrition, and especially into fatness, which, in excess, does not minister to clearness of mind or long life.

He has the sign of large Language; the fullness under the eye may, however, be enhanced by the plethoric state of his general constitution, that which gives the fullness seen in the cheek, the great width to the side face, and the bulkiness to the neck; still we fancy he may be a good talker, not, perhaps, a consecutive and vigorous orator; a man of the type better adapted to conversation than to sustained speaking.

His percepts appear to be full, enabling him to gather facts and information quite readily, and to hold them for use when occasion requires it. The reasoning organs appear to have been cultivated in later years; his pictures taken fifteen

years ago show less of Causality, less of fullness at the upper part of the forehead than he now possesses, showing that his mind has been drawn more into the channel of logical thinking.

The anterior brain is not massive; the strength of his development lies in the middle section of the head, where the organs which give life—power, appetite, desire for property, and the ability to push his cause earnestly—are located. He appears to have rather strong Cautiousness and Secretiveness, the first giving prudence and the second policy, and though he may talk pretty freely, he is not likely to say more than his cause requires; he can be reticent and reserved in his statements when necessary.

He appears to have a good degree of Order and Calculation, considerable mechanical talent, but not a scholarly development—languages and literature, power of statement and expression would be more manifest in him than comprehensive, theoretic power adapted to largeness of planning and appreciation of remote causes and consequences. If he were a lawyer or legislator, he would advocate and push a bill with more skill and tact than he would plan, organize, and initiate measures.

When aroused, he has a severe temper, and considering the development in the region of the ear, there seems a disposition to remember grievances and to chastise those severely who have injured him.

He has great ambition, being inclined to do and suffer much to attain and keep position, esteem, and popularity.

His temperament has a tendency to anchor him to the physical, the tangible, and the earthly; he is not strongly theoretical, sentimental, or disposed to live in the realm of the ideal. He is fond of

the good things of the table, and we think that if he would live on "half rations," instead of "double rations," he would live longer; by losing say fifty pounds of flesh would have a clearer mind and stronger character in general.

He has a warm social nature, is evidently fond of his friends, and very affectionate in his domestic attachment; those who rank "upon his list of friends" deem him genial, hearty, companionable, and devoted.

The career of the Democratic nominee has been entirely that of the soldier, and it is eminently creditable. He was born in Montgomery County, Pa., on the 14th of February, 1824. His grandfathers on both sides took part in the war of the Revolution, and his father served in the war of 1812. With these facts in view, it does not surprise us that young Hancock looked to the army as his normal sphere, and that when he arrived at suitable age he entered the military academy at West Point, whence he was graduated in 1844. In his class were Generals Grant, McClellan, Burnside, Reynolds, and W. F. Smith.

There were many students cotemporary with him who distinguished themselves in the late war on the Confederate side: for instance, James Longstreet, "Stonewall" Jackson, and others. Indeed, as we glance over the names, which in subsequent years were destined to acquire lustre for bravery and skill on many a hard-fought field, we are forced to the conclusion that General Hancock, as a student, mingled on terms of cordiality with the men to whom the country is in the largest measure indebted for services on the battle-field.

Cadet Hancock was appointed on his graduation brevet second lieutenant in the Sixth infantry, and served nearly three years on frontier duty at Forts Towson and Washita, Indian Territory, receiving his commission of full second lieutenant June 18, 1846. Early in 1847

he was detached upon recruiting service for the Mexican war, and accompanied the army which landed at Vera Cruz, March 9, 1847, under command of his namesake, General Winfield Scott. There he was engaged in skirmishes in the defense of the convoy at the National Bridge, near Jalapa, August 12, and at Plan del Rio August 15, and five days later at the twin battles of Contreras and Cherubusco, which occurred August 20, he won his brevet as first lieutenant "for gallant and meritorious conduct." Shortly afterward he was made adjutant of his battalion, and in that capacity participated in the severe battle of Molino del Rey, September 8, and the capture of the City of Mexico, September 14, 1847. This was the last serious military event of the war.

Returning to the United States early in 1848, Lieutenant Hancock was assigned to duty in the Quartermaster's Department, in which he remained until the breaking out of the civil war. He was at first stationed at Jefferson Barracks, Missouri, then at Fort Crawford, Iowa, 1848-49; at St. Louis, 1849-51, and again at Jefferson Barracks, 1851-55. Though breveted first lieutenant on the field of Cherubusco, Hancock did not get his full lieutenantcy until January 27, 1853. He was made a staff captain November 7, 1855, being then assistant adjutant-general of the Department of the West, with headquarters at St. Louis. He was stationed at Fort Myers, Fla., 1856-57, during some minor operations against the Seminole Indians. Later at Fort Leavenworth, Kan., he assisted in suppressing the disturbances which grew out of border ruffianism, from August to December, 1857. He also accompanied the expedition to Utah in 1858, marching thence to California late in that year, and was chief quartermaster of the Southern district of California from May 5, 1859, to August 3, 1861. In August of that year he was ordered to report to the Quartermaster-General at Washington, which he did in person as soon as he could make his way across the country, there being

no rapid transit at that time in the way of a Pacific railroad. He was at once assigned to duty as Chief Quartermaster of the Army of Kentucky. It was not, however, in such a capacity that Captain Hancock could secure the services and the honors which an ambitious soldier desires. He doubtless sought for and obtained an opportunity for active service in the field, as he was commissioned by President Lincoln a brigadier-general of volunteers, September 23, 1861, and given command of the first brigade of General "Baldy" Smith's division of the Army of the Potomac, consisting of four regiments.

He saw little active service during the first year of the war, his brigade forming part of the army for the defense of the national capital. His command, however, formed part of the force that occupied Lewinsville, October 9, 1861, and he was engaged in several successful reconnoissances. In March, 1862, his brigade saw its first active service under General McClellan, and participated in the action of Lee's Mills, Va., April 16, during the siege of Yorktown. At the battle of Williamsburg, May 5, 1862, General Hancock had a separate and detached command of five infantry regiments and two batteries of artillery. The enemy attacked his forces in the evening of that day, after they had successfully repulsed Hooker's assault on the Union left. They were met by Hancock at the point of the bayonet and driven, routed, from the field after a fierce combat, with a loss of seven hundred men killed, wounded, and prisoners, one stand of colors being also captured. For this service he was breveted major United States Army, to date from May 4, and lieutenant colonel, to date from May 5, his conduct being described by the Commanding General as "brilliant in the extreme." He was also engaged with his brigade in several other actions in the "Peninsular Campaign," during the middle and latter part of 1862, and received brevet of colonel United States Army.

During the Maryland campaign he was

intrusted with several important commands, distinguishing himself especially at Antietam. November 29, 1862, he was made major-general of volunteers, and commanded the First division of the Second corps at Fredericksburg, December 13, when in the desperate assault upon Marye's Heights, his division lost 2,014 men out of a total of 5,000 taken into battle, and was himself wounded. He commanded the same division in the unfortunate battle of Chancellorsville, May 1, 2, and 3, when his horse was shot under him, and he was in charge of the rear guard of the army during the retreat from that field.

At the great battle of Gettysburg General Hancock's part was very important, commanding the rear guard as the Union army advanced. General Meade sent word for him to hasten forward and assume command at the front, although he was not the ranking General. Upon Hancock then fell the momentous decision of advancing or retreating. At that moment, in fact, most of the Union troops were in full retreat through the town of Gettysburg, with the enemy pursuing. Hancock detected at a glance the capability of the surrounding hills for a defensive battle, and ordering the troops to halt and form in line of battle upon Cemetery Hill, sent detachments to occupy Culp's Hill and the Round Top, and thus determined the topography of the great battles of the following days. He reported by messenger to Meade that Gettysburg was the proper place to fight out the battle with Lee, and advised the concentration of the entire army at that place. The advice was adopted, and the following morning, July 2, it fell to General Hancock to command the right center of the Union army, which repulsed the enemy's assault after the Third corps had been broken and driven back. He also assumed command of the Third corps after the wound received by General Sickles. On the last day of that great battle, July 3d, General Hancock received and repulsed the charge of Longstreet's column, 18,000 strong. This, in the gen-

eral opinion of military authority, decided the issue of the battle of Gettysburg, and with it the failure of Lee's offensive campaign into Pennsylvania. In the thickest of the fight, while leading a line of battle against the enemy, General Hancock received a dangerous wound and fell from his horse in the moment of victory. He was able, however, to send word to Meade of the repulse of the enemy, and received from the Commander-in-chief a formal expression of thanks in the country's name and in his own for the great services thus rendered.

After a slow recovery from his wound, he returned to active duty and participated in the advance upon Richmond organized by General Grant, his corps occupying a prominent position and taking part in the battles of the Wilderness, Alesop's House, Spottsylvania Court House, where he captured Stonewall Jackson's old brigade, and Cold Harbor. He assisted also in the assaults on Petersburg, was with Sheridan in the three days' battle of Deep Bottom, commanded the Second and Tenth corps on the James, and had his last fight at Boynton Road. After this President Lincoln directed him to organize an army of 50,000 veterans, but the surrender of Lee rendered their employment unnecessary.

When hostilities ceased he took command of the Department of Missouri, and in 1866 took the field against Indians. On May 30, 1866, the thanks of Congress were tendered to Major-General Hancock "for his gallant, meritorious, and conspicuous share in the great and decisive victory of Gettysburg," and on July 26, 1866, he was made a full Major-General, United States Army, having received that title by brevet the year before.

In the year 1867, during the progress of reconstruction, and after many vexatious troubles in Louisiana, General Hancock was appointed by President Johnson to the Fifth military district, composed of Louisiana and Texas, to succeed Generals Sheridan and Mower, whose administrations had not given satisfaction.

On taking charge General Hancock issued a special order, in which he declared that the processes of war must be superseded by civil law, saying: "The right of trial by jury, the habeas corpus, the liberty of the press, the freedom of speech, and the national rights of persons, and the rights of property must be preserved." He also declared that all crimes in the district must be referred to the civil tribunals. In later orders he constantly reiterated these principles, and he also reinstated several of the civil officers who had been removed by General Mower. In the year following, when informed by the State authorities that the taxes could not be collected, and that the State Treasury was empty, General Hancock issued an order providing for the efficient levy of taxes and collection of the revenues of the State.

According to a recent writer, the events which led to General Hancock's withdrawal from the Fifth military district were as follows: A street commissioner in New Orleans having been charged with malfeasance, and a Recorder having been pronounced ineligible by the Supreme Court of Louisiana, General Hancock removed both of them. Without obeying a previous order of General Sheridan, forbidding elections without the order of the commanding General, the City Council proceeded to fill the vacancy in the office of Recorder. General Hancock then removed the two white and seven colored members of the Council who had voted for the appointment. General Grant then directed General Hancock to suspend his order of removal and report the case more fully. Afterward the removed officers were reinstated by General Grant. It was charged that this was due to the influence of Southern Republicans at Washington, who were displeased with General Hancock's course. Owing to the policy of General Grant in this matter, General Hancock, at his own request, was relieved of the charge of the military district.

He was soon afterward sent as commander of a military division to Dakota,

where he remained from 1869 to 1872. In the latter year he was appointed commander of the military division of the Atlantic, with headquarters in New York city, where he has since resided. This appointment, made upon the death of General Meade, was creditable to President Grant, as he was not then on speaking terms with General Hancock. The Democratic nomination for Governor of Pennsylvania was tendered him in 1869, but declined. He was spoken of prominently for the Presidential nomination at Baltimore in 1872.

General Hancock was married in St. Louis in 1856 to Miss Elmira Russell. He has had two children, of whom the surviving one, Russell Hancock, is now a planter in Mississippi.

In person General Hancock is fine looking and soldierly, being tall, well filled out, blonde in complexion, with clear blue eyes full of meaning and decision. His reputation as a man, like that of a soldier, is high; in manner he is gentle and unassuming, yet dignified and even-toned.

WILLIAM H. ENGLISH,

DEMOCRATIC NOMINEE FOR VICE-PRESIDENT.

THE portrait of Governor English shows an organization whose chief characteristic is strength. The Motive temperament predominates, and impresses the active and susceptible brain with emphatic energy. He is a man of quick intuitions, makes up his mind promptly, and holds tenaciously to his convictions. His intellect has much of the critical cast, so that he can display a high degree of acuteness in rendering an opinion upon a mooted question. In expression he is naturally brief and to the point, preferring to look at a question from one point of view at a time, and not to take a general view of its bearings. He is ambitious and self-reliant, prefers to make his own way in his own fashion, and tolerates little interference. Whatever he undertakes he pursues earnestly and steadily, keeping success ever in view, and despising the very thought of failure. He has, in fact, little or no sympathy for weakness and failure in the work of life, and may show at times a sharp, censorious spirit toward them. He is not a credulous, novelty-

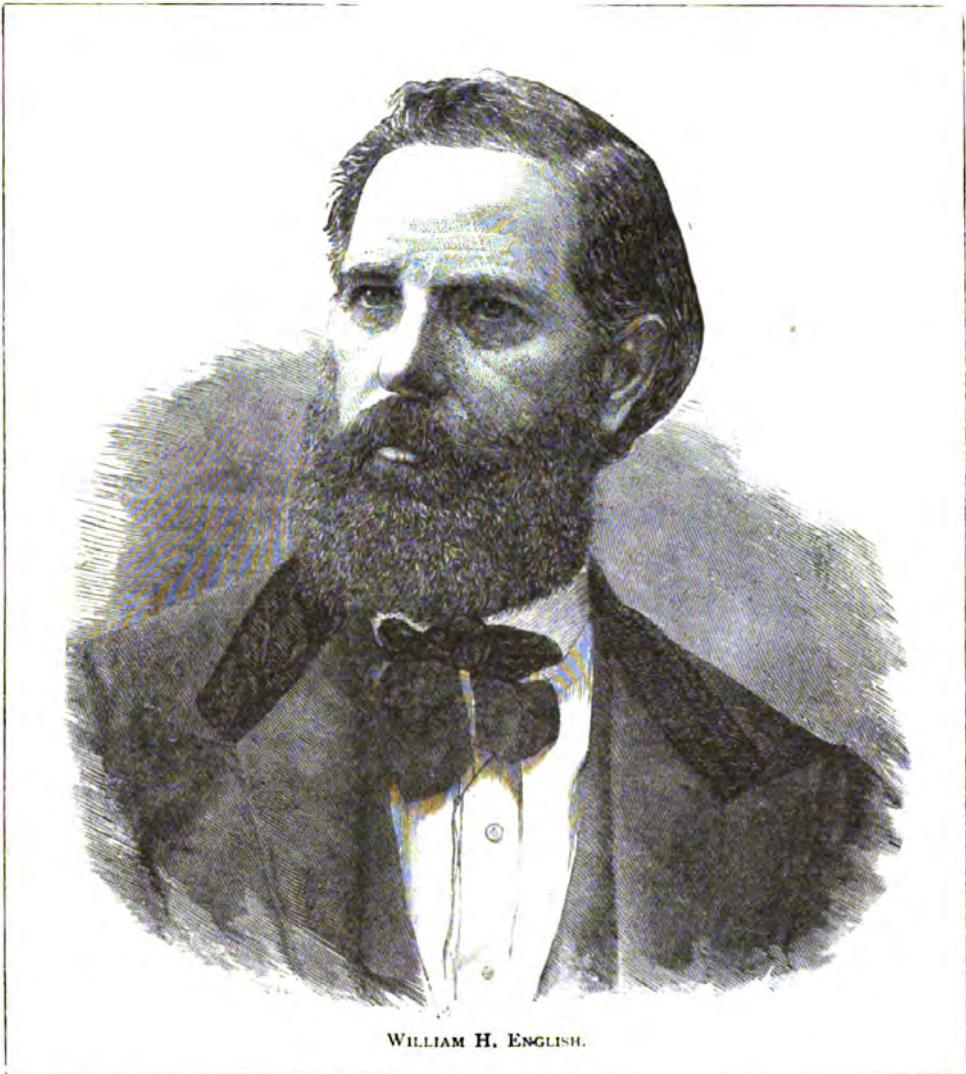
seeking man, but rather conservative and steady in his opinions and mannerisms.

William H. English was born in Lexington, Indiana, August 27, 1822, and began his political career, even before he had attained his majority, as a delegate to the State Convention which nominated General T. A. Howard for Governor of Indiana. His father, Major Elisha English, was a native of Kentucky, as was also his mother, who was a descendant of Lieutenant Philip Eastin, who served in the Revolution. After receiving a common school education he took a three years' course at South Hanover College, after which he studied law at odd times, and was admitted to the bar.

Shortly after he became of age he was appointed Postmaster of Lexington, and in 1843 was elected principal Clerk of the Indiana House of Representatives. The following year he threw himself into the political canvass with energy, and was rewarded with an appointment in the Treasury Department at Washington. Here he remained for four years, voluntarily resigning his office when General Taylor was inaugurated President, be-

cause, having supported Cass in the National Convention, he could not, he said, consistently hold office under his successful rival. In 1850 he was Clerk of the Claims Committee of the United States Senate, and Secretary of the Convention which met at Indianapolis to revise the

Kansas-Nebraska Bill. It is claimed that he, not Senator Douglas, was the first to enunciate the doctrine of popular sovereignty. He was elected to Congress a second term, against the Whig and Know-Nothing candidate, Judge Thomas C. Slaughter, and continued to support the



WILLIAM H. ENGLISH.

Constitution of the State of Indiana. In 1851 he was a member of the State Legislature, and in 1852 took his seat in Congress as a supporter of Franklin Pierce.

Mr. English was a member of the House Committee on Territories, and as such participated in the debate on the

political measures of President Pierce during the Thirty-fourth Congress. His third term covered the period of the controversy respecting the admission of Kansas under the Lecompton Constitution, which he opposed until that Constitution (which did not prohibit slavery)

had been ratified by the people. In 1858 he was elected to Congress for the fourth time, retiring in 1860, just as the secession movement assumed menacing proportions.

He started the First National Bank of Indianapolis in 1863, and was its president for fourteen years. He has been success-

ful in business, and is reported to be very wealthy. He is a widower, his wife, who was a Miss Emma M. Jackson, of Virginia, having died four years ago. There are two children living, a son and a daughter. The former was a member of the last House of Representatives of Indiana.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER III.—Continued.

THE TEMPORAL BONE IN THE CARNIVORA.

THE temporal bone of the carnivora is situated, as in man and the quadrumania, upon the lateral and middle parts of

has received our previous consideration, we note that the external surface of the



Fig. 125.—TEMPORAL BONE OF CAT. EXTERIOR.

the cranium and is double. Continuing our observations on the same animal which



Fig. 126.—TEMPORAL BONE OF CAT. EXTERIOR. OUTLINE.

temporal bone (Figs. 125, 126) shows the following features: a long process directed from within outwardly and from behind forwardly, p, p, p, showing laterally near its base a hollowing, a, designed to receive the con-



Fig. 127.—SKULL OF SHAGGY DOG.

dyle of the lower jaw ; back of this process a curved osseous plate—the scaly portion of the temporal. In cats this part is more rounded than in animals of the dog class, and in the latter it is much more developed from front to rear than from inside to outside. Consult for the clearer understanding of this difference in form the skulls of the dog (Fig. 127), the wolf, the fox (Fig. 130), and the cats represented by Figs. 133, 134.

upper margin with the lower margin of the parietal, and by its lower margin and



Fig. 128.—EAR-DRUM OF CAT. OUTSIDE.



Fig. 129.—EAR-DRUM OF CAT. INSIDE.

its sharp point with the occipital bone. Behind and below the zygoma is a round-



Fig. 130.—SKULL OF ADULT FOX.

This part of the temporal bone shows many differences in extent and development among the different species of carnivora and even in individuals of the same species. One can consult in this respect Figs. 133, 134, which represent three heads of young cats. Below the scaly portion is seen a triangular sort of ap-

pendix, q, q, q, which we have not found in man or the ape ; this bone is the ear-drum. It forms, indeed, an independent bone which one can easily detach. It is shown detached from the temporal (Figs. 128, 129). Its lower and external part is very convex, q, q, q ; its upper border forms a sort of bulb, showing at the middle a



Fig. 131.—TEMPORAL OF CAT. INTERIOR.

pendix, terminating in a point, v. This articulates throughout its length on the



Fig. 132.—TEMPORAL OF CAT. INTERIOR. OUTLINE.

groove which contributes to form, by its union with the temporal bone, the orifice

of the auditory canal, and in which the membrane of the tympanum is inserted.

Considered by its interior surface, the

the inferior margin of its zygoma. The special points in the temporal bone of the cat, which it is well to remember are

the considerable extent of the ear-drum, the form and development of the scaly division, the arrangement of the contiguous plate of the parietal, lapping over the upper surface of the petrous section.

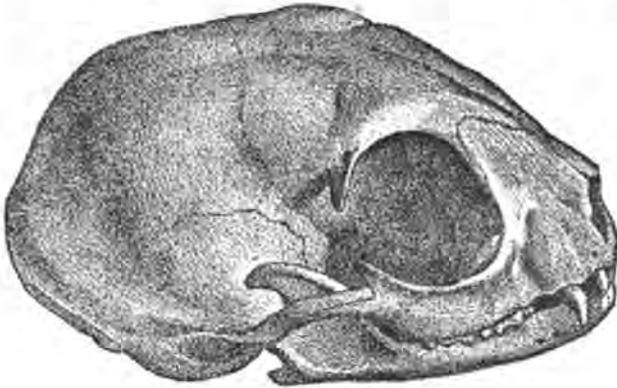


Fig. 133.—SKULL OF YOUNG CAT.

temporal shows the following points (Figs. 131, 132): first, two articular surfaces—one upon the anterior margin, s, s, s, which dovetails with the great wing of the sphenoid; the other, superior, x, x, x, x, articulating with the lower margin of the parietal of the same side; second, between these two borders the interior surface of the scaly portion, 1, 2, 3, shows impressions corresponding to the middle, lateral, and inferior convolutions of the brain. The form, extent, and depth of this fossa in the base of the skull of the cat are well shown in Fig. 9. Below this fossa is the stony or petrous portion. We did not allude to this part when the temporal bone as seen from the outside was considered, because it is concealed by the ear-drum. Nearly in the center of the internal surface the orifice of the internal auditory canal is seen, t; the remainder of the interior surface of this bone offers nothing of importance.

The temporal of the cat articulates with three bones in the skull and the lower maxillary: the sphenoid, the occipital, and the parietal. It shows besides a true jointure with the osseous part which we have designated under the name of ear-drum. It articulates also with the cheek-bone by

THE TEMPORAL BONE OF GNAWING ANIMALS.

In the temporal bone of the rabbit, the interior surface of the scaly part

(Figs. 135, 136) shows two distinct characteristics: The superior surface, b, which is irregular, articulating in front, with the external part of the frontal bone, and in the remainder of its extent with the lower margin of the parietal bone. The lower surface, m, is quite smooth and depressed; it contains the lower lateral and middle parts of the brain. Observed by its outer surface, the acoustic process presents inferiorly a rounded, protuberant mass (Fig. 137). This, commonly known as the ear-drum, is well developed in this species. The ear-drum is generally large in rodents; the beaver of the Danube, the marmot, and the dormouse exhibit it in the highest degree of develop-



Fig. 134.—SKULL OF YOUNG CAT.

ment. In the dormouse it is so extensive that it occupies almost the whole inferior surface of the base of the cranium.

Above, one notices a concave process having the appearance of the stem of a feather, at the summit of which is the orifice of the external auditory canal. Over this canal is a smooth surface, upon which lies the internal surface of the inferior process of the scaly portion. Above this and a little backward, we notice another process, somewhat uneven, which gives insertion to certain muscles. Seen within the acoustic part, the bone presents an irregular surface. The dura-mater carpets this surface, and upon it lies a part of the lower surface of the lateral lobes of the brain.



Fig. 135.—TEMPORAL BONE OF RABBIT. INTERIOR.

The temporal does not articulate with the same bone in all rodents. In the hare and the rabbit its articulation is the same; for instance, it articulates with the frontal by the anterior and superior angle; with the parietal by its superior margin; with the occipital by its acoustic portion; with the sphenoid by its inferior margin; with the cheek-bone by the zygoma, and by the cavity that is noticeable at the base of that process with the condyle of the inferior maxillary.

The temporal does not articulate with the same bone in all rodents. In the hare and the rabbit its articulation is the same; for instance, it articulates with the frontal by the anterior and superior angle; with the parietal by its superior margin; with the occipital by its acoustic portion; with the sphenoid by its inferior margin; with the cheek-bone by the zygoma, and by the cavity that is noticeable at the base of that process with the condyle of the inferior maxillary.

TEMPORAL BONE IN BIRDS.

This bone, when a bird has arrived at maturity, is formed of an osseous piece



Fig. 137.—EAR-DRUM OF RABBIT.



Fig. 138.—TEMPORAL BONE OF RABBIT. EXTERIOR.

which shows two divisions, very distinct in form, extent, and relation. (1). The superior, a, b, b (Figs. 140, 141), and (2) the

inferior, n. Examining the temporal on the surface, which corresponds to the integuments of the brain, we notice that



Fig. 136.—TEMPORAL BONE OF RABBIT. OUTLINE. INTERIOR.

the superior division, a, b, b, shows a smooth surface, varying greatly in form and extent in different species.

In a memoir published in 1807, and deposited in the annals of the Museum of Natural History, Geoffroy St. Hilaire sought to make a comparison between the osseous parts of bird crania and those of quadrupeds. That savant represents upon the plate which accompanies his treatise the head of a young chicken, from four to five months old, shown in profile, by its inferior surface. Each cranial division is marked with a letter indicating its name. According to that author, the part which we are now describing would be properly termed the parietal bone; while the piece placed farther in, and which he has indicated by the letter S, would be the os-interparietal, but this celebrated naturalist



Fig. 139.—TEMPORAL BONE OF RABBIT, WITH EAR-DRUM. EXTERIOR. OUTLINE.

had limited his observations to only one or two heads, and upon them based his conclusions, and the several analogies

which he has drawn between the bones of the skull and face of this class of animals and those of quadrupeds, appear

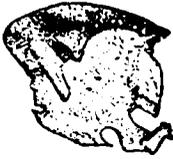


Fig. 140.—TEMPORAL BONE OF CROW. EXTERIOR.

forced. We are quite willing to leave these matters to the judgment of those who occupy themselves in particular researches connected with this subject, only remarking, that the osseous portion designated by St. Hilaire under the name *os-parietal*, is that which offers to us the most analogy with the squamous portion of the temporal in quadrupeds; and the bone which the same savant calls *inter-parietal*, does not really exist in birds, although it may appear as the representation of the *os-parietal* in quadrupeds.

This division in the hooded crow is convex, and generally less prominent in the gallinacia. Two apophyses, one posterior, b, b, quite long, and one inferior, a, much shorter, lie at the lower margin of this surface, which is covered by muscular fibers and aponeurosis. The lower portion, n, is flat and much more extended than the other; it forms by union with that of the opposite side a great part of the orbitar-plate, and half, or very nearly, of the cavity designed to receive the quadrigeminal tubercle.

Examined on its interior surface, the temporal shows two very distinct fossæ; one, above, having considerable extent and depth, 1, 2, 3; this forms the lateral superior fossa of the base of the skull, t, t



Fig. 142.—TEMPORAL BONE OF CROW. INTERIOR.

(Fig. 143), and receives the lateral parts of the cerebral hemispheres. Some arterial channels are noticeable—that placed in front being much more marked than the others. The lower fossa, c, is separated from that which we have just described by a small osseous blade, x, x, x. It is deep, and forms, in conjunction with

the semi-cavity of the occipital bone (Fig. 119, b, b), a hollow or complete fossa, in which lie the quadrigeminal tubercles.



Fig. 141.—TEMPORAL BONE OF BIRDS. EXTERIOR. OUTLINE.

In front of these two fossæ an irregular bony process is observed, beginning at 3, terminating at m. This osseous part forms the larger portion of the orbitar plate; its anterior border, 5, 5, unites with the like portion of the opposite temporal. Several openings or hollows are seen at the base of the skull. The whole anterior surface of the temporal is lined by the dura-mater, which is extremely fine or delicate in birds. Its place is upon the side of the skull, as in quadrupeds, only some parts of this bone, which we have constantly found in the latter, are wanting entirely in birds; for instance, the mastoid process, or the part which constitutes the auditory apparatus. Here this is found in the occipital, as we have shown when discussing that bone.

The temporal in birds articulates with the occipital bone by its posterior edge, v, v, v, v; by the superior, o, o, o, o, with the parietals and a part of the frontal; by its anterior edge, 5, 5, with the opposite temporal; and by the superior part of this edge with the process of the frontal represented in Fig. 84, b, b. The man-



Fig. 143.—TEMPORAL BONE OF CROW. INTERIOR. OUTLINE.

ner of articulation at this part is remarkable. The anterior angle of the temporal fits into the hollow of the frontal

(Fig. 84, d), and the blade, b, b, of the latter is covered by the little thin plate of the temporal placed before the superior fossa. This articulation in birds can be seen, however, only a short time after birth. It is very apparent in the magpie and jaw four and five days old. It is ex-

tremely remarkable in very young orioles, those not over ten days old. Finally, the temporal articulates by means of a small fossa back of the great apophysis, b, b, with the process belonging to the lower jaw, and representing the glenoid apophysis in man and quadrupeds.

THE WORK OF JOURNALISM.

IN this age of railroads and telegraphs, when all is hurry, bustle, and push, one of the most difficult things in the world is to get people to stop and think. If they read, they want something through which they can go at the speed of steam, and without any effort on their part. They have no time to think. When they read, it is for *refreshment* and *pleasure*. To all these the sentimental novels and papers of the day furnish mental food, or rather mental "stuff."

Now, is not this a great mistake and a great danger? Is such reading a refreshment to the mind? Has it not rather a tendency to weaken the mind? Is it not a sort of wide-awake dreaming? We notice that inveterate readers of light literature are generally fickle, light-headed, and incapable of successfully taking part in any measure that requires sound judgment and reason.

Would it not be more refreshing to examine the niceties of nature's laws, the wonders of the human body and mind, and those questions which have to do with the welfare of the race? Of course, the business-man can not be required in his leisure moments to wade through a long, abstruse scientific treatise. But can he not find pleasure in some good essay, a choice bit of poetry, or a short story giving a sweet, simple, and true picture of human life? Can he not get good magazines and wholesome papers? This applies to all as well as to business-men. The perusal of such literature, the rarebits of mental production, would certainly furnish more nutriment and more refreshment to the mind than is furnished by wading through the mire of some

tawdry-colored serial. We do not condemn all novels. There are some that are good; but they are few and far between. They are as scarce as good poems.

There is no doubt that Agassiz found more pleasure in contemplating a single fossil than any one could find in a lifetime reading trashy novels. But, it may be said, all have not the mind of Agassiz. True. But all have minds, and those minds are capable by culture of appreciating, to some degree, the beauties of truth.

The "respectable" man, even, will follow with his mind a "hero" through back streets and dark allies, among robbers, thieves, gamblers, drunkards, and to all kinds of indecent resorts. What if he should follow bodily in the same tracks? Would he not be disgraced? Certainly he would. Shall we respect our bodies more than our minds? Such "respectability" is obtained either through mistake or from policy.

Publishers will buy only such articles as suit the public taste. Why? Because they find greater sale for such articles. That is it. They work simply for money. I refer to publishers of the trashy, so-called literary papers of the day. Like those who take advantage of the Indian's fancies and sell him beads and block-tin at exorbitant prices, these publishers are laying up wealth for themselves by gratifying the false taste of the public.

This brings us to the great fact: the masses read this trash. They consequently have all the weaknesses that result from such a course. The youth addicted to such reading is likely to be

feeble-minded or reckless. The people so addicted are likely to be affected in the same way.

This element of silent corruption is the most dangerous foe with which we have to contend. Compared with it the wrangling of politicians is as nothing, for it is shaping the destinies of a people through the character of the thought which it produces and perpetuates. If that thought be trashy or immoral, they are

likely to be trifling and effeminate; if that thought be solid and wholesome, they will be strong and cheerful and happy.

Since in this age of printing all the people can and will read, is it not the great work of journalism to instruct and refine society? And this can only be done by putting into the hands of the people, in an attractive form, literature that is pure and ennobling.

J. M. BICKNELL.

A PRESS EXCURSION.

THE Convention of the "New York Press Association," of 1880, met at Troy, June 17th and 18th, in the audience room of the City Hall. Editors and writers for newspapers from all parts of the State were present and had a very agreeable and instructive time. The citizens of Troy invited the members of the Association to drive in carriages on the afternoon of the 17th. The route taken embraced a good part of the city and its most attractive outskirts, as Mt. Ida and Oakwood Cemetery, the Holly water-works, the paper-boat manufactory, etc. In the evening they were welcomed by acting Mayor Rhodes, in the beautiful Music Hall; the annual address was delivered by Hon. G. Fairman, long editor of the *Elmira Advertiser*, and a poem read by Mr. Charles M. Dickinson, of the *Binghamton Republican*; after which the President of the Association, Hon. J. M. Francis, held a reception in his parlors, where the company were individually introduced to Governor Cornell and many others. On the following morning at ten o'clock they took seats in carriages, and were driven to several iron foundries and manufactories, where they witnessed a variety of processes for the conversion of iron into articles of utility. Among the factories visited were the widely known and very extensive "Bessemer Steel Works," of the Albany and

Rensselaer Iron and Steel Company and the rolling mill of H. Burden & Sons, where they saw what is said to be the second largest water-wheel in the world. The manufacture of Bessemer steel, in the opinion of the writer, was one of the most entertaining sights of that day.

They were entertained with a collation at the residences of Messrs J. A. and I. T. Burden, after which they started for Cohoes, where the Harmony Cotton Mills, the largest mills in the world, and some other manufactories were inspected. Here a view of the Cohoes Falls was had, and at the Cataract House a delightful entertainment was given them. By invitation from the Troy and Boston Railway Company at seven o'clock Saturday morning the Association started for the Hoosic tunnel, through which they went and returned. Having partaken of a collation at North Adams, the company returned to Troy, where they separated for their homes.

Troy is a beautiful city, finely situated for views. From Oakwood Cemetery an extensive prospect spreads before the eye, taking in Rensselaer, the Hudson and Mohawk Rivers, and the whole of Troy with its suburbs.

Among the most noteworthy intellectual features of the Convention was the speech of Mr. Pixley, editor of the *Argonaut*, of San Francisco. He gave some very interesting information with respect

to the Chinese in California. Mr. P. is anti-Chinaman and is endeavoring to create a sentiment in the East which will help toward securing from the Government at Washington a restrictive policy affecting Chinese emigration.

These Conventions of the Press Association, held in the different cities of the State, are as schools—on the object-teaching plan—to the members who, in this way, learn more about the visited city and its industries than they would be likely to learn otherwise in a life-time. They, in their turn, publish in their papers a report of what they have seen, and thus their readers learn the same lesson, and so it is carried along, benefiting many others besides the editors.

Some of the Trojans who entertained the Association declared that the time they spent had been profitable to themselves, inasmuch as they also had learned much which was new and useful.

C. F. W.

THE ART OF THINKING.—Too much stress can not be laid upon the fundamental importance of perfect command over thought. How many a page must be re-read, how many lessons conned over and over to compensate for lapses of thought? In the possession or absence of this power over mind lies the chief difference between mental strength and mental weakness. Some men think as a child plays with a hammer, striking little blows here, there, anywhere, at any object within reach. The action of a strong mind may be compared to the stone-breaker's sledge-hammer, dealing stubborn blows successively upon one spot till the hard rock cracks and yields. When such a mind acts, it acts to some purpose and can begin where it left off without going over the whole ground again to take up the threads of its ratiocinations. Concentration and system are thus seen to be the chief elements in the art of thinking.

HALLUCINATIONS.

I DO not care to reason with Dr. Maudsley or any other scientist in regard to what is called hallucinations. These gradgrinds, in their inveterate repugnance to spiritualistic ideas, are unquestionably laboring under scientific hallucinations that would seem to nullify their own doctrines of development and evolution. Because their advance has been intensely on the rational or materialistic side of the mind, I see nothing to justify the contempt they are heaping upon those whose finer organization evolves the ideal or spiritual. We all believe the brain of the civilized man is less rudimentary than that of the savage. It is of a more delicate texture; more complex, and in the proportions of the humanizing, sympathetic parts larger, while the crueller, destructive forces, are subordinated.

This being the case, the survival of the fittest will naturally be such as can best uphold and advance the condition of the ameliorated man; the growth, steadily

progressive, of the ideal, the æsthetic, the man of government, freedom, science, art, and literature. Now, if man be immortal; if his condition in this world be the prophecy of an existence hereafter, it is natural to suppose that his faculties would, in the course of development, gradually evolve the germ of cognizance. The external, material sense, giving place to the internal, spiritual sense.

In the Christ we find the spiritual sense so preponderating that the external senses were no more than adjuncts or appendages thereto. He not only read the minds and hearts of men, but was in companionship with beings hidden to and from other eyes. He so penetrated the secrets of nature that He intimates that all physical infirmities are subject to certain states of the mind or belief, and this state, which He calls faith, He declares to be the spiritual, curative element by which healing is wrought; hence, what the people called miracles (and we

preserve the term), was no more than the natural action of advanced development in Him, and simple reliance upon a divine power in the recipient of healing.

Immortality is the natural sequence to development which, of itself, negates limitation. If our kind, from the poor, simple, blind Anthropoid was in progress of eons evolved, the Darwins, the Spencers, and Tyndales of modern thought, no less than the Oberlins, St. Therasas, and Elizabeths of Hungary, backward in time to the Saints and Martyrs, the law-givers, Moscs and Solon, and Lycurgus, the Messiahs of the nations, Zoroaster, Confucius, Buddha, and Mahomet, and greatest of all, the Christ, are we to suppose that no other and no higher revelations are to be experienced by the onward man?

Are we driven to the miserable subterfuge of asserting that these wonderful men were impostors? It seems utterly childish to say they were misled by their own imagination, deluded by their own excited nerves, and ideas took form and objective shape when all was no more than their own excited nerves and heated blood. Even if this be the case, it merely changes the ground and makes man even more wonderful than his revelations; makes him in his own right a God after the manner of Jacob Boehm. The Anthropoid has scaled the heavens, and can no more be subject to mere material laws than the particles of matter out of which suns and worlds are evolved can be annihilated. By the laws of his own being, righteously and reverently observed, his generations are becoming more and more in harmony with the God of the universe, and we shall, at length, be as Gods, royally born, truth-penetrating, and spirit-discerning.

Are men and women impostors, who see and hear what we have not the power of seeing and hearing? God forbid! Were the Saints, who, by their steadfastness, have helped to redeem the race from subterfuge and moral as well as physical cowardice, laboring under a poor delusion that sinks them from martyrs to

mere deceived men and women, who died from obstinacy? When the heavens were opened to them and they perished amid exultant cries of holy rapture, was there nothing at stake needful for them to assert, and no truth in the divine vision open to their eyes?

When Joan of Arc heard voices and saw beings who transformed her ignorance into knowledge and power and effective soldiery, it would be blasphemy to say that delusion and imposture could effect what she realized. Suppose the exultation declined, the rapt vision disappeared after a time, and the poor girl died pitiably in darkness and dread, she will still remain on the page of history as one of the most wonderful creations that ever came athwart our horizon, and fell a victim to the cruelty of the times. To say there was no vision, no seeing beyond what others saw about her, and she was the tool of priestcraft or soldier, will not account for the unwonted courage, wisdom, and forecast she displayed. She was what she believed herself to be, and nothing less. It is easier to believe in facts than in hallucinations. Imposture may accomplish much, but when it overturns kingdoms, and establishes empires, as in the case of Mohammed, the visions that accompany the movement are of a solid, realistic kind, no more to be doubted than the historic facts that supervened.

Cromwell had his visions and ecstasies, and it is the fashion to call him a hypocrite, but his fastings and prayers went with the vision of the great Democrat, and did more to exhibit the spirit, and establish the freedom of England, than all the prayers of all the hierarchy of the Established Church. It would be well if such hypocrites could multiply both here and in England. Imposture does not create heroes, statesmen, and reformers.

Scientists enlarge upon the action of the imagination as well as the sensitiveness of the nervous system as productive of hallucination. It may be that these are the very states required to give vitality to what may not be wholly illu-

sive, and yet partially so, owing to the incompleteness of the organization, by which the seer has glimpses only, and he is tempted to struggle for the full light, when it would be more honest to wait, and as in human legal testimony, say, "I do not know, it is not clear."

The question comes home again and again, Is there any reality in these things? When a person in good health, without any previous thought of an individual, sees him visibly presented to the eye, why should he consider it a trick of the senses? He might conjure up an image by dwelling upon the subject, but when all his thoughts are in another direction, I do not see how the image in question is to be referred to an act of the imagination. We have the testimony of thousands of persons whose integrity and good sense are unquestionable, who have seen such things. Their word would be unchallenged in a court of law, but when it is a phenomenon, something out of ordinary experience, people hesitate to believe.

I wake from a pleasant sleep. The night is a dark, tempestuous night, the rain beating furiously upon the roof, and the wind howling at sash and crevice. My light has been extinguished, and my room ought to be totally dark, but it is not. On the contrary, luminous rays are about my bed, and a beautiful child, the sweet image of a golden-haired darling who had gone onward years before, is leaning by my side. I am not surprised nor awe-struck. Somehow it seems most natural, and as the light slowly fades and the sweet image grows indistinct, and nothing remains but the wild war of the elements, I think how tranquillizing such heavenly visitants might be to us; but friend after friend departs and I, who so long for their companionship, see them no more, though others declare that spirits come and go almost unbidden to them.

From this I infer that in myself the power of discerning such manifestations is but a partial, temporary exercise of a faculty in which the conditions are transient, and the faculty rudimentary. I do

not believe it to be hallucination; it is not disease, nor is it the result of imagination, for what I both see and hear comes upon me unexpectedly when my thoughts are in no way exercised in that direction.

I have a firm belief in the immortality of the soul, of its progressive nature, of its innate tendency to what is true and beautiful, its infinitude of possibilities; that it is always emancipating itself from what is unworthy, discordant, or evil in any way. I believe in an Infinite Father, who loves His child and extends to it a helping hand, and is mindful of all its endeavors, and pitiful over its shortcomings; and, as its faculties expand under the influence of divine affections, it naturally happens that spirits kindred to itself will associate with him, and be more or less manifest to him as his conditions of biology are favorable.

I know of no more terrible orphanage than the materialist makes of man. Born into conditions by which he may scale heaven or descend to hell; poised amid divine and devilish proclivities, he is left in utter darkness and dread to suffer without remedy or cause; be virtuous without moral results; aspire to be only the victim of a mockery of the faculties he has attained through eons of growth. Such an estimate of our being casts suspicion and terror upon the whole system of a universe in which we find ourselves. Without a benign progressive evolvement which no conditions of life or change or death can frustrate, we are no better than miserable atoms of destiny, whose friends and devils mock at our struggles in the abyss of never-ending darkness and misery. But we are conscious of the opposite of all this, which would be a libel upon the beneficence of the Father of our being.

Readers of Charlotte Brontë will remember how strikingly, in "Jane Eyre" and in "The Professor," if I mistake not, either that work or "Valette," she precipitates the fate of her heroine by an unwonted voice or cry, by which she learns of the state of her lover, etc. A friend inquired

of her why she made use of this weird superstition, to which she answered, with a manner that implied her own experience :

"We know that such things have been!"

In this relation I will record what happened to myself of a similar import, in the hope that some of your readers may suggest a solution of what, to my mind, admits of but one reading, namely, the wide-spreading sympathies of all life and nature, and that the blessed unseen ones participate in our grief. We know "such things are," and why conceal them?

On the 4th of July last, myself and family were invited by a friend to pass the day with them at a secluded farmhouse, green to the very threshold. We were all in good health and spirits, and the walk through the pine woods was not oppressive, a walk of nearly two miles. We had some fine singing, conversation, and an excellent dinner which all enjoyed. In the course of the afternoon, I found myself suffering from a sense of presentiment which I could not cast aside, notwithstanding my utmost efforts to do so. I gave no expression to a feeling that might mar the pleasure of the group of intelligent friends and happy children,

but so oppressive did it become that I grew ill and retired early.

No sooner was I alone than my ears were conscious of cries and sobs as of persons in distress. Wailings in a low key were pitiful to hear. I covered my head, and tried in every way not to hear, but it would not be. The sad, heart-sobs could not be put by. I arose several times and went out. The night was a windy, misty one, with a slight fall of rain. In vain did I strive to think this boding wail might be smothered. It was not a new experience. I had heard it before, out over the sea and from distant lands, and never had it been a meaningless sound, and now I knew that deep sorrow awaited me.

Is this superstition? Is it delusion? Is it hallucination? Whence came the sounds, so unexpected, so full of grief?

I only know the fact. I know it was.

I will not dwell upon the tragical event that was transpiring far away on the coast of North Carolina. At that very time four lovely girls, my granddaughters, two in early childhood, and two in the first flush of young womanhood, perished in Beaufort harbor by the upsetting of a sail-boat!

ELIZABETH OAKES SMITH.

EDGAR A. POE AND HIS POETRY.

WE have in our possession an old newspaper that contains the following announcement :

BOSTON THEATRE.

For the Benefit of Master Payne.

HAMLET.

Hamlet,	Master Payne.
Laertes,	Mr. Poe.
Grave-digger,	Mr. Bernard.
Ophelia,	Mrs. Poe.
Queen,	Mrs. Powell.

After which a Musical Entertainment, entitled :

PAUL AND VIRGINIA.

Paul,	Mrs. Woodham.
Virginia,	Mrs. Poe.

Mrs. Poe respectfully informs her friends and the publick that her Benefit will be on Wednesday evening next.

This brief record indicates the parentage and standing of the immediate ances-

tors of our poet. We marvel that the son, with his imaginative temperament, during his many trials of want and disappointment, should not have followed the adventurous footsteps of his parents.

The depreciative memoir of Poe that precedes his volume of poems in the edition of 1876 is libelous. His publisher can not be excused for having permitted it to go forth attached to Poe's writings. In this scurrilous proem our author is depicted, full-length, as a vagabond, villain, drunkard, gambler, and libertine. No doubt Poe had grave faults of character, and was of a badly-balanced organization. Boot-blackening denotes a thrifty pursuit—but, alas, magazine writing begets only a precarious livelihood. Al-

ways restive, elated or depressed, as circumstances affected him, under provocation, Poe became moody, reckless, and quarrelsome, and readily made enemies among his compeers—some of whom remained life-long adversaries.

For years Poe was a needy borrower of small sums of money, and resorted to shifts and subterfuges to keep his head

Magazine for 1845, he says, in the *Broadway Journal*, of the same year, that "it bears no resemblance, and is a gross wrong." The picture in Redfield's edition his friends pronounce "idealized;" but those recently published in "Gill's Life" and Miss Rice's "Memorial Volume" are said to be authentic likenesses. The former, however, being merely a wood-



EDGAR A. POE.

sheltered, and his hearth-fire ablaze. Magazine publishers paid him at the rate of four dollars per two-column page. In his dealings our author was not always conscientious; and, when hard pressed by needs, differing versions of his poems were sold, under varying names, to several publications.

Of his portrait, issued in *Graham's*

cut, is all too smooth and rotund to be distinctly characteristic.

In person Poe was of medium height, erect and well formed. His motions were nervous, his manners prepossessing, his conversation earnest and eloquent. Although his predilections were always those of a Southron, it is now known that he was born in Boston during a brief visit

of his parents in that city. Himself says in one of his letters: "We like Boston; *we were born there.* The Bostonians are very well in their way. Their pumpkins are delicious; their poetry is not so good." Let us forgive Poe's literary judgment of his fellow-townsmen; our many anthologies indicate that he certainly must have been in error. The very distinguished English "philosopher," Mr. Tupper, once wrote from London to a literary friend in America: "Shall we make Edgar A. Poe famous by a notice in *The Literary Gazette?*" This would-be Warwick, however, lost his opportunity for crowning a king. Poe became self-crowned, and to-day ranks an autocrat in three departments of letters—criticism, romance, and poetry.

We do not altogether accept as genuine the modesty assumed by our author in the preface to his poems, where he says: "I think nothing in this volume of much value," etc.; "Events, etc., have prevented me from making at any time any serious efforts," etc. Poe had much unemployed time; and if the poetic impulse had oftener haunted him, he would irresistibly have been compelled to do its bidding. Our author's entire collection of verses, including the dramatic "Scenes from Politian," numbers only forty-three pieces, many of them brief, some "album-y," others occasional. His best versions were composed slowly. Every sound and expression must have been carefully weighed and balanced. Their form was primarily considered, and, lastly, their substance evolved and compressed to fit his form-limitations.

As a poet Poe represents more of wizard than seer; has more of manner than matter; is more ingenious than emotional; more mystic than philosophic; more amatory than heroic. Although a good story-teller in prose, he relates no incident or narrative in verse. His subjects partake of the bizarre, fantastic, and extravagant. As Mrs. Whitman says: "He could never write an occasional poem, nor adapt himself to the taste of a popular audience."

Never was poet more fond of refrain. Excessive iteration was another of his hobbies. Again may be noticed all too frequent recourse to parenthesis—resorted to as a measure of art, to produce variety, or to acquire a rhyme-word where none readily offered. On general principles parenthesis is only a blemish that interrupts continuity and directness of purpose. Poe had a large vocabulary. He compels uncommon words and word-compounds into difficult rhymes and metres. Expressions like these are forcible and original: "On the night's Plutonian shore" (The Raven); "Quaff, oh quaff the kind Nepenthe" (The Raven); "The naphthaline river" (For Annie); "The ghoulish-haunted woodland of Weir" (Ulalume); "The scorias river" (Ulalume); "Peccavimus, but rave not thus" (Lenore); "Flapping their condor wings, Invisible woe," etc. (Conqueror Worm).

At times we encounter mannered expressions, such as: "The lolling lily;" "the monarch lolls;" "the world lay lolling;" and also not an over-fondness for posing for rhyme on the word "heaven." The sonorous sounds "ore" and "more" were favorites with poets long before the days of Poe. But no one succeeded like him in making them perform effective service. Thus we quote from "To One in Paradise," "No more—no more—no more;" from "The Raven," its "Nevermore;" from "Lenore," "The sweet Lenore hath gone before;" "his name's 'No More;'" from "To Zante," "Thy charms shall please no more;" "Thy memory no more;" from "The Haunted Palace," "And laugh, but smile no more."

Among others, we notice these obscure and archaic expressions: "Red litten windows" (Haunted Palace); "The mists of the Taglay" (Tamerlane); "The red levin" (Israfael); "Halidone" (at the close of Politian).

Again there are frequent allusions to all too remote localities and objects, as: "Distant Aiden" (The Raven); "Porphyrogene" (Haunted Palace); "Eblis" (Tamerlane); "Videlicet a tent" (Fairy

Land); "Old Alberto's daughter" (To the River).

Allusions to the heavenly bodies, mythology, and ancient history are frequent. Occasionally "heaven" is spoken of; but more frequently we have displays of pandemonium and its inmates. Things grim, ghastly, horrible, sheeted and shrouded, entombed and weird, in the forms of ghosts, ghouls, demons, fiends, phantoms, shadows, and spectres, are oftenest made to appear. Rare is any reference made to animated nature. Neither lion nor lamb, wolf nor hind, horse nor hound, are mentioned; but in their stead we have the toad, newt, bat, lizard, and worm—a sorcerer's stock in business. Of things ornithological—dove, swan, humming-bird, and songster are all ignored; and only taloned birds-of-prey and carrion-feeders—the albatross, eagle, condor, vulture, and raven—glorified. Of trees the poet makes no mention.

As a literary reviewer, Poe is entitled to distinction for the independence and analysis of his criticisms. Before his day the judgment of American reviewers was oftenest expressed in vague generalities. Condemnation or praise was given without reason to justify it. Flourishes of fine writing, long quotations, and repetition of English opinion were the reviewer's capital. The convenient adjective "exquisite" stood, as now, among lettered drivelers for a multitude of merits. Himself a master of euphony and expression, Poe had a clear understanding of the proprieties of language and the demands of art. Recklessly did he fling his critical firebrands among the dry haystacks of literary shams and authorlings. It must, however, in fairness be said, that at times he was biased, and habitually dealt too considerately with the productions of charming lady writers and influential members of the press. On other occasions, jealousy or fancied wrongs warped his judgment.

Poe delighted in good workmanship. In his opinion musical expression and technical ingenuity made ample amends for poverty of conception. All too often

he paraded the elementary rules of composition, and occupied himself with the yard-stick for rhetorical measurement; or prated, in learned *formulae*, of *dactyl*, *iambus*, and *anapest*, while the spirit of the composition under review escaped his notice. And now, returning to "the poet," let us proceed to examine the characteristics of some of his versions.

THE RAVEN

justly gives its name to our author's volume. Taken "for all in all" we are disposed to consider "The Raven" foremost among American poems. However this may be, some acute and thoughtful reviewers, among whom, as we write, eminent names come to our mind, "can see nothing in it." According to their manner of thinking, the poem lacks substance, point, and purpose; it embodies no philosophy, it teaches no moral. The gnarled tree, the nest-building robin, the gravedigger's spade, the background landscape, all are wanting. *Cui bono?* is the logical inquiry. And yet, "most potent, grave, and reverend seigniors," apply this same interrogatory to Coleridge's "Ancient Mariner" or Shakespeare's "Hamlet," and the reply shall be the same.

To us "The Raven" is simply a sombre, controlling phase of its author's feelings, allegorically interpreted. Analytically considered, we discover therein *wording* that is forcible and novel; *rhythm* original and peculiar; a *refrain* euphonic and impressive; a *subject* weird and mysterious; and a *composition*, in its nicety, strikingly grand and unique. No poem within the wide range of English literature is more phenomenal. Its technical achievements are immense. Few versions so long, devoid of action and narrative, are equally effective and well-sustained. We doubt that the author could anew have produced its equal, unless he had repeated himself largely in manner and sentiment.

Poe must have pondered long and lovingly, and dreamed and watched wearily to bring to bear upon the many lines all his resources of skill in the art of versi-

fication. First was the strong conception, then the novel framing of both metre and refrain; and lastly came the consideration of sound and detail. He may have derived hints from Cresset's French poem "Ver Vert," or Dickens' "Barnaby Rudge;" but such common property as talking parrots and croaking ravens was never placed in the custody of any one or two authors. Our poet certainly is indebted to neither foreign celebrity for the ethereal substance and masterly *technique* of his composition.

Mr. John H. Ingram, who has written of Poe learnedly in books and magazines, surmises that "The Raven," in form and manner, had a forerunner in some verses entitled "Isadore," which were contributed by Mr. Albert Pike to the *New York Mirror* of October 18, 1843. For comparison it may be instructive to extract two of the stanzas:

"Thou art lost to me forever—I have lost thee, Isadore—

Thy hand will never rest upon my loyal bosom more,
Thy tender eyes will never more gaze fondly into mine,
Nor thine arms around me lovingly and trustingly en-
twine.

Thou art lost to me forever, Isadore!"

* My footsteps through the room resound, all sadly and
forlorn;

The garish sun's lines flauntingly upon the *unswept*
floor;

The mocking-bird *still sits and sings* a melancholy
strain,

For *my heart* is like a heavy cloud that *overflows*
with rain.

Thou art lost to me forever, Isadore!"

And yet all this, with its dust and cobwebs, its silent, singing mocking-bird and drowsical heart—its jumbled imagery, excruciating pathos, feeble expletives, and forced rhyme—how very unlike Poe!

In the edition of our author's work of 1876, the form of "The Raven" is distorted by subdivision of the stanzas into eleven lines; whereas Poe himself measured his version in six-line stanzas. In the author's name we would respectfully protest against this mutilation. The third line of the second stanza, which now reads:

"—— vainly I had *sought* to borrow," etc., originally stood,

"—— vainly I had *tried* to borrow," etc.

Years ago one of the British Quarterly Reviews made this erroneous statement: "The metre (of 'The Raven') is a modification of that used in the conclusion of Miss Barrett's 'Lady Geraldine.'" It is well known that soon after the publication of Poe's "Raven" Miss Barrett wrote to one of her friends in America: "Our great poet, Mr. Browning, the author of 'Paracelsus,' and 'Bells and Pomegranates,' was struck much by the rhythm of the poem." In "Lady Geraldine's Courtship" she afterward adopted the form of "The Raven." Her version was published subsequent to that of our author. "The Raven" first appeared in the *American Whig Review* for 1845, preceded by an editorial complimentary heading. The publisher's *honorarium* paid was exactly ten dollars.

"Lenore" was originally named "The Pæan." In the early version, published in *Russell's Magazine*, we find the name "Helen" in place of "Lenore." The poem is a kind of dirge—musical—and in the main carefully wrought.

"To Helen" (No. 1). First published in the Baltimore volume of 1829, and republished in the *Southern Literary Messenger* of 1836. This imaginative, youthful effusion concerns the "Helen" of the poet's boyhood, Mrs. Stannard, of Virginia. We find the verses copied in Lowell's prefatory remarks to "Poe's Works;" but, strange to say, they are not embodied in the author's collection. It may be well to repeat them on this occasion:

"Helen, thy beauty is to me
Like the Nicean bark of yore,
That gently, o'er a perfumed sea,
The weary, way-worn traveler bore
To his own native shore.

"On desperate seas long wont to roam—
Thy hyacinth hair, thy classic face,
Thy Naiad airs have brought me home
To the glory that was Greece,
And the grandeur that was Rome.

"So in your brilliant window-niche,
How statue-like I see thee stand!
The agate lamp within thy hand,
Ah, Psyche! from the regions which
Are Holy Land."

"To Helen" (No. 2) was first published in Mrs. Kirkland's *Union Magazine*, New York, 1848. The passage,

" Oh Heaven !—oh God !
How my heart beats in coupling these two words !
Save only thee and me !"

is not in the original rendering. This was a genuine love-epistle, sent to a distinguished lady-poet of Rhode Island, which eventually led to a serious attachment.

Eminently romantic, ardent, and possessed, our author here attains the apex of his ability as an imaginative poet. We think this quotation will serve to confirm our assertion :

" And thou, a ghost amid the entombing trees,
Didst glide away. Only thine eyes remained.
They would not go—they never yet have gone," etc.

" They follow me—they lead me through the years ;
They are my ministers—yet I their slave," etc.

Other passages have equal merit.

"Ulalume" was first published in the *American Whig Review*, New York, 1847. The poet states that this version "is autobiographical." Weird, sonorous, and ingenious, though not as melodious or impressive as "The Raven;" in skillful elaboration it is excelled only by that poem. Mrs. Whitman told the reviewer that "Poe preferred 'Ulalume' to 'The Raven,'" and added: "He certainly read it more impressively, with a look as if he were filled with its solemn splendor."

"The Bells" was first published in *Sartain's Union Magazine*, Philadelphia, 1849. Anthologists have singled out this poem for especial commendation. Among the rest, it has been chosen in Mr. Whittier's Collection as representative of Poe's genius. Here, for once, we have mannerism "run mad." There is novelty of form and artistic construction; but the wording is, mostly, "tinkle" and "tintinnabulation," with little variety, soul, or sentiment; whilst the refrain becomes distressingly repetitious. Professor John H. Hart, formerly editor of *Sartain's Union Magazine*, states that the first draft consisted of only two short stanzas, as follows :

" THE BELLS—A SONG.

" THE bells ! hear the bells !
How fairy-like a melody there swells
From the silver tinkling bells

Of the bells, bells, bells !
Of the bells !
The bells !—oh, the bells !
The heavy iron bells !

" Hear the tolling of the bells !
Hear the knells !
How horrible a monody there floats
From their throats—
From their deep-toned throats !
How I shudder at the notes
From the melancholy throats
Of the bells, bells, bells !
Of the bells !"

But before publication the author reconsidered and extended his composition to its present dimensions. This version owes its acceptance to the elocutionists, who ring their many changes and inflexions on its endless iterations. As poetry, nothing could be more tedious and uninspired.

"An Enigma," originally published in Mrs. Kirkland's *Union Magazine*, New York, 1848, was called "Sonnet." Dedicated to Sarah Anna Lewis, and formed on the same acrostic plan as "A Valentine." We are unable to determine what is here meant by the term "tuckermanities." Does the word slurringly refer to the late Mr. H. T. Tuckerman, the literary reviewer ?

"Annabel Lee." Soon after Poe's death an authorized and paid-for version was printed in *Sartain's Union Magazine*, 1850. At about the same time Mr. Griswold, Poe's literary executor, caused the appearance of an imperfect copy in the *New York Tribune*; and, strangely enough, the poem also appeared as original in the *Southern Literary Messenger*. It was the last written of our author's versions. The second stanza originally began—

" She was a child and I was a child," etc.

Melodious, tender, and romantic, but extravagant in language and sentiment, uncommonly repetitious, and endowed with little underlying thought. A manuscript copy was sold at auction in New York city, some years ago, for one hundred and eighty dollars. Does not this circumstance illustrate that it was injudicious in the late Horace Greeley, after Poe's death, to offer for sale publicly, in

the columns of the *Tribune*, one of Poe's fifty-dollar promissory notes for the paltry sum of five dollars?

"The Haunted Palace" was originally printed in Brooks' monthly *Baltimore Museum*, in 1833; afterward embodied in the prose tale of "The Fall of the House of Usher," published in 1839. Distinguished British reviewers have singled out these verses for special commendation. The subject is allegorical. Poe says of it: "I mean to imply a mind haunted by phantoms—a disordered brain."

We think the merit of this composition lies mostly in euphonious wording and skillful construction.

"The Conqueror Worm" was first published in *Graham's Magazine*, Philadelphia, 1843, and reprinted in the New York *Broadway Journal* of 1845. In the early version the fifth line of the second stanza stood:

"At the bidding of vast shadowy things."

And the fifth line of the fifth stanza read:

"And the seraphs all haggard and wan."

As a whole, it is dramatic and powerful, but extravagant. The climax in the fourth stanza, where "the blood-red thing" appears, is more startling than satisfactory. The close is strong and suggestive. But who, or what, precisely, is "The Conqueror Worm?" Is it the worm of the still?—of the coffin?—is it sin—is it death?

"The Sleeper" was first published in the *Southern Literary Messenger* of 1835, and named "Irene." After undergoing reconstruction, these lines again appeared as original, under their present title, in the New York *Broadway Journal* of 1845. The first half describes a lone and lovely sleeper, one of the glowing forms of Titian. But the second part abruptly divulges that this lovely, dreaming sleeper is only a cold and ghastly corpse. We are more shocked than stimulated by this discovery. Some of the descriptive passages, although a little obscure, are picturesque. We notice these:

"The lily lolls upon the wave,
Wrapping the fog about its breast,
The ruin moulders into rest."

"The bodiless airs, a wizard rout,
Flit through thy chamber, in and out."

"I pray to God that she may lie
Forever with unopened eye,
While the dim, sheeted ghosts go by!"

We have interpolated a comma after the word "dim;" the sense seems to require it. But the line—

"Soft may the worms about her creep"—

closely following descriptions that are lovingly pathetic, is repulsive.

"Dream Land" was originally published in *Graham's Magazine*, in 1844. The twenty-first, twenty-second, twenty-third, and twenty-fourth lines are repetitions of the four previous ones; the six closing lines are identical with the six at the opening; all of which is an unnecessary extension. The meaning of—

"— an Eidolon named night"

will remain Greek to most readers. This version, with its ghouls, blackness, and chaos, and its nightmare manner, can not be rated among Poe's most successful compositions.

"Eulalie," first published in 1845, is enjoyable, dainty, lover-like verse, skillfully worded, and cleverly constructed. We are here reminded of the songs of the Elizabethan dramatists.

"For Annie." Here the subject-matter does not accord with our sense of what is fitting for poetry. Surely these verses belong to the hospital or asylum. One might with equal propriety indite a Monody on the Small-pox, or a Sonnet to the Toothache. Much hardihood of feeling is necessary to turn one's infirmities and transgressions to account of poetry. For her to whom these melancholy strains were addressed, we can only proffer our commiseration:

"The moaning and groaning, the sighing and sobbing," etc., were probably self-imposed penalties; and "that horrible, horrible throbbing"—the "nausea"—"the fever that maddened the brain"—"the torture of thirst," etc., might readily have been re-

ferred to natural causes, which come of doing violence to the laws of health and sobriety.

"Scenes from Politian" was first printed in the *Southern Literary Messenger* of 1836. Here we find little characterization. The *situations* are commonplace; the *story* lacks interest; the *language* is neither poetic nor impressive, but deformed by excessive iteration. Our dramatist has made a strange selection of names for his characters. "Politian" (it might as well have been "Politician") and "Baldazzar" (why not "Belshazzar"?) are chosen to indicate a pair of British noblemen. One of the best passages occurs where "Lalage" handles her mirror, saying:

"Ha! here at least's a friend—too much a friend
In earlier days—a friend will not deceive thee,
Fair mirror, and true! now tell me (for thou canst),
A tale—a pretty tale—and heed thou not
Though it were rife with woe. It answers me,
It speaks of sunken eyes, and wasted cheeks,
And Beauty long deceased—remembers me
Of Joy departed—Hope, the Seraph—Hope,
Inurned and entombed!—now, in a tone
Low, sad, and solemn, but most audible,
Whispers of early grave untimely yawning
For ruined maid. Fair mirror and true—thou liest
not!

Thou hast no end to gain—no heart to break."

This is genuine and pathetic.

Part IV., where the lovers meet in the garden, conjures up memories of "Romeo and Juliet," to our author's disadvantage. "Lalage" asks her lover, "Knowest thou the land?"—and we naturally turn to Goethe for an extension of the query. Subsequently "Politian" wordily exclaims:

"—— I will kneel to thee
And worship thee, and call thee my beloved
My own, my beautiful, my love, my wife,
My all; oh, wilt thou—wilt thou, Lalage,
Fly thither with me?"

Then the lady interposes—

"A deed is to be done—
Castiglione lives!"

To which tragic cue her lover grandiloquently responds—

"And he shall die!" (*Exit*).

Surely all this is in the line of extravaganza and burlesque. Further on occurs

some time-honored dramatic turns of expression—such as: "I clutch thee" (*Macbeth*). "Thou reasonest well" (*Cato*). Then we have a sword-encounter, quite in the manner of "blood and thunder" theatricals. Observe:

"*Pol.* Draw, villain, and prate no more!

Cas. Ha!—draw?—and villain?—have at thee then at once, Proud Earl! (*Draws*)."

At the close our dramatist indulges in a sort of legal language, where he says:

"There is *no let or hindrance* to thy weapon—
Strike home. I will not fight thee," etc.,

rounding the passage with this stout Elizabethan oath:

"Now's Death and Hell!"

'Tis a queer medley, and sometimes borders on the ridiculous.

"Sonnet—To Science" was printed in Poe's early volume, dated 1829. As a composition of youth it has uncommon merit, and, in our opinion, would not discredit some of the older poets. The early volume of Poe's poems was issued in his eighteenth or nineteenth year, in Baltimore, soon after our author had left West Point.

"Al Aavaaf" was written in Poe's seventeenth year, and gave its name to his early collection of 1829. This long version is encumbered with too many explanatory notes. Some writers hold that a poem to be complete should be left to explain itself. Both Lowell and Emerson assent to this doctrine. Here we note fitting visions of Coleridge's "Albatross" and "moony sky." In the fourth line Circassia is "bob-tailed" into "Circassy." Lines seventy-six and seventy-seven read—

"—— Fante!
Isolad! ora! Fion di Levante!"—

all of which, by the bye, is repeated in one of our author's later poems, "To Fante." Wording like this unfairly presupposes a reader's familiarity with the Italian language. Of the passage—

"Some have left the cool glade, and
Have slept with the bee," etc.,

Poe, *the critic*, would have said that the last word of the first line should have

been transposed to the beginning of the second.

"Tamerlane" was first published in Poe's early volume of 1829, and dedicated to his friend John Neal. It lacks novelty, point, and purpose. We are sometimes expectant of "Timour the Tartar," but he never turns up.

In Part II. there is a queer allusion to "*beautiful Gomorrah*." Mr. Neal told the present reviewer that, on the evidence of these early poems, he predicted Poe's ultimate success; and that he for a long time stood alone in his favorable estimate of Poe's genius.

In pronouncing on Poe's poems, it is only fair to say that, while we indulge in pointing out their blemishes and shortcomings, we are also fully alive to their merits. To present their numerous felicities, and to define the charm of their

beauty and power, would require much space and frequent quotation. Our author's "good wine needs no bush;" its merits are clearly apparent to any average intelligence.

IN MEMORIAM.—E. A. POE.

SAY I am stoic—one who failed to know
When rhymes are kindled by an inner glow;
Say I am pauper—borrowing at best—
That all my point is farce, my pathos jest.

Say, though I hew the log to stately form,
I ne'er to mind resuscitate the worm:
Say I by inches do, in childish play,
With word-mosaic line by line inlay.

If foul traduction serve thy purpose well,
Unrein thy tongue, that, reckless, it may tell
How hunger galls me: or how cups inflame
And tip with venom every shaft I aim.

Say all of these; then 'vengeful vent thou'it find,
And gather audience fitting to thy kind.
But dare not say I ever dimmed one gem
Of purity in beauty's diadem.

WILLIAM WEIDEMEYER.

NOTES ON THE PHYSIOLOGICAL PATHOLOGY OF THE BRAIN.

[ABRIDGED from the original article, published in *The Journal of Psychological Medicine*, October, 1879.]

THE title of this paper may lead many to anticipate the object I have in view in its composition. It is in great part to call the attention of my medical brethren to the respective labors of Drs. Hughlings-Jackson, Ferrier, and Brown-Séquard. Many are aware that the gentlemen named enjoy the credit of having added not a little to our knowledge of cerebral physiology and pathology; it is, however, a source of regret that teachers of medical science of such recognized ability and of so high a reputation should be found the advocates of opinions so very antagonistic or contradictory as are those of the two first named, when contrasted with Dr. Brown-Séquard's published views on the same subject. The "localizers," as Drs. Hughlings-Jackson and Ferrier are named, would seem to this present time to enjoy the larger amount of support or credit; whilst Dr. Brown-Séquard's "inhibitory" theory is comparatively considered nowhere. I hope to

prove by the following remarks that it is more than probable the largest amount of physiological and pathological truth is to be found away from or outside the teachings of each, or of all the three gentlemen here named. Dr. Hughlings-Jackson, it is well known, has made his mark in the profession by an attempt to localize the abnormalities of the brain; to assign to the morbid changes of its several parts certain and specific signs and symptoms. His theory of "discharging lesions" as well as of temporary and permanent organic changes occurring to the cerebral mass and its several parts—with their individual outward signs or symptoms, as seen in epilepsy, tetanus, chorea, etc.—his theory (I say) is well known and accepted, in great part, by the profession. Let me add that the pathological investigations of Dr. Hughlings-Jackson and the experiments of the Ferrier school have this one feature in common—viz, both or all such (investigations and experiments) are designed and prosecuted with the view to demonstrate the sure and certain *localization* of

both the motor functions of the brain— as well as of those several morbid changes occurring to this same organ, the presence of each one of which is said, as has just been stated, to be indicated in an especial manner by well-marked signs or symptoms. Many recent writers have expressed themselves in the strongest terms in favor of Dr. Hughlings-Jackson's pathological doctrines; and many more have conceived a marvelous affection for the vivisections of Dr. Ferrier and their results; and these results the press, both general and medical, has declared to be "the greatest scientific discoveries of the present age," and to have surpassed in importance "all preceding knowledge." Dr. Carpenter, the long-continued opponent of Gall and Spurzheim's "localization" teachings, is now constrained to accept, with even much laudation, the "data" of Broca, Hughlings-Jackson, and Ferrier, in so far as *aphasia* is concerned. The "admirable experiments" of the last-named, he (Carpenter) affirms have afforded some reason to believe in the "localization," so long and persistently denied by him, and that the time is now come to "modify" or "abandon" his former and long-cherished antagonism to Gall, Spurzheim, and the Combes. As before intimated, Dr. Brown-Séguard has put himself in a position of direct hostility to the teachings of both Dr. Hughlings-Jackson and Dr. Ferrier, and this being the case, it is surely expedient, if not essential in every way, to ponder closely and well the relative claims of the gentlemen named on that profession of which they are, in any case, eminent and much-honored members.

Now Dr. Hughlings-Jackson affirms: (1) That the researches of Ferrier demonstrate the truth of what he has long urged on his medical brethren, that "discharges of convolutions" develop movements as in epilepsy. (2) That the proximate cause of epilepsy, as of the movements seen in chorea, is located in the gray matter of the convolutions. That the epileptic convulsions and the choreic twitches are "one of degree rather than

of kind" "having the same centric causation." (3) That hemi-plegia, "hemi-chorea," "hemi-spasm," and "hemi-contraction" (a mixture of palsy and spasm) are each one and all located in the corpus striatum. (4) That disease located in the right hemisphere is indicated by symptoms affecting the left side of the body and *vice versa*. . . .

Dr. Brown-Séguard denies: (1) The existence of parts on the surface of the brain deserving the name of motor centers. (2) The assertion of Todd and Carpenter, backed though it is by both Hughlings-Jackson and Ferrier, that the corpus striatum is, in any sense, a motor center; and certainly not for both the arm and the leg.

In so far as the corpus striatum is concerned, Dr. Brown-Séguard adds the following highly significant remarks, viz: "Given disease of the corpus striatum, you may or may not have paralysis of either the arm or the leg, or both. Given the complete destruction of the corpus striatum, then there may not necessarily be any paralysis of either a leg or an arm."

It is concluded by Dr. Brown-Séguard, that even in diseased states of the corpus striatum where the paralysis is found, *then* it is due to an "irritation producing on distant parts an inhibitory influence." Dr. Semple, in an article contained in the *Journal of Psychological Medicine*, tells us what, indeed, the preceding remarks seem to justify, "That Dr. Brown-Séguard, who has perhaps done more than any other living investigator to localize the functions of the brain, now publicly announces that his own previous results have proved fallacious, and that the brain acts as a whole, and not by the separate agency of its individual parts That there is no necessary relation between the seat, the extent, the kind of cerebral lesion and the symptoms that may appear from its influence." Now, there is, as I believe, a way, and but a single way, by which we have it in our power to escape the dilemma into which Drs. Hughlings-Jackson, Ferrier, and Brown-Sé-

guard place us. There is no help for us but to accept, as we are bound to do sooner or later, the physiology of the brain as taught by Gall and Spurzheim. To this we must come, or forfeit our claims to rank as physiologists. Physicians and surgeons of whatsoever rank, or of no kind of rank, may continue to call *Phrenology* "rot," and to laugh at it—may pretend to scorn those who have devoted the years of a fairly long medical life to its investigation—but the *truth* will live, will have its due. Do we accept the doctrine of progression, of evolution, and fail to attach to it the inevitable conclusions? Do these not demonstrate *bonâ fide* that the brain of man—so ample, so wonderfully contrived, so exquisitely protected, so well nourished as it is—*must* execute offices in the animal economy of the most important and indispensable kind? Strange, indeed, it is that this marvelous structure (the brain), these cerebral hemispheres in man—the crowning points, as they are, in his organism—should at this day be so much disassociated with their true and normal functions, so much denied their fair and very legitimate offices in the animal economy! The functions of the brain's cortex are not yet estimated as they should be, and the consequence of the many false and mischievous views taught in connection with its physiology is simply this—its pathology is seriously at fault.

We are taught by a host of the best men of the day that our knowledge of this complicate nervous system of ours has been reached by degrees inconceivably small. From the zoophyte to man we see a gradual increase of parts, a slow yet sure amplification of nervous structure. Is not the embryo life of a given animal the index, the type, of all beneath that animal in the scale of living beings? Are we not assured that the perfect brain of man has in its mode of growth—its accretion and development—assumed in due order of sequence so many temporary states of being, each one of which is the representative of the permanent type of

the lower forms of life, as seen even in fishes and reptiles, to say nothing of birds and mammals? Is it not taught in our schools that nature starts from the most simple to reach the most complex, and exhausts, as it were, the structure of all other animals before she arrives at her *chef d'œuvre*—man? Now, in what consists this the grandest achievement of nature's laws?—in what, but the development or creation in the *genus homo* of the anterior and superior cerebral lobes, the superadded instruments of altogether new functions—functions which, being altogether mental, *i.e.*, of an intellectual and emotional nature, and not concerned else than sympathetically, so to put it, in the lower or merely animal movements—the automatic or excito-motory phenomena—can have but a very secondary relation to the morbid phenomena which belong to epilepsy, tetanus, chorea, and so on? From this point of view it is not possible to connect, as cause and effect, the diseased conditions found in the hemispherical ganglia (Solly) with the convulsive and nervous disorders named. The labors and discoveries of not only Gall, Spurzheim, and the Combes, but of Marshall Hall, Granger, Mayo, and many more, seemed threatened by something like an extinction; there appears a danger lest such labors and such discoveries may lose their fair and legitimate hold on physiologists.

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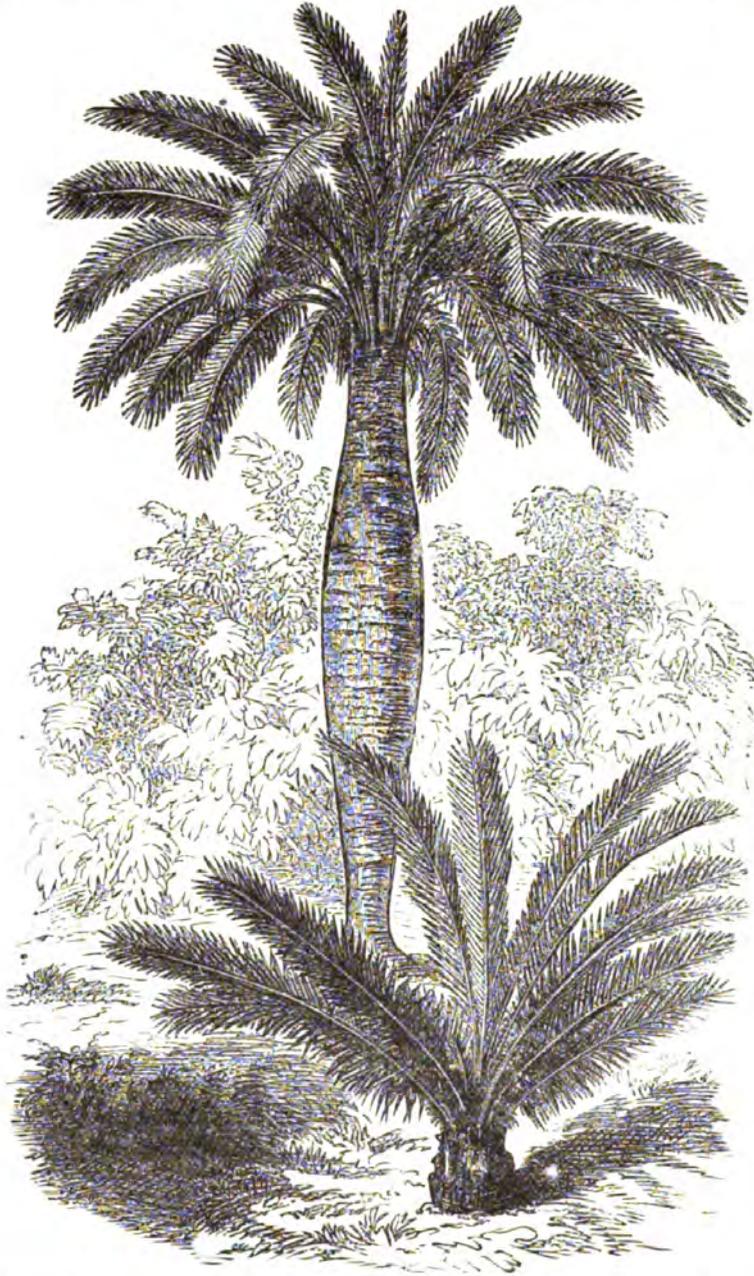
(*To be continued.*)

AN ANCIENT GOOSE.—The Prattsburg, N. Y., *News* says there is a goose in that town twenty-six years old. The veteran is at this time a patient sitter, and is expected to bring off a brood of twelve goslings in a few days. She lays an average of twenty-five eggs per year. She is maimed, and blind in one eye from an encounter with a fox while defending her nest, but is accounted good for a score of years to come, or, as the editor maliciously suggests, would serve a good purpose for boarding-house use.

THE COQUITA PALM.

THIS species of palm, designated by the botanist as the *Jubica spectabilis*, is a native growth of Chili, but has spread into other parts of South America, where it is cultivated for its valuable products. It yields the *Miel de Palmo*, or palm honey, which is so highly esteemed by the people there. The obtaining of this

coveted article is at the sacrifice of the tree. First it is cut down; then the graceful crown of long and slender leaves is



is lopped away, to catch the sap which flows from the wound. By cutting a thin slice from the end every day the flow is kept up for several months. A good tree will yield 90 gallons. This sap is boiled

into other parts of South America, where it is cultivated for its valuable products. It yields the *Miel de Palmo*, or palm honey, which is so highly esteemed by the people there. The obtaining of this

down to the consistency of treacle, and used instead of sugar. The tree bears also small nuts, which are edible, and are exported in considerable quantities. The Chileans let their cows and oxen do the husking of these nuts in a peculiar manner, as follows: The cattle are very fond

of the green husks, and, being allowed to feed upon them, swallow the nuts whole.

Afterward, when chewing the cud, they eject the nuts, which are found in small heaps, entirely free from husks, in places where the animals have congregated.

THE STORY OF A PEDLAR.

“IT is only a pedlar, mother; he wants to stay all night—shall I let him come in?” The speaker was a charming young girl, fair as a May-dawn. As she stood there holding the door ajar, waiting for her mother’s reply, she made a pretty picture of rosy health and rustic beauty—her pinned-up sleeves leaving bare beautifully-moulded arms, her soft brown hair caught back with a brown ribbon. She wore a dark calico dress, a blue flannel jacket, and over all a large checked cotton apron to protect her apparel while engaged in kitchen duties. Her mother sat in an easy-chair by the fire, and though an invalid, her now wrinkled face was sweetly expressive of hope and faith.

“Certainly, Rosina, tell the poor fellow to come in; I wouldn’t turn a dog from my door such an evening as this.”

It was indeed dreary looking; the short winter’s day, which had been mild at daylight, was closing in with a driving sleet storm, and the wind was as keen as a knife-blade. Rosina accordingly stepped back through the passage, and said to the man standing on the steps with his pack on his shoulders, “Mother says you may stay.”

The pedlar quickly stamped the mud off his feet, and followed the girl to the room where her mother sat—the largest and warmest apartment of a huge, double log-cabin. The spaces between the well-hewed logs were neatly plastered and the walls ornamented with numerous pictures, cut from illustrated papers and tastily framed in autumn leaves and the graceful silver-gray moss of Southern forests. There were home-made rugs before the fire, and the mother’s chair and a

small carved walnut table stood near her, on which were a German lamp, filled and trimmed ready for lighting, a Bible, a magazine, and a batch of papers. The large bed in the corner was draped with a snowy counterpane, and twisted round the posts as well as arching over the white curtains of the window, were Christmas decorations of holly, mistletoe, and cedar, it being the eve of that most joyous holiday known in the South and Southwest.

Mrs. Clayton was the widow of a Congressman, who in his day had thrilled Senates and fascinated galleries of auditors with his eloquence. Nature had lavished her gifts upon him; his handsome person appeared always to advantage through his carriage of easy grace and manner of polished ease. A New England education to back his native talent of oratory had fitted him to become at once, without a long apprenticeship of demagogism, the political idol of the rude Western people among whom he lived. He already had a comfortable inheritance, increased by the golden stream poured into his lap by a successful law practice. An elegant and luxurious home, a lovely wife, and two budding daughters seemed to fill his cup of happiness to the brim. But elated perhaps by too much prosperity, undervaluing the blessing of perfect health and such easily-won wealth, he abused these good gifts in the drinking saloon and at the gambling table. For years he drank freely, but seldom becoming brutally drunk, without *apparent* injury to his health; for years he gambled on and yet lived lavishly at home, but at last, outraged nature reproved him sharply. A

disease of the nerves attacked and fairly maddened him with unassuaged agony. Nothing but the most powerful doses of the deadliest anodynes gave him a moment's rest, and in one of his terrible paroxysms he precipitated the end by deliberately blowing out his own brains. His younger daughter, Virginia, had been watching with him that morning, and he himself sent her into an adjoining room to get the morphine bottle. The sound of the pistol recalled her, and when she beheld the terrible spectacle she sank down and died at her father's feet.

In a few weeks the bereaved widow gave up to the creditors the elegant town mansion where she had lived and entertained her friends with so much magnificence and liberality, and retired to a small farm entailed on her in her girlhood by an eccentric uncle, which till her time of trouble and poverty she had scarcely been aware of possessing. Here she and her daughter Rosina lived in the greatest seclusion and closest economy until the maturity of the latter and the requirements of her social nature had led her to associate with the rather rude young people of the neighborhood, who, recognizing her superior talent, culture, and beauty, readily acknowledged her leadership.

As the pedlar entered, Mrs. Clayton spoke courteously to him, bidding him draw near the fire and warm himself. The young man deposited his pack, and sitting down, opened conversation in a modest manner by remarking upon the variableness of the climate and the prevailing complaint of "chills."

"I suppose you are a foreigner?" said the old lady, regarding him with some curiosity.

"Yes, madam, from Ireland, and, if you will excuse me," his face relaxing in a very agreeable smile, "your question reminds me of a similar one propounded to me only this morning by the widow Brown, who lives in your neighborhood; and when I had told her my birthplace she said, 'Poor creeter, aint you tired of totting that pack clare from thar?'"

Mrs. Clayton could not help smiling, well knowing the vagaries of old Mrs. Brown. That person was in the habit of saying she "didn't see no use in larnin; she allers got along mighty well without it;" and yet its lack had made her the laughing-stock of a pedlar.

"I suppose," replied Mrs. Clayton, "you did not set out from the Emerald Isle as a pedlar?"

"No, madam, but as a runaway school-boy."

"Indeed! how could you leave your parents at such an age?"

"They were dead, madam; I ran away from my brother, who had the care of me, and expected by that means to exchange his guardianship for that of my eldest and favorite brother, who had emigrated to America."

"And did you succeed in reaching him in safety?" asked Mrs. Clayton, with an air of real interest.

"Alas! madam, when I arrived in Savannah—his home—I learned that he had died a month before of yellow fever."

"How sad!—and what did you do then?"

"I got a situation in a store as errand boy, where for several years I was glad to earn my board and clothing."

"And did you never go to school any more?"

"No, madam; but I tried to make up for the want of it by studying at night, and reading when I had a few odd moments in the day."

"But you left Savannah after awhile?"

"Yes; my employer's brother moved to Arkansas, and persuaded me to come with him, promising to give me a clerkship in the store he intended to open at Red Bluff Landing. I remained with him two years, and then determined to invest some of my savings in a pack and explore the country on foot."

"Well, really yours is an interesting story. Let me introduce you to my daughter;—what is your name, sir?"

"Charles O'Connell," said he, bowing gracefully to Miss Clayton, who, in the act of setting the table for supper, slightly

inclined her pretty head. She was followed and assisted by Jim Hooker, the hired man, who attended to the outdoor business, and was looked upon as a kind of protector as well as dependent by the widow and her daughter. He had been a protégé of Mr. Clayton's, an orphan whom he had raised as his body-servant, and was quite devoted to the family. The supper was liberal, and consisted of articles mainly the preparation of the fair Rosina's own hands, as her mother exultantly informed the stranger. The young lady had doffed her big apron and put some of the Christmas holly and mistletoe berries in her hair; but though she waited on the young pedlar graciously, there was yet a something of *hauteur* in her bearing which showed his quick discernment that however kind she might wish to appear, she yet felt herself on a much higher plane than any mere pedlar could ever hope to be. She was indeed indulging in that feeling of caste which is disposed to regard all wanderers as vagrants or cheating adventurers. The country was full of them—men with all kinds of packs, sewing-machine agents, and soap-receipt venders; and Rosina was inclined to denounce the whole crew, without discrimination, as shirkers of honest labor and hard-bargained drivers, who made money by imposing on the credulity or the necessity of others. She was almost provoked with her gentle mother for her tone of consideration to the stranger, yet when she furtively glanced at his really handsome face, his bright, candid eyes, and the hair that curled around his high forehead, she could not resist a favorable impression and the dole of at least a distant politeness. He addressed himself, however, chiefly to her mother, in reply to whose inquiries he gave a graphic description of the "serpentless isle" and a forcible sketch of what he denominated the wrongs of his countrymen. Evidently this young pedlar had not breathed the air of America for nothing, and quite as evidently the fires of patriotism burned brightly in his breast.

After supper a huge dish and an im-

mense bowl, in which was a silver ladle, engraved with Rosina's name, and a waiter with glasses, were produced; then a basket of eggs, a dish of sugar, and a bottle of whisky. Mrs. Clayton explained to her guest that it was "a custom in the country" to make up a large supply of egg-nog Christmas eve, to which every visitor or chance-comer should be "treated during Christmas;" but, added she, "I think it a custom more honored in the breach than in the observance; but this is a piece of indulgence to Rosina, who expected a small party of neighbor girls to-night; I don't approve, but trust they will not abuse my leniency."

Mr. O'Connell very cheerfully assisted in making the egg-nog, but refused to taste, saying he made it a rule of his life never to drink a drop of spirits. Just as the great bowl with its foaming contents was placed on the sideboard there was a loud "halloo" at the gate, and presently two buxom-looking girls bounced into the room, talking and laughing boisterously as they came, followed by their brother, who bore his fiddle wrapped in a blanket-shawl. The elder of the two, Miss Eudora Brown, instantly recognized Mr. O'Connell as the pedlar who had stopped at her mother's house that morning, and familiarly addressing him with "Hey, old fellow, got here ahead of us, did you?" proceeded to give Rosina a smothering embrace, who, softly whispering, "Why, Dore, how can you be so familiar with that pedlar?" received for answer, "You go 'long, Rosy—a pedlar's good as other folks to my thinking," in tones so distinct that Rosina was sure the stranger overheard, and she struggled with conflicting feelings, mortified that even a pedlar should see her on such apparently intimate terms with so coarse a girl as Dora Brown, yet vexed with herself for caring for the opinion of a "wandering vagrant."

When the Browns had partaken of the egg-nog and cake, Tom, the brother, produced his fiddle and played for his sister and Rosina to waltz—the latter having kindly taught the neighborhood girls

the lessons she had learned from a French dancing-master when a child. To her intense disgust, Eudora, after two waltzes, marched boldly up to the pedlar and proposed to him to dance a schottische with her. He caught Rosina's expression, sprang to his feet, and went through all the movements with ease and grace. As he led Miss Brown to her seat, she loudly exclaimed: "You are the beetenest partner I ever gallivanted with!"

On his pallet that night, in the big attic under the sloping roof, fragrant with the odor of winter apples and wheat, the "pedlar" made up his mind to work henceforth with a very special object in view.

The next morning when he drew out his pocket-book to pay his bill, Mrs. Clayton repelled him with a significant gesture. "No, sir, it shall never be said that a Clayton charged a traveler for a night's lodging. You are welcome to such fare as we had to give you; but don't insult our poverty by offering us money."

"Perhaps then, madam, you will accept something from my pack? You are very kind to me, but indeed I had no right to tax your hospitality. I have really been well entertained—so well that I could hardly render an equivalent in money; but do permit me to make up to you in some way for the trouble I have cost you. I have here some elegant dress patterns—silk, delaine, and chale."

"I will look at them and perhaps *buy* some," said the lady, emphatically.

As the pedlar proceeded to open his pack, the Misses Brown, who had spent the night there, came in with Rosina to examine the "pretty things." One pattern of chale, with a fawn-colored ground, besprinkled with rosebuds and leaves, caught Rosina's eye and fancy at once. "Oh, mamma, do get that for me," she whispered—"I will take it as a Christmas gift," and inferring her wishes from the expression, the pedlar at once offered the pattern to Mrs. Clayton at a figure so much below cost, that with involuntary incredulity she closely scrutinized the

fabric in her hand, but observing O'Connell flush, she with great good breeding immediately closed in with his offer, paying his price, but unconsciously receiving twice the amount his board would have cost at an ordinary hotel.

Months passed away and brought a blooming June. One evening when the old log-house looked fairly transfigured in its summer drapery of white jessamines, climbing roses, and honeysuckles, and Rosina was at work among her annuals, she heard the gate-latch click, and turning, confronted the pedlar of Christmas eve. He looked tired and was wiping the beady perspiration from his forehead as he approached.

"Good-evening, Miss Clayton," was his greeting, bowing distantly; "will you let me rest a while and show you some new goods? I have a piece of French muslin that I think will rarely become you."

Somewhat embarrassed between her liking for the man and contempt for his occupation, her pride of caste and womanly curiosity to see that pretty dress, Rosina blushing invited him into the house, where her mother was sitting in the passage, and hastened to bring a pail of fresh water from the spring, while Mrs. Clayton gave a cordial welcome to the visitor. She informed him that her health was considerably improved, and that she could now walk with only the aid of a stick. When Rosina came in with a glass of cool water for him he was showing her mother an exquisitely fine pink-and-white striped organdie.

"Oh, that is as pretty as my variegated peonies!" she exclaimed enthusiastically. "I must have it to wear to the barbecue next week," and then she stooped to her mother's ear, whispering, "I have eggs enough to pay for it, ma—at least if he will let you have it as cheap as he did the chale."

"I hoped to sell it to you when I bought it," remarked O'Connell, his blonde face coloring deeply.

The old lady still hesitated, and it being yet early in the evening, the pedlar

prepared to leave, but she urged him so earnestly to remain all night, that he, nothing loth, tossed his pack aside and began to talk. "I do assure you, lady Clayton," said he, showing his fine teeth in a smile, "I have seen some queer specimens of humanity since I bade you adieu Christmas morning. I have walked fifteen hundred miles, all in the bounds of this State, and sold over a thousand dollars' worth of goods. One evening I found myself in an extensive 'deadening,' following a foot-path which I had been told led to a habitation where I would be likely to sell a good many things. I heard the most unconscionable yelling, shouting, and screaming as I approached; so long-continued and indicative of strong excitement that I was fully persuaded some terrible calamity had befallen the people to whose house I was directing my steps. Just on the edge of the 'deadening' I came upon a singular scene. A wretched cabin without even a worm fence around it, stood there—a mud chimney at one end, against which stood some ash-barrels; and racing round and through the house I beheld a tall, bearded man in a hunting shirt, dragging after him the hide of some wild animal, and rushing in pursuit a pack of hound puppies, five or six boys, and one yellow-haired girl. I dropped my pack and looked on silently, nobody noticing me for at least half an hour. Then the head of the family having paused to take breath, caught a glimpse of me and sang out: 'Helloo, stranger, how d'ye do? Jest go in and make yourself at home. We air only teaching the puppies to *bear-hunt*. This is the hide of an old bear I killed in December.'

"The hut had a dirt floor and the 'old woman,' (the only name by which I heard her addressed either by husband or children), sat on a bench beside a smouldering fire nursing a babe and smoking a clay pipe. Her parchment face lighted up when I told her I was a 'pedlar,' and she at once bestirred herself to get a supper of 'long collards,' bear-meat, and corn dodgers. The six boys and yellow-

haired girl had a fight over the viands, *chunking* each other across the table with bits of bread and swearing fearfully. Slang seemed their vernacular, and though I am acquainted with most Western idioms, theirs nonplussed me completely."

"I suppose you think our backwoods people perfect heathen," said Rosina.

"If by 'perfect heathen' you mean people who are ignorant of the religion and refinements of the nineteenth century, Miss Clayton, yes. I think that style of folks may be so regarded, but yet they have some excellent traits: I believe they are honest, I am sure they are brave, and don't tell lies."

"Why, that is saying a great deal for them," said Mrs. Clayton; "we should pity their ignorance and respect their integrity. My good old neighbor, widow Brown, whose geographical blunders amused you so last winter, you remember, Mr. O'Connell, is as kind a soul as ever lived. She would put herself to any trouble, endure any privation to help a sufferer."

Thus launched upon the sea of talk, our pedlar was in a most animated mood by the time tea was served, and as he ate, he quoted poetry and displayed an acquaintance with history and general literature that fairly astounded Rosina.

"I actually could admire that man if he were not a pedlar," she said to her mother that night when they were alone. "Isn't it astonishing how well he talks and what refinement he evinces. He seems to have Longfellow at his tongue's end. I was very much mortified when he asked me how I liked the 'Golden Legend' to have to own that I had never read it. I shall borrow the book from Mr. Markham and read it right away, so that no other peripatetic shall have the chance of making me blush for ignorance on that score."

"I don't think you will be likely to meet another 'peripatetic' that will know much about Longfellow; and allow me to say, my daughter, that it really grieves me to see you continue to indulge those

prejudices that I have tried so hard to eradicate from your mind. No species of labor is in itself degrading, though one may make any occupation lowering by indulging a false spirit of shame. It is said that Leonidas when chided for sweeping his city streets declared: 'A man may make any profession honorable, but no profession can make him so.' You seem to have faith in Phrenology; now, Mr. O'Connell has a head and face that is strikingly like that of the sculptor, Millmore. If the indices are to be trusted, this pedlar is destined to be respected by his fellow-men. Don't you remember Peter's dream and the warning voice, which said, 'What God has cleansed call not thou common,' which he interpreted to mean that he should go and preach to those whom he had stigmatized in his Jewish pride as 'Gentile dogs'? Now, my darling, let us be careful how we apply that epithet, 'common,' especially when the person in the case is a man who has hewed his own way through the world, and having been his own schoolmaster, we find can teach us."

Considerably impressed by her mother's gentle rebuke, Rosina turned over in bed and fell to dreaming.

The young lady attended the barbecue in company with Eudora Brown and her mother, the old lady being the only available chaperon. Rosina wore her pink-and-white organdie, a Leghorn hat trimmed with a wreath of roses, and carried a pink silk parasol in her hand.

The first person she saw on reaching the barbecue grounds was Mr. Charles O'Connell, driving her old friend, Mr. Markham, in a shining new buggy. They directly joined old Mrs. Brown and her charges, and Rosina dropping behind with Mr. Markham, Eudora, with her usual boldness, proposed to O'Connell that they should hasten forward and join the "bran dancing" under the arbor. "I can't keep my feet still when I hears that music," said she, roguishly shaking her curled switch, and coquettishly turning her rouged cheek toward him. She wore a flaming deep red dress, a scarlet sash,

and a hat loaded with a whole flower garden.

"My dear," said Mr. Markham to Rosina, "I do hope you will not slight my young friend, Mr. O'Connell, to-day if he ventures to pay you any attention. He is a gentleman, although he has gone peddling through the country. I knew his brother in Georgia—a man of undoubted integrity and good education. This young man looks very much like him. Every one who has dealt with him in this section gives him a good name for honesty and genteel behavior, and now that he is going to open a store at Brown's Cross-roads, right in your neighborhood, you will have it in your power to do him some kindness in a social way."

"Oh, well, I'll not 'slight' him, for your sake, Mr. Markham, and as to being 'kind' to him, mamma will be enough so to make up for any deficiency on my part. She is as much carried away with him as you are."

Despite her light tone, Rosina rather desired to dance with the "vagrant," who had arrayed himself very neatly, and in her heart of hearts was not a little piqued because he failed to approach her entirely, except once for a moment merely to hand a saucer of ice-cream. If he admired her at all he did so at a very respectful distance, devoting himself to the wall-flowers.

Early in September the "store" was opened, and the peripatetic became a fixture. He was attentive to business, which he conducted on a cash basis or very short credits; and, strange to relate, he kept *no whisky* to sell by retail or wholesale, notwithstanding he had groceries—flour, molasses, sugar, coffee, etc., in addition to dry-goods and sundries; and, notwithstanding "everybody" had told him that "everybody else kept *sperrits*," and he wouldn't be able to keep up his business without that "chief of drugs," and essence of groceries; and yet Mr. O'Connell's store speedily became a most popular rendezvous. The girls went there to see the "handsome Irishman," as well as to buy his well-selected ribbons and cali-

coes; the old folks went because they got goods that "wore well;" and the boys to hear O'Connell talk and sing. His influence over them was altogether good. He established a literary society and reading-room; he was the leading spirit in getting up tableaux and Thespian entertainments, and he was especially liberal to the poor.

Meantime, Rosina, though she longed to do so, never went near the new store, and because Mr. O'Connell boarded at widow Brown's ceased visiting there. When she met the gentleman she was as distant as ever, notwithstanding the recollection of his handsome face had caused her to reject two wealthy suitors. Mr. O'Connell maintained his reserve, though calling occasionally to see her mother, to whom he also frequently sent presents of fish, game, and fruits.

When eighteen months had passed away, establishing his business on a secure foundation, Rosina received a note from him proposing to escort her to a church festival which was to take place in the academy at the Cross-roads. He would call for her in his buggy that evening if she would go.

"Who would have thought a 'pedlar'

could write such a beautiful hand or word a note so gracefully, mamma?" said she, showing the scented billet to her mother.

"My dear, will you never cease speaking in that taunting way of Mr. O'Connell? I believe he divines your ideas and therefore avoids you."

"Yes, mamma, I will promise never to make fun of him again if you will let me go with him to-night."

Mrs. Clayton looked at her dubiously, but consented, and showed her pleasure by expressing entire approbation when the young lady appeared dressed in a fawn-colored robe, and looking as sweet as the rosebuds that besprinkled it.

When she returned from the festival that night she left her escort fastening his horse at the gate, and running in to her mother, showed her a heavy gold ring on her finger, at the same time exclaiming, "Oh, mamma, what do you think, I've promised to marry *my pedlar*, if you'll consent, and I know you will, for I'll never be happy without him. I rejected Tom White and Jack Harwell for his sake, for I've loved him, mother, ever since the Christmas I saw him first, only I was too proud to own it."

VIRGINIA DURANT COVINGTON.

OUR SHIPS AT SEA.

How many of us have ships at sea,

Freighted with wishes, and hopes, and fears,
Tossing about on the waves, while we
Linger and wait on the shore for years,
Gazing afar through the distance dim,
And sighing, will ever our ships come in?

We sent them away with laughter and song,
The decks were white and the sails were now,
The fragrant breezes blew them along,
The sea was calm and the sky was blue,
And we thought as we watched them sail away,
Of the joy they would bring us some future day.

Long have we watched beside the shore

To catch the gleam of a coming sail,
But we only hear the breakers' roar,
And the sweeping night wind's dismal wail,
Till our cheeks grow pale and our eyes grow dim,
And we sadly sigh, will they ever come in?

Ah! poor sad heart, with its burden of cares,
Its aims defeated, its worthless life
That has garnered only the thorns and the tares,
That is seared and torn in the pitiful strife,
Afar on the heavenly golden shore
Thy ships are anchored forevermore.



THE RELATION OF FOOD TO MORALS.

[AN excellent and practical discourse on the above topic was preached by the Reverend J. F. Clymer, in the First M. E. church of Auburn, N. Y., in June last. A full report of this discourse having been supplied us, we are pleased to publish a large part of it in this department, for which it is admirably fitted. The text upon which the earnest-minded clergyman based his remarks was Deut. xxi. 18-20.—Ed. P. J.]

ONE of the greatest surprisals, in this day of advanced science and revelation, is that Christians and moralists in their work of reform have paid so little attention to the influence of the body on the soul. Jesus more than any other teacher or reformer recognized the detoning and debasing influence of bad bodily conditions. Hence he almost always healed maladies of the body before he entered his principles upon the soul. It is true that his many miracles on the bodies of men were primarily intended to reveal his divinity, yet divinity in its manifestations always runs over the whole line of the natural before passing into the supernatural; therefore Christ's miracles on the bodies of men had a sanitary side to them. The man with the leprosy was in the poorest condition bodily to hear favorably any talk about moral sweetness, hence Christ healed his diseased body, in connection with his moral teachings. His example with the blind and hungry and deaf in this respect, ought not to go for nothing with those

of us who seek to save men in our day. Philanthropists and Christians for the most part have overlooked the power of a debased body on the soul. They forget that Paul likens a body that has sinful habitudes to a thing of death, to the soul that seeks to live the new life in Christ. Therefore good men have labored to create in themselves and those whom they seek to reform certain emotional conditions of the spirit, by a tenacious adherence to creeds or the patient performance of a set round of religious duties, and all this regardless of bad physical conditions begotten by bad habits of eating and drinking. While they have been struggling to bring their own souls and the souls of others into holy attitudes, all the basilar forces of the body have run riot within the pale of human customs and human laws. If you want to empty a boiler of steam it will not help you much by lifting the safety valve, if you still keep water in the boiler and fire in the furnace. Prayer and Bible-reading and psalm-singing will not help a man much to get rid of his sins, if he keeps up a set of bodily habits which fire the body and inflame the soul to keep up its sinning. That you may see the connection more clearly between vice and viduals, let me show you how food may damage our bodies and demoralize our souls. . . .

I aver, without the fear of successful refutation, that three-fourths of all our bodily ailments or diseases, and many of

our immoral acts, are the legitimate issues of improper dietetic habits. If these habits do not affect us directly, they do so indirectly, by lowering the tone of the whole system, physical and moral, causing us to break down prematurely into some disease or deviltry, under the pressure of legitimate toil or immoral provocation. How is it possible to account for the death of one-half of the human family before five years of age, unless we trace it to the violation of physical laws in some way connected with the eating habits of those who are parents? In this way many children enter the world with such a low state of physical vitality, and so little moral tone, that they are unable to resist the attacks of disease or throw it off when on them. And much less are they able to throw off moral disease and rise above their immoral heritage, if they pass through childhood to years of maturity. Such children not only carry in their little bodies the physical weaknesses of their parents, but also the specific immoral tendencies found in the conditions of their parentage. And more than this, should their endowment of vitality be sufficient to carry them over the death line for infants, they are subject to such unnatural relations to dress and diet that it becomes a natural impossibility for them to live. In this way many children die prematurely, not by the arbitrary edict of God, but by the violation of law. . . .

The primary cause of all premature deaths is violated law. God does not arbitrarily kill anybody. Most of those who die in infancy or in early life, come to death by the violation of God's laws written in their bodies. If these laws were obeyed in us, and in our ancestry, most of us ought to live beyond threescore years and ten, and drop from this life into the other, in a ripe, mellow old age, just as ripe fruit drops from its bough in autumn-time. But you ask where is God in the many untimely deaths that occur? I answer, he is present in his great-hearted goodness to help the dying to an eternal victory over death,

if they will only let him. He is present to bind up the hearts that are breaking with sorrow for the departed, and to make a sudden and untimely death a monument of warning to those still living, and thus making the wrath of man to praise him. If, therefore, our children die in infancy, because we have entailed on them feeble bodies by our violations of law, God does not kill them, but they die through violated law, and he in his goodness takes the little ones to his bosom, the seat and source of all law. Let us not, then, charge our sorrows to the willful enactment of our heavenly Father. He taketh no pleasure in the death of him that dieth. When he gives life to us, he intends that we shall keep it as long as possible.

Having given us life, all the forces of his boundless nature are engaged to maintain it in us until he is ready to harvest us, as the farmer does the ripened grain. The God of nature and the God of grace are not in antagonism. "The one God is in all and over all." A kingdom divided against itself can not stand. If, therefore, we die this side of threescore years and ten—seventy years—we die untimely. It is high time that good men were awake to this fact, and ceased laying over on Divine Providence what legitimately belongs to ourselves. "Jesus Christ came to destroy him that hath the power of death, that is the devil;" and when the philosophy of Jesus is wrought up into human lives by obedience to physical laws, the power of disease and death over our bodies will be very much broken. The victory over death can be so far achieved by men in the body that they need not die until their minds and hearts have received all the development in this world that infinite love ordains. That is, men may so baffle the monster Death by obedience to law as to keep him at bay until their souls have taken on such Christly ripeness that shall burst and break their bodies, as the ripening chestnuts break their burrs under the frosts of autumn. We have, therefore, no right to ascribe to supernatural agency

any phenomena which can be explained on natural principles. Disobedience to law brings penalties. There is nothing that men need to see more in their efforts at reform than the connection between their sufferings and their disobedience. . . .

Science and Revelation both declare that our physical life is in the blood. The physical, mental, and moral natures are so intimately connected that that which affects one affects the others. So that a man's mental and moral nature, as well as his physical, can very largely be determined by his blood. Now, it is a physiological fact that our blood is made out of the food we eat. That which enters the mouth makes blood. By the mysterious processes of digestion and assimilation, our food is transformed into blood; and the blood passing through the veins and arteries repairs the waste tissues and forms new ones, thus building up our bodies and sustaining life. It follows, then, that our bodies are made of the food we eat. Evidently, then, it was the design of our Creator that the prime object of eating should be the building up of tissues, muscles, bones, and brains. That this may be a pleasure to us, he has associated with eating the delights of appetite. But most of us have so far perverted the divine order as to make the pleasures of appetite the chief object of eating. "Give us something good to eat," is the great cry of humanity, and the goodness of food is gauged by the sensations of the palate and not by the law of nutrition. Most of us determine the goodness of our food by the amount of sensual delight it gives us between the mouth and the chest; no matter how much damage it may do beyond to the delicate and intricate structure of the stomach and viscera. Hence a vast amount of food enters the mouth that makes bad blood, blood that in itself is corrupt, and carries poisonous particles to every organ in the system, and putting us in splendid condition to be easily provoked to some outbursts of anger, passion, or revenge. My hearers, there is a sure and vital con-

nection between bad blood and bad morals. Blood always tells in morals as well as in muscles. Blood has power throughout the whole realm of life, whether it be in a human body, in society, or in the body of a horse on the race-course.

You ask, what kind of food makes bad blood? I answer, very much of the flesh of animals that forms the staple diet of most of us. Sty-fed pigs and stall-fed oxen are fattened under the most unlawful and unhealthful conditions possible; shut up in the dark, cut off from exercise, the fat deposited on their bodies is made up of the waste matter that the life forces of the animal have been unable to expel. This waste fatty matter is useless, un nourishing, and poisonous. Even in the living animal it sometimes becomes so effete, that is, lifeless, that it breeds vermin, such as has been found in pork, which can not be destroyed by ordinary cooking or by the process of digestion, and hence live and generate in the human body, producing disease and death. I am not now making a plea for the absolute disuse of animal food, but against the bad quality of very much of it, and also against the inordinate use of that which may be good in quality. A certain amount of animal food may be necessary for our nourishment, especially in winter-time, because of its heat-producing qualities. But that we must eat meat every day and at every meal, is in no way necessary for the proper sustenance of the human system.

The use of large quantities of animal food as a *staple* article of diet makes the blood gross, coarse, and corrupt, filling the flesh of the body with scrofulous elements, sending poison to every part of the system, causing it to break out in running sores, salt-rheum, tetter, and the like, producing an inordinate appetite, throwing every organ of the body into frictional relations to every other organ. It is a matter of every-day surprise to me that any human being will consent to eat the flesh of pigs. Consider their uncleanness, their selfish, greedy habits, the vast amount of corruption that enters

into their bodies, and think when you eat pork all this train of horrid elements enters into your body. And your body thus detoned by a low order of animal flesh, it can have no other effect than to make you take on the disposition and tendencies of the hog. God's bill of fare, in the 11th chapter of Leviticus, excluded from the tables of the Jews the hog, and all water animals except those that had fins and scales. This bill of fare was given to the Jews, not only for the preservation of their health, but as God's great purpose was moral reform, he had an eye single to their moral condition in the matter of their eating. Does any one doubt that the unhealthy, ugly, and vicious elements that make up the flesh of most of the animals we eat, enter our blood, and in that way affect the disposition or carriage of the soul? I am confident if there were less demand for animal food, the quality would be very much better. Animals would not be subject to false and unhealthy generation and false and hasty methods of growth. They would come up more in keeping with the laws of their nature, and come to us with more health and better qualities. As for the hog, if man would not domesticate him, he could not propagate his species. He would become extinct, just like the lion, leopard, and hyena under the march of civilization.

As the blessings of civilized life come on us, you notice the carnivorous or flesh-eating animals become extinct. So it seems to me, that with the developments of civilization, there ought to be such moral refinements in human beings that they would grow away from their carnivorous tendencies and eat such food as tends to develop the mental and moral faculties, and not the animal propensities. Among animals you find that those that live on the flesh of other animals are the most vicious and destructive, such as the lion, leopard, and hyena. Those animals that live on the grains and the higher order of foods, are the best and most useful, such as the horse and cow. If this law obtains among animals, why

not among men? If you want proof of this, study the character and lives of those who live largely on animal food, and you will find them very animal-like in all their relations—restive, impatient, passionate, ugly in their ways, fiery in their disposition, easily provoked, readily put out of humor. And if you could look into their private lives, you would find all their baser qualities having the fullest sway, stopping, it may be, inside the fence of human laws and customs, but seldom considering the claims of a higher and divine law. I charge, then, very many of our household miseries, domestic woes, and connubial wretchedness to unrestrained lusts, begotten in the body by the inordinate use of animal food.

We forget, my hearers, that the great law of nature, "Like produces like," is universal. "Every seed after its kind" is the law of all creation. Monkeys and men are not exceptions to this law, notwithstanding Darwin to the contrary. This principle obtains not only in the production of life, but in the processes of its development. If the position about the intimacy of soul and body is true, then, if a man's body is made up chiefly of flesh taken from diseased and stall-fed cows, and his whole physical frame is saturated with the irritating and exciting condiments of what is popularly called good food, the whole bias of his bodily powers will be toward animalism. All the impressions and impulses that the soul receives from such a body, are beastly and debasing. Like produces like in the formation of physical tissue out of food, as well as in the generation of stock in the stall. Hence I hold that very much of the wickedness of mankind is the natural expression of physical beastliness, rather than the outflow of innate viciousness. A body made up largely of all manner of nerve-goading, passion-producing, anger-generating elements, such as are found in the gross animal dishes, with their belongings, just as surely drives the soul to sin as a tempest drives a feather before it.

The kind of food a man eats and the

time and manner of his eating it, are not merely a question of medicine, but one of the first questions of morals. The effects of food on the passions and feelings are thus described by Prior :

" Observe the various operations
Of food and drink in several nations.
Was ever Tartar fierce and cruel
Upon the strength of water gruel?
But who shall stand his rage and force
When first he rides, then eats his horse?
Salads and eggs and lighter fare
Tune the Italian spark's guitar;
And if I take Don Confreze right,
Pudding and beef make Britons fight."

If, therefore, our meat has something to do with our morals, or if our food in some way affects our faith, it seems to me that many of our efforts at moral reform ought to be preceded by instruction in hygiene. In other words, efforts to make a man genuinely devotional, ought to be prefaced by efforts to correct bad dietetic habits. A father, by prayer and precept and flogging, had done his best to reform his boy, whose staple diet was meat and sausage, pie and cake, at his meals, with lunch between. The family physician said to the father, "If you will put a leech back of each of your boy's ears once a week for a month, you will do more to reform him than your preaching and pounding will do in a year." This father asked for the philosophy of this prescription. "Why," said the doctor, "your boy has bad blood and too much of it; he must behave badly or he would burst." "Then," said the father, "I'll change his diet from beef and pie to hominy and milk." In three months thereafter a better boy for his age could not be found in the neighborhood.

In your use of animal food be very particular as to quality and quantity. Lamb and mutton are considered the most healthy by the authorities. Avoid, as you would contagion, the use of pork, unless you raise and feed it yourselves with good grain, and not the refuse of the house or barn, and keep the animals as clean as you do your pet dogs. Never fry your meats with hog's lard, but stew, bake, boil, or broil them. Use hog's lard in no

form for cooking. Most of it is reeking with scrofulous elements. Displace it in *all* your cooking by milk or butter. If you want to aid, and not hinder, the growth of your soul Godward, and you desire to have pure thoughts and a pure heart and a pure life, see that you make your blood out of pure food, or you will find that your soul will have an enemy within the castle of its body more treacherous and deadly than any of its enemies without.

There is another popular article of food which has a vital connection with bodily disorders and bad exhibition of character. Good in proper quantities and in its sphere, when made in the largest and chief articles of diet for every meal, the one kind of food upon which we depend most for building up the waste of our bodies, thus used it indirectly does no great damage. I refer to the ordinary fine-flour bread made out of bolted wheat-meal.

The process of bolting or refining takes from the wheat most of the phosphates and nitrates, the elements that are chiefly required for making nerves, muscles, bones, and brains. The phosphates and nitrates being removed by bolting, very little remains in the flour except the carbonates, the heat and fat-producing elements. The use of fine-flour bread as a staple article of food, introduces too much heat and fat-producing elements into the system, and where there is too much carbon or heating element, it tends rather to provoke the system to unnatural and abnormal action, and instead of serving as an element to warm the body, its tendency is to burn or consume, heating and irritating all the organs, getting one into that state which is popularly known as "hot-blooded."

One reason why children fed chiefly on white bread feel hungry nearly all the time, and demand so much food between meals, is found in the fact that their bodies are insufficiently nourished. Their bones and nerves not receiving the nitrates and phosphates they need, are suffering from hunger. When children are

ted with food that thoroughly nourishes their whole system, they will seldom desire to eat between meals, and thus retard the process of digestion, laying the foundation for dyspepsia and all its kindred evils.

Flour made of white wheat, unbolted, popularly known as Graham flour, contains all the elements necessary for the nourishment of the body. Not every flour called Graham flour contains these elements. There is a great deal of bogus stuff in the market, which has brought the genuine article into disrepute, and made many thoughtful people disgusted with everything in that line. . . .

I am confident that the American habit of eating sumptuous and late suppers, whether at our homes or church fairs or festivals, is damaging the physical, mental, and moral health of our nation more than any other one thing of its kind; more damaging because it has the appearance of innocency, and the sanction of our fathers, mothers, and some of our pastors.

Furthermore, the habit of eating hurriedly or hastily is preying upon the vital and moral forces of many of us. A meal eaten hastily or nervously, under the pressure of intense mental activity or nervous tension or great weariness, begins its work of nutrition under the greatest possible disadvantage. All our meals should be eaten calmly and deliberately, so as to thoroughly masticate the food, and not impose on the stomach and viscera the legitimate work of the teeth. In the interest of health to soul as well as body, I enter an earnest plea for more time for eating, and especially at noon, when most hard-working people take their principal meal.

Clerks, business men, and school-teachers, mechanics, laborers, and our children who attend the public schools, need more time at noon to properly dispose of the chief meal of the day. No better investment could be made to secure the best possible physical, intellectual, financial, and moral returns than for all classes of people to take two hours at midday for

resting and eating dinner. Selfish greed demands otherwise, and makes a show of gain, but the loss is sure to come in due time to all parties concerned. My friends, when will we fast-living, fast-eating, fast-working, and fast-dying Americans learn the great lesson that life is a unit; that the trinity in us, namely, the physical, intellectual, and spiritual, is one life, with different phases of expression, and whatever mars one mars the whole, and whatever builds up one most surely builds up the others? All our powers are many members in one body, with an inter-dependence which is eternal. Slight your body, and you smite your soul and enervate the mind. Corrupt the mind, and you detone the body and debase the soul.

When will those who profess to be God's children, by the adoption of the Holy Ghost, catch the spirit of his great apostle Paul, who, more than any other sacred writer, maintained the sanctity of the human body, and its subservience to the mind and soul. Hear him: "I beseech you, brethren, by the mercies of God, that ye present your bodies a living sacrifice, holy acceptable unto God, which is your reasonable service, and be not conformed to this world, but be ye transformed by the renewing of your minds, that ye may prove what is that good and acceptable and perfect will of God." I admit the power of the Holy Ghost in the work of regeneration, but is there not something for us to do in keeping our bodies under, "lest we become castaways"?

I do not say, mark it, that *all* human evils and ills have their primary origin in physical habits, but I do say that the great mass of impulsions from our bodies toward our souls are in the interests of sin. The economy of salvation orders otherwise. By the gospel the body may become the temple of the Holy Ghost. By the law of self-denial, of the New Testament, our bodies with all their fiery elements may be made an inspiration to our souls. It is not the purpose of God that a life-time warfare shall be kept up

between the body and the soul. There ought to come to every true Christian a day of final victory over his bodily powers, in which they will cease their rebellion and come into the sweetest union with the soul in its great work of developing a likeness to Christ. . . .

Our fondest dreams for the progress of humanity must be based in a newly-created body, by strict obedience to the laws of God, written on every fiber, tissue, muscle, and bone. We can not develop the human brain and heart to the possibilities that God has put in them, while

they are tenants of bodies, the laws of which are violated in the commonest habits of every-day life. Regeneration does a mighty work for us, but regeneration has also much to do with our highest and best development. The sins of the fathers must stop acting on the sons; the accumulated virtues of parents must roll over on their children in purer, stronger, and better bodies, until by a blessed economy the whole race shall be exalted to heirship with Christ, through loving obedience to all the laws of physical as well as moral life.

APOPLEXY.

THE proportion of sudden deaths is on the increase. If we examine the returns of mortality from week to week, as published, we note under the title of "heart disease" this fact most conspicuously, as it is under that title most of the sudden deaths are tabulated by physicians. "Apoplexy," "congestion of the brain," and "paralysis" are other forms of expression which are taken usually to mean about the same thing, although in strict science they are very different.

The term "apoplexy" signifies a shock; popularly we speak of one having "a stroke" of apoplexy or paralysis. In true apoplexy a fainting condition occurs—one suddenly falls to the ground, apparently lifeless, only respiration remaining. There are several varieties of this disease: for instance, the sanguineous, the serous, the nervous, the simple. Some authorities maintain that there is but one form or variety of true apoplexy—simple apoplexy offering but a difference of degree in the violence of attack, there being sudden congestion of the brain, but no cerebral hemorrhage.

The symptoms of this disease, briefly stated, are, a sudden loss of consciousness and voluntary motion, the person lying as it were in a deep sleep, with the face flushed, slow and stertorous breathing, the air being ejected from the lungs with a flapping motion of the lips, and the

pulse being full, slow, and hard. In the variety called serous the attack is slower in its exhibition, the patient feeling at first faint, and the face showing an increasing pallor; he usually vomits, and then falls into a condition resembling syncope, the skin being cold, the pulse feeble.

It should be unnecessary to state here that an apoplectic attack should be distinguished from drunkenness or narcotic poisoning, but there have been many cases in which men have fallen in the streets, and have been taken by police officers to a station, in what was thought to be merely the stupor of intoxication, and little care being given them in consequence, they have died. Instances of this sort have been frequently published among the police reports, showing the need of intelligence on the part of those who guard the peace to be able to discriminate in this matter. There are, to be sure, certain phenomena in drunkenness which assimilate apoplexy, but the lack of the odor of liquor is an important aid in distinguishing between the one and the other.

Most cases of apoplexy occur in old age and in persons over sixty; the deposit of earthy matters in the arterial coats, which is more common in old persons, is an important predisposing cause; another cause is hereditary predisposition; an-

other is disease of the kidneys, by which an excess of urea is thrown into the blood, and if not eliminated, may lead to the serous form. Constitutional condition has much to do with an apoplectic attack. People who are stout, corpulent, with short thick necks, with flushed or florid faces, indicating abundance of blood, and more than average temperamental excitability, are much more liable to an attack than those who are slender. The prevailing impression that disease of the heart renders one particularly liable to an attack is not true.

Among the immediate causes are violent exercise or straining, which induces a rush of blood to the head, excessive fullness of the stomach, great mental excitement, leaning, stooping, carrying heavy weights; and extreme heat, warm rooms, stimulating drinks, highly-seasoned food, wearing of tight articles of dress about the neck and waist, have their effect and should be carefully avoided. People who are of the constitutional type which suggests apoplexy should be especially careful to avoid exposing themselves to or creating any of the causes named above. We have known many stout persons to die in an attack which came on shortly after a meal; and inquiry disclosed the fact that they had eaten freely and drank of some exciting beverage like wine, brandy, coffee, or ale.

In midsummer many sudden deaths occur from drinking iced water. We have known persons to go from the heat and glare of the midday sun into a house and there drink freely of iced water, and soon after fall unconscious. In such cases the iced water had driven the heated blood from the center to the extremities, particularly the brain, surcharging that organ and inducing the attack.

We have said that apoplexy is sudden in its coming, but a large proportion of cases have what are termed premonitory signs, such as sense of weight and fullness in the brain, roaring in the ears, flushing of the face, and headache, which is a frequent symptom, but a sign of imminent apoplexy, mainly when it be-

gins to occur in advanced life in persons not subject to it in earlier years. If the headache be accompanied by vertigo the danger is greater than if the headache exist alone. Loss of sight or of hearing for a few seconds, a confused mind, double vision, a numbness of various parts, loss of memory, and a feeling of anxiety are also among the warnings which should be heeded.

A word or two with regard to the prevention of this greatly-dreaded malady may be summed up in the statement, that a mode of life which tends to prevent excessive fatness or corpulence, which contributes to balance of mind, freedom from excitement, and to regularity of function, will render one almost proof against an attack of apoplexy. For those who have an apoplectic diathesis, either by inheritance or constitutional acquirement, it is proper to say that by restricting themselves to a diet almost entirely vegetable, avoiding all stimulating beverages and immoderate exercise, especially in summer, they will in most instances ward off an attack. D.

MANHOOD.—He who *would* do wrong, but is deterred through fear, or hope, or promise of a reward, is a slave not only to his own vile passions and propensities, but to the power of popular prejudice or popular sentiment, be that right or wrong. He who, being free, does right because it *is* right, who dares to be true to his own convictions in the face of the obloquy and scorn of a misguided, bigoted, and intolerant majority, is nature's true nobleman and hero, the grandest and noblest type of humankind. Such have ever been the lights of the world, the advance guard in the advocacy of all the truth, in civilization, in human progress and reform—have been reviled and persecuted by time-honored conservatism as disturbers and innovators, as heretics and infidels. The ingrained ignorance and superstition of old conservatism still cries, "Crucify him! Crucify him!" "The fathers ate sour grapes and the children's teeth are set on edge." L. B. COB.

ONE PHASE OF EVOLUTION.

HE was a bright, chubby-faced boy, good-humored, and mischievous. His parents and friends *enjoyed* his pranks, and indulged him almost to the bent of his desires. As a young man, he was lively and witty, very sociable, a "good fellow" indeed, not backward in giving and taking a treat, and now and then going on a lark.

Well, sad to say, he got in the habit of taking his drams daily—two, three, four, five, and more glasses, and, between times, cigar or pipe was rarely absent from his lips. After a while he lost his good situation through irregularity, and then found the hotel bar or drinking saloon his most congenial stopping place.

The years went on, and he grew old rapidly, becoming less and less attentive to his dress and appearance in like proportion with his indifference to the quality of the liquor proffered him to drink or the sort of tobacco which filled his pipe. So long as it was liquor, so long as it was tobacco, he eagerly took it, and at last, by an easy process of evolution, he had descended to a brutish level—he had become a swine man. D.

GAMBETTA, according to an exchange, has been ordered to give up smoking for fear of losing his voice. The Czar has, it is said, given it up for fear the Nihilists would poison his tobacco. Tobacco needs no poisonous addition, containing as it does one of the most potent of all poisons. From whatever motive men give up tobacco, they make a great and beneficial change. One of the most eminent and useful citizens of Brooklyn stated to

the writer of this paragraph that he believed it was giving up tobacco that had saved his life.



STUDIES IN DEVELOPMENT.

A NOVEL RIDDANCE FOR RATS.—An inventive genius filled a small tarletan sack with a spoonful of cayenne pepper, and tacked it over a rat-hole. When the rat bounced out, his eyes were peppered by the sifting from the shaken sack. He squealed like a young pig, and escaped. The whole tribe have since migrated.

NOTES IN SCIENCE AND AGRICULTURE.

More Image-Breaking.—The eminent philologists, Professors Sophus Bugge and A. Chr. Bang, have lately proclaimed to the world that the much-revered Eddas are not an original Teutonic production, but largely, if not entirely, borrowed from Greek, Latin, Jewish Christian, and Keltic sources. According to a writer in the *Academy*, they show that in the Asa faith Loke is Lucifer, Balder is Christ, his name being derived from the Anglo-Saxon Bealdor, meaning Lord. Angantyr is the Kentaur with the Keltic article *in* prefixed. Lodyn is simply Latona, which has so long been looked upon as the most venerable morsel of literature from the hoary past of Teutondom, now turns out to be merely a Norse version of the Sibylline oracles. The death of Balder is only a somewhat mutilated version of the crucifixion of Christ. The Baldermyth, usually regarded as the bright peculiar flower of Scandinavian mythology, is, according to Bugge, a curiously modified version of the Greek Paris-legend. Prof. Bang, also, maintains that the *Völuspa*, instead of being the most archaic embodiment of German belief, is only an adaptation of the Latin pseudo-Sibylline prophecies. It is evident that it will be necessary to reconstruct the entire system of Germanic mythology.

Discovery of Giant Remains in Ohio.—A correspondent of the *Cincinnati Enquirer*, in describing the mound in which the gigantic skeletons lately found in Muskingum County, Ohio, were deposited, says it was about 64 ft. long and 35 ft. wide, top measurement, and gently sloped down to the hill where it was situated. A number of stumps of trees were found on the slope, standing in two rows, and on the top of the mound were an oak and a hickory stump, all of which bore marks of great age. All the skeletons were found on a level with the hill, and about eight feet from the top of the mound. In one grave there were two skeletons—one male and one female. The female face was looking downward, the male being immediately over, with the face looking upward. The male skeleton measured nine ft. in length, and the female eight ft. In another grave were also found two skeletons—male and female—with the female face looking upward and the male face looking downward. The male frame was nine feet four inches in length, and the female eight feet. In another grave was found a female skeleton, which was incased in a clay coffin, holding in her arms the frail skeleton of a child three feet and a half long, by the side of which was an image, which, upon being exposed to the atmosphere, crumbled rapidly. Seven others were found in single graves, and lying on their sides. The smallest of the

seven was nine feet in length, and the largest ten. One single circumstance connected with this discovery was the fact that not a single tooth was found in either mouth, except in the one incased in the clay coffin.

On the south end of the mound was erected a stone altar, four feet and a half wide and 12 feet long, built on an earthen foundation nearly four feet high, having in the middle two large flagstones, upon which sacrifices were undoubtedly made, for upon them were found charred bones, cinders, and ashes. This was covered by about three feet of earth. This excavation was made under the direction of the Muskingum County Historical Society, and the things alluded to in this letter, or dispatch, can be verified by a number of witnesses who were present and watched the work as it progressed. It was pursued with great interest and diligence, there being the strongest incentive to prosecute the investigation, for such remarkable developments in mound-opening are very rare, and are therefore fascinating in the extreme. Their future labors were also rewarded with additional developments, which, if they do not throw additional light upon this giant race of people that once inhabited this country, will at least stimulate research.

What is now a profound mystery, the result of this excavation may in time become the key to unlock still further mysteries that centuries ago were commonplace affairs, is a stone that was found resting against the head of the clay coffin above described. It is an irregular-shaped red sandstone, weighing about 18 lbs., being strongly impregnated with oxide of iron, and bearing upon one side two lines of hieroglyphics.

How Sheep-killing Dogs May be Rendered Harmless.—In the "Archives of Comparative Medicine and Surgery," a paper by Dr. Alexander Hadden, it is shown that upward of 500,000 sheep are killed by dogs annually in the United States, and recommends emasculation as a method which will operate as a preventive of this great destruction in a most important branch of stock-raising. The writer says that "castration produces a change—if we may be allowed the expression—in the moral character of the animal. The objects of his attachment are now different, whereas before he wandered from home seeking the companionship of others of his kind; now he becomes more firmly attached to his home, and more dependent than ever upon his master." He supplies testimony from different sources to confirm this statement. One correspondent assures him that he has never known a dog whose habits were not materially improved by the operation, and that he never knew a castrated dog to have hydrophobia. "Not being so apt to associate with other

dogs, his chances for taking the disease are reduced to a minimum." Here is a suggestion to farmers which is certainly worth their attention, now that sheep-raising has become so prominent a branch of rural business in all parts of the country.

An Extinct Race.—One of the most remarkable races that ever inhabited the earth is now extinct. They were known as the Guanches, and were the aborigines of the Canary Islands. In the sixteenth century, pestilence, slavery, and the cruelty of Spaniards succeeded in totally exterminating them. They are described as having been gigantic in stature, but of singularly mild and gentle nature. Their food consisted of barley, wheat, and goat's milk, and their agriculture was of the rudest kind. They had a religion which taught them of a future state, of rewards and punishments after death, and of good and evil spirits. They regarded the volcano of Teneriffe as the place of punishment for the bad. The bodies of the dead were carefully embalmed and deposited in catacombs, which still continue to be an object of curiosity to those who visit the islands. Their marriage rites were very solemn, and before engaging in them, the brides were fattened on milk.

Petroleum for Rustic Work.—Here is room for great improvement. We see on every hand handsome rustic work falling to decay and becoming distorted by age. It is commonly made of a kind of wood which does not last long. Soak it thoroughly with crude petroleum when new, and it will remain unchanged indefinitely. A rustic summer-house, on a shaded part of our grounds, would have been unusually exposed to dampness and decay, had not this been prevented a dozen years ago by petroleum. The peculiar brown color imparted by a mixture of the heavy oil, remains unchanged; and a lattice-work of pine lath, a fourth of an inch thick, fully exposed to dampness and weather, is as sound and unworn as ever. The oil is now so cheap that there is no excuse for omitting its application, and it may be rapidly and easily brushed over the surface and sunk into the pores with a whitewash brush. Apply it heavily.—*Exchange.*

Domestication and Brain Growth.—At the recent meeting of the British Association, Dr. Crichton Browne gave an address on the influence of domestication on brain growth. He had found by experiments that domestication had greatly reduced the brains of the duck, and he argued that men, like ducks, might be fed and housed, fenced about, and exempted from participation in the life struggle, until, like the ducks, they would depreciate in mental capacity. Their bodies might increase in size and succulence, but their brains would become straitened and withered. Disease and luxury crippled the brains. It was as true as ever that men were perfected through suffering, toil,

and conflict, and it was not through affluence and comfort that genuine civilization was attained. It was the civilization, not merely the domestication, of mankind that must be aimed at.

A Simple Way to Cook Eggs.—Butter a saucepan; break into it the eggs; do not crowd them; place in a slow oven until the whites set. Thus treated they are more delicate and much more wholesome than fried eggs.

Get Rid of Rats—"Four years ago my farm was fearfully infested with rats. They were so numerous that I had great fears of my whole crop being destroyed by them after it was housed; but having two acres of wild peppermint that grew in a field of wheat, cut and bound with the wheat, it drove the rats from my premises. I have not been troubled with them since, while my neighbors have any quantity of them. I felt convinced that any person who is troubled with these pests could easily get rid of them by gathering a good supply of mint and placing it around the walls or base of their barns."—*Evening Post, Spearsville, Ind.*

A Home-Made Daniell Battery.—The London *Electrician* gives the following directions for making a Daniell cell, which may serve the purpose of two or three correspondents who have written to us for suggestions: Select a small round earthenware jar, such as is used for keeping preserves, and, having lined the bottom with gutta-percha, or some suitable cement, to the depth of one-quarter inch, fix upright in this a rod of zinc, of equal height with the jar, to which a length of copper wire has been attached by passing it through a hole drilled in the upper part of the zinc rod, or by soldering. Make a cylinder of pipe-clay, or other porous clay, larger than the zinc rod, and, having dried it, make it hot in the fire by degrees, till it attains a red heat. Let this cylinder cool gently, and when cold, place it in the jar encircling the center rod at a little distance. By moderately heating the end of the cylinder, it will, when placed on the gutta-percha, make a groove which will fix the tube and prevent infiltration of the fluids. Line the inside of the jar with a plate of thin copper, bent into a cylindrical form, and having a few holes punched in it, through which may be threaded the extremity of another length of copper wire. On the top of this cylinder place a flat ring of copper, pierced with holes, and nearly, but not quite, touching the porous cylinder. This forms the battery. To charge it, a saturated solution of sulphate of copper is poured between the copper and the clay tube, and some crystals of the same salt are placed upon the perforated ring, so as just to be in contact with the solution. The zinc compartment is then to be filled with a solution of sulphate of zinc, sal-ammoniac, or common salt.



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CABINET COLLOQUY—No. 9.

PHYSICAL RELATIONS OF THE MORAL FACULTIES.

“PHILOSOPHERS of your class,” remarked a visitor, “make a great deal of the body—it seems to me too much—in its influence or connection with the mind. Do you think, in fine, that the faculties of the physical senses of nutrition, and so on, are the purveyors of the higher nature, supplying it with material resolved by their different processes?”

Yes, such is our belief. Here are the organs of sense, the eyes and the ears, and the others; while the man is awake and active they are employed in collecting whatever comes within the range of their apprehension. The perceptive faculties of the intellect scrutinize and separate the material gleaned by the senses, into its constituent qualities and properties; the reflective faculties arrange and compare, and apply these through processes more or less complex, and conclusions or inferences are derived which contribute to the general stock of ideas, which in their turn make up the distinctive intelligence of men concerning external things. I can not accord with Sir Richard Steele, in regarding the soul of man

as the ruin of a glorious pile of buildings, where, amidst great heaps of rubbish, you meet with noble fragments of sculpture, broken pillars and obelisks, and a magnificence in confusion,* for I consider human nature to be more like an edifice in the course of construction, and advancing toward a complete and perfect symmetry. The broken pillars and obelisks you meet among men are those who have been either misdirected by unwise and incompetent teaching or have made wrecks of themselves through perverted appetite or self-will. But even they who have turned to avocations of selfishness, and corrupted their manhood, and ceased to glorify God in their bodies and in their spirits, as a Christian philosopher enjoins, now and then exhibit an occasional gleam of dignity, virtue, and wisdom; and we may be amazed by the transient irradiation from qualities originally impressed by the signet of divinity—qualities still existing, though crushed beneath a Juggernaut of propensity.

Go into the slums of our city, mingle familiarly with the uncultured and rude, with those who are the pariahs of our social scale, and you will meet with men and women whose practical sagacity, though expressed in uncouth phrase, will astonish you. Born of a class ever subject to the prejudice and suspicion of the fortunate, without any claim to the ways of refinement, never having received from parent or friend admonition or instruction in things pertaining to the spiritual life, but rather incitement to despise the morality of conventionalism, and to repel the overtures of the Christian missionary—these people will, nevertheless, often exhibit a singular appreciation

* *Tatler*. No. 87.

of the philosophy which pervades the economy of justice, and exists in all our normal relationships. They can detect the incongruities of those who occupy the spheres above them, and, with pungent sarcasm, expose their meanness, cupidity, and presumption. You may scarcely find anywhere else a more sensitive apprehension of the humanities than is to be found among these abandoned wretches. Mr. Dickens recognizes this, and his characters are often the vehicles of bitter sarcasm on the hollowness of life in high places. And what does it evidence if not the existence by native endowment of principles in man which bear special relation to truth, duty, and aspiration? Here we have, to be sure, the moral nature in a crude or nascent state, and, though its grasp of truth may appear intuitively strong, it fails of effect in the attempt to apply it to practical affairs. Thus we perceive the important work of education.

CONSTITUENTS OF TRUE MANHOOD.

Manhood, in its best estate, is but a perfect expression of truth, charity, spirituality, in those relations which exercise our faculties of intellect and our physical forces. There can be no such expression, however, without the highest culture of the intellectual and physical natures. Just as a judge could not render a sound and impartial opinion without a thorough examination of a mooted question in all its bearings, so the mind can not exhibit a fully matured and exact discrimination in the affairs of morality and religion without being perfectly furnished with the data relating thereto.

"You remind me," said our visitor, "of a statement by Lecky, which struck me so forcibly that I think I can give you the

words almost exactly—thus: 'It is from the moral and religious faculty alone that we obtain the conception of the purely disinterested. This is, indeed, the noblest thing we possess—the celestial spark that is within us, the impress of the divine image, the principle of every heroism. Where it is not developed, the civilization, however high may be its general average, is maimed and mutilated.' This I certainly believe, and take for granted that you do also; but will you explain certain difficulties which occur to me in this regard? Let me illustrate my meaning. We meet with people who are refined in manner and delicate in susceptibility; they evince an earnest sympathy for the suffering and oppressed, and are highly indignant when informed of an act of injustice; yet in different ways they are themselves guilty of direct infractions of moral law. In their families they may exact excessive service from servants; in their dealings with store-keepers they may show a vexatious indifference to settling their accounts; they may subject friends and acquaintances to annoyance and embarrassment in matters of their own appointment; they may be derelict in meeting obligations as members of a religious communion, or of a local society, and urge lame excuses touching the weather, or bodily ailment, for their remissness; yet in the church they will show intensity of devotion, and in the proceedings of the society ardor of co-operation. Now, such conduct seems to me to involve gross moral culpability which an impartial tribunal would punish severely."

And the majority of observers would agree with you. But the observers, who constitute the main body of society, are not mindful of their own shortcomings,

of the "beams" in their own eyes; in other words, of their own mental defects and inharmony. Human nature, in its best estate—and nowadays there is not a little boasting of progress and development—is an aggregation of qualities great and mean, strong and weak. Viewed from one side, it may appear very beautiful, even glorious in dignity and strength; viewed from another side it appears deformed, besotted, vile. Well said Pascal, "What a chimera is man! What a confused chaos! What a subject of contradiction! A professed judge of all things, and yet a feeble worm of the earth! The great depository and guardian of truth, and yet a mere huddle of uncertainty! the glory and the scandal of the universe!"

In all his conduct, infinite as it is in variety, man acts only in accordance with his multiple composition. His demeanor at any given moment is but the expression of elements or faculties then in exercise, and is more or less appropriate to the situation in which he finds himself in the proportion of his ability to adapt himself to that situation. If all the faculties required for the complete apprehension of a subject are exercised in its consideration, it will be viewed on all sides, and an opinion will be formed that will approach perfection, according to the development and culture of the faculties. Such an opinion will, of course, be more worthy our confidence than one founded upon a consideration of the same subject by only a part of the faculties which bear a normal relation to it. It would be a one-sided course for a man to discuss a question of morality from the points of view of economy, prudence, and justice only, although he might present a noble body of doctrine constructed of the good

materials furnished by those important elements. But it would be incomplete and inadequate, for such a question involves even more important factors than those mentioned, as, for instance, benevolence, the interests of friendship and of religion; and each has a bearing which can not be ignored by a philosophy which aims to embrace all the issues.

Referring now to the inconsistency which you illustrated by the well-known conduct of people in the privileged, or rather educated, walks of society, it is to be explained by their lack of true moral culture. Their endowment of the organs whose functions are related to the higher mental life is marked, and their temperament of that fine consistency which is conducive to a delicate susceptibility in feeling and emotion; but they have not been trained to employ intelligence and discretion in the exercise of the moral and religious sentiments; they perceive not the true significance and adaptation of these sentiments in the affairs of life; consequently their manifestation is, in the main, weak and indefinite, or a mere subservience to convention. There may be outbursts of feeling and passionate declarations of interest, but they are productive of no substantial results, no cheerful proffer of aid—which means earnest work—follows the effusion of sentiment, because there is no coherence or intelligent interrelation between the executive faculties and the moral sentiments.

(Conclusion in October.)

THE PHRENOLOGICAL INSTITUTE. — The session for 1880 will commence on the 1st of October. Those contemplating attendance upon the course, and who have not sent in their names, should do so at once. Particulars with regard to the topics of the lectures and the terms will be supplied at once on application to the publishers of the PHRENOLOGICAL JOURNAL.

PHRENOLOGIST OR MENTAL-PHYSIOLOGIST?

WE have been asked by a correspondent to give an opinion with respect to the adoption of a substitute for the name *phrenologist*, in announcing a course of public lectures. He states as the chief reason for his request that in some communities the term, so aptly introduced by Spurzheim, awakens satirical criticism, and he who boldly proclaims it as belonging to him is looked upon with distrust and criticism, whereas the *physiologist* generally receives from the same people a respectful consideration as one whose mission has an important bearing on the serious concerns of human life.

We can not disguise the fact that the vocation of the phrenologist has proved a most tempting field for the trickster, mountebank, and charlatan. The apparent ease with which its great principles may be learned, the broad area of utility which they cover, and the liberal remuneration, especially, which is accorded the skillful teacher and examiner, have attracted hundreds of selfish and vicious adventurers, who, after a hasty glance at a textbook and a superficial comparison of a few heads, have dared to offer themselves as competent to delineate character and teach the profound truths of mental science. Indeed, Phrenology has suffered so much from the inflictions of charlatanry that it has required most earnest and careful effort on the part of its true teachers to maintain its respectability. Medicine and Law harbor an immense number of quacks and charlatans; but those professions are heritages of antiquity, and stand before the public as absolute necessities to social integrity, and the knaves and ignorant meddlers who

infest them are regarded as natural parasitic attendants of two institutions essentially beneficial in their objects and remunerative to their practitioners.

Recent in its enunciation, and with scarcely the development of a century, Phrenology has not assumed the importance of a necessity in the estimation of the general public, so that for its advocates there remains much of labor ere this science is placed upon the footing to which it is rightfully entitled. One fact which has operated as an obstacle to its special advancement in popular consideration is that the physiologists have appropriated most of the discoveries of the early phrenologists and some of the principles which lie at the foundation of phrenological science, and these discoveries and principles are recognized as parts of physical science, while little or no allowance is made to Phrenology for them. Some authors of repute accept and teach doctrines similar to, or identical with, those of Phrenology, but use different terms, as if the nomenclature so highly commended by Archbishop Whately were not sufficiently comprehensive for their petty use of it.* The odious savor which the word *Phrenology* appears to have, in the esteem of some, is allied to that exhaled by *astrology*. The abuse of *astrology* by the medieval mountebank and charlatans doubtless led to the substitution of *astronomy* by the learned; but the latter term is not so accurate as the former in its technical significance. So, probably, the adoption

* Dr. Whately says that, even if all connection between the brain and mind were a perfect chimera, the treatises of phrenologists would be of great value "from their employing a metaphysical nomenclature far more logical, accurate, and convenient than Locke, Stewart, and other writers of their schools."—*Combe's Testimonials*.

of a substitute for phrenology might have certain desirable effects which the conscientious teacher and worker would be glad to realize for the sake of the more successful prosecution of his chosen pursuit. First impressions have much to do with one's success in any effort which requires an appeal to the public, and certainly if a noble cause retain a designation which by its very announcement arouses prejudice and ridicule, its advocate, in the outset of his mission, has obstacles to remove for which he is tacitly held responsible by the ignorant. The teacher of chemistry, natural history, or geology is not required to apologize for his profession, or to contend against prejudices which illiterate and covetous bunglers have created; and yet those physical sciences for usefulness to man are not to be named in the same category with Phrenology.

Whether, then, the teacher of the mind's constitution shall announce himself as a phrenologist or a physiognomist, as a lecturer on the science of mind or on Phrenology, we will not assume to direct. We know that in certain relations we could speak by the hour on *mental science*, and be warmly approved, whereas the same discourse under the name of Phrenology would awaken censure. In general, however, we are asked to present the philosophy and uses of Phrenology to expectant audiences. We therefore merely counsel our correspondent to adopt that course in his relations with the public which shall be compatible with dignity, integrity, and a favorable impression. He certainly is not bound to say or do aught which shall awaken opposition to his work, but he is bound, as a teacher of truth, to act in all respects honorably and uprightly.

"HOW SHALL I VOTE?"

IS the question asked by several readers. In answer we might very briefly and disinterestedly say, "For the best man," and leave the inquirers perhaps as much in the valley of indecision as they apparently were before. Assuming, however, that the question is honestly propounded, we will indicate a course which each voter can pursue for himself, and so reach an independent conclusion.

First. Examine the antecedents, the history, of the men who stand conspicuously before the American people as candidates for the most exalted station in our civil affairs. Note their respective training, education, vocations, and the nature and degree of the service to the public which they have rendered. Men who are commended for high office are presumed to have shown superior capability for exercising the functions of office in a sphere related to public service. It is fitting, therefore, that their careers be carefully scanned, in order to ascertain how faithfully and effectively they have performed their duty.

Second. Examine the men as to organization in mind and body, which may be done with the aid supplied by science. The sketches which have appeared in the PHRENOLOGICAL were founded upon photographic portraits, and care was taken to discuss fairly the indications of form and feature as given by the camera. Lacking the opportunities for personal examination, we are compelled to make use of the substitutes afforded by art. These sketches are, therefore, offered more as suggestions than as definite guides to the inquiring reader.

Especially consider the moral character of the men—which has been the most faith-

ful to the principles of truth, justice, and honor; which has most subordinated self to the interest of community.

We take it that every one of our readers who feels interested in the politics of his State and of the country has his preference among the parties which divide the people. It can scarcely be otherwise, and it is altogether proper. But this should not debar him from calmly surveying the field and weighing the per-

sonal merits of the candidates, and comparing the issues made by their respective supporters, be they Democratic, or Republican, or "Greenback."

In the fierce agitations of partisan controversy there is much misrepresentation on all sides, but there is also much truth concerning parties and politicians evolved, which, if intelligently considered, will help one to conclude upon the man who will serve the people best.



"He that questioneth much shall learn much."—Bacon.

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. But one question at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of an early consideration.

IF AN INQUIRY FAIL TO RECEIVE ATTENTION within two months, the correspondent should repeat it; if not then published, the inquirer may conclude that an answer is withheld, for good reasons, by the editor.

WE CAN NOT UNDERTAKE TO RETURN UNAVAILABLE contributions unless the necessary postage is provided by the writers. IN ALL CASES, persons who communicate with us through the post-office should, if they expect a reply, inclose the return postage, or what is better, a prepaid envelope, with their full address. Anonymous letters will not be considered.

LIVER PADS.—*Question:* Can you tell me anything about the composition of the liver pads, which are so extensively sold throughout the country for stomachic and other diseases?

Answer: They are differently made. That which is most extensively advertised, the "Holman," is said, on the authority of a prominent medical publication, to contain ground tannegreek seed, and ground flax-seed, with pitch, resin of galbanum, and resin of sandrac, some aromatic material being put in to disguise the odors of these substances.

LIGUORI AS A TEACHER.—A correspondent, M. C. B., sends us a letter which purports to be written by a father of the church, reflecting upon certain statements made in the course of a notice of a Roman Catholic manual, in a late number of the JOURNAL. The remarks which we applied to the doctrines of Liguori seem to have given special offense. The priest terms them a calumny, and states that the doc-

trines mentioned breathe the purest morality. Our remarks were founded upon a letter addressed by Leo XIII. to the Redemptorist Fathers, Dujardin and Jacques, expressing his high approval of their labors in translating into French the works of Alfonso Liguori, and using this language: "These writings have been spread throughout the whole country, with the greatest profit to the Christian cause, and it is to be wished that they should become more and more popular, and should be placed in the hands of all."

Now, for the benefit of that "credulous public" that knows nothing of Liguori's writings, except what the "JOURNAL man" says, we would state that the Mecklin edition of Liguori's "Moral Theology," published in 1845, sets forth doctrines and principles which, if practically introduced in the life and conversation of men, would sap the foundations of morality. Let any reader consult volume 2, pages 117, 170, 176, 177, 319, 321, 322, 330, 340; volume 3, pages 237, 245, 246, and if the instruction which the faithful reader receives here be the "purest morality," we confess ourselves unable to discriminate between the nature of injustice, indecency, fraud, deceit, perjury, and that of truth, duty, honesty, modesty, justice, humanity, and chastity. Let those who doubt read the work itself.

CHOICE OF OCCUPATION.—L. T.—From your description we infer that you are better adapted to some physico-intellectual pursuit than to one which is theoretical. Engineering, or surveying, or architecture, would offer you a sphere of usefulness and probable success. A more trustworthy opinion could be rendered should you send us your photograph for the consideration of our examiner. The charge

would be small, as you have already had a chart.

A CLASSICAL FACE.—D. T. W.—The term classical is related to the type left upon the ancient monuments of Greece and Rome. You will find specimens of it in "New Physiognomy," and in any good treatise on painting and sculpture; and you will find it represented in the numerous bits of statuary which are copies of the ancient gods and goddesses, nymphs and heroes. The outline of the classical face is symmetrical, the nose straight, and nearly on a line with the forehead; the chin slightly protuberant and rounded, the mouth medium in size, the cheek bones not conspicuously prominent, if anything falling within the line of the ridge of the forehead; viewed in front the face is pyriform. An illustration will probably serve to give you an appreciative idea of the classical.

BROAD NOSES.—M. H. C.—It depends upon the part of a nose where the breadth is shown, what peculiarity of disposition is indicated. If near the end, it may be the sentiment of confidence; if farther up, acquisitiveness, or economy, or self-defense. A strong, vigorous, bony organization has usually a prominent and broad nose, and in general terms a nose that is well expanded is associated with large lungs and superior power of respiration. You will find this topic considered very fully in "New Physiognomy."

ELOQUENCE.—A. B. T.—Eloquence consists in both matter and manner, harmoniously adapted to each other. Demosthenes said, it is true, that the first, second, and third element in effective oratory was action; but there must be vivid language, to which the action is to be suited. Fine delivery, a polished manner, without being moved by them. So, too, we might mention Bossuet, Mirabeau, Pitt, Robert Hall, Patrick Henry, and others whose splendid utterances are frequently quoted as illustrating eloquence. There are more good writers than speakers, we know, for the reason, perhaps, that nowadays fine speaking is not as much esteemed as in the days when there was no printing-press. Most of our clergymen, lawyers, state-men, and public lecturers, even, greatly impair the effect of their matter by a careless, slovenly style of address and bearing.

Several ANSWERS must be deferred to the next number



Communications are invited on any topic of interest; the writer's personal views, and facts from his experience bearing on our subjects, being preferred.

THE SAME FACT FROM DIFFERENT CAUSES.—People, to a great extent, do the same acts. This is a more comprehensive truth than at first thought one is willing to admit. Deeds, to take the world over, are more alike than the doers of them. Hundreds of persons, of as many dispositions, engage in the same vocation with no appreciable difference in the result of labor; and yet the hundreds of workers represent just so many mental motors, whose variations are no less than the number of persons represented.

One of these hundreds engaged at the same business, works to support his family; another, to hoard up a little coveted gold; another prudently looks to a "rainy day;" another works to keep dressed in fine clothes; another, to have the approval of society; another, because it is his duty; another, because life was not given to be wasted; another, because it is his "lot," and so on. But the results of labor from these varied causes is virtually the same.

Again: one sits down to rest because he likes to take care of number one; another, because he has not enough "go-ahead" to carry him forward to the point of exhaustion; another, because by exhaustion her beauty will sooner fade, and there will be less hope of her winning that young man; another, because her child would be wronged by its mother's exhaustion; still another, because every nerve has done its utmost for the loved ones for whom the last energy goes out freely. Yet a casual observer sums up the matter with, "Well, they have taken a notion to sit down," while the causes of the same act range all the way between the widely different extremes—laziness and exhaustion.

Now, many who recognize the truth of the foregoing would not look for the same law in more subtle instances, but it runs through the whole series of human action; and because this law is not recognized to a due extent Phrenology, which traces it in its more subtle workings, is denounced. One points to a person who has large Acquisitiveness, and informs you that he possesses less peculiarity than his narrow-headed neighbor, who has not had equally good advantages for making money. This case, to him, is sufficient proof that Phrenology is a "hoax," while he has only cited another instance of the same fact from different causes, which can not as clearly be explained in any other way as by Phrenology. (My! how profoundly some do think before they decide—especially when preju-

dices helps to the decision !) The narrow-headed neighbor is, perhaps, sharp, practical, not very conscientious ; does not care to lavish much upon himself, and makes money as a matter of course. On the other hand, the acquisitive man may be slow, conscientious, not very sharp after business, and he may indulge a taste for reading. He eats a third more than his fast neighbor, and does not make money as rapidly as he, though caring much more for it, and would, other facts equal and the Acquisitiveness of each unchanged, acquire a great deal more of this world's goods than he.

Phrenology makes the case clear, and thereby evinces the subtlety of its truths in penetrating and analyzing psychical motors. Indeed, the seeming contradictions to Phrenology only prove its truth, and without it many of the obscure causes of action would be unexplainable. The burthen of objection to its principles has its cause either in lack of thought or lack of knowledge.

ELIZA J. STEPHEN.

A PLEA FOR THE INSANE.—A correspondent living in the far West writes : "Having been an inmate of an insane asylum situated in this vicinity I think I am more competent to judge of its merits and demerits than those who visit the asylum and see the outside of matters only. I do not write this article for the purpose of unjustly censuring any one, for truth bids me say I never was treated with more respect and kindness than by the officers and employes ; but there are many features connected with an asylum which need to be exposed, that they may be made better. I had supposed that in an institution of this kind every known means almost were employed to cure the patients, whereas *drugs, drugs, drugs*, are the panacea for nearly every woe. Patients are often left to bathe themselves, and I have often seen them merely get in the bath-tub and out again, with no practical benefit from the performance. The patients are well clothed and have plenty to eat, of that which would be excellent food was it always cooked in the right manner. Much of the food, in fact, is not eaten on account of its being so poorly cooked. The cooks are careful, however, that all victuals for the officials are cooked in the best style. From my observation the officers get the best of everything, the employes the next best, and the patients the poorest. Beef is the principal meat used, and far too much of it is put on the table, one-half not being eaten. As I before stated, the patients are well clothed and get plenty to eat, such as it is. They are furnished with neat and clean beds, and everything about the asylum is a model of neatness and cleanliness. Much, too, is done for the amusement of the patients. A walk outdoors twice each day, when the weather is fit, is enjoyed by many. A dance, twice a week, with the best of music, where all well-behaved pa-

tients are allowed to attend, serves as a great help to forget imaginary troubles ; and it would do any one good to see how well the patients enjoy this feature of the asylum. Buggy-riding is resorted to in a very limited degree. While at the asylum I had the privilege of attending a show several miles away, which helped me more than all the vile medicine I took. An asylum in an adjoining State employs daily four teams to take patients out riding. During my stay of nearly a year my folks never came to see me, and I received only a card and two letters, although fifteen or twenty letters were written to me. Why I did not get them I know not, unless the officers neglected to hand them to me. Many are sent to the asylum who could be doctored as well, if not better, at home, if people would only think so. But a notion pervades the mind of nearly all that when persons become a little deranged they must be sent to an asylum, and there they are taken, confidently expecting everything possible will be done for their recovery, and often, *very* often, *nothing* more is done than could be done as well at home. Why are patients herded together and individual needs entirely ignored, making these institutions simply places of restraint, and no intelligent effort made for the cure of their maladies ? Let any one visit the wild women's ward and there behold the dozens of poor, miserable wrecks of once, perhaps, noble women, suffering with the worst of diseases, and nothing done to cure them, but simply to keep them in close retirement, and they will be ready to exclaim, 'Where's the heart not dead to pity but for them would heave a sigh.' The same is true of the men, but not to so great an extent."

I wish to say to those who have or who may have relatives or friends in an insane asylum, Go and see them ; it will do them good. Don't leave them there and depend on what is written you as to how they are getting along. To the State authorities let me say, reduce the salaries of some of the higher officials, and do more for the poor unfortunate. No one can know the truth about an asylum only by a sad and practical reality. No one can know the feelings one experiences on first entering such an institution.

I have drawn no imaginary picture ; I have endeavored to state, without exaggeration, that which actually came under my own notice. I did not go to the place with my eyes closed, and while there learned the working of the institution in almost every respect ; and I write this article not to censure any one, but for the good of the unfortunate.

RUGH.

PERSONAL.

Miss JULIA SMITH, of Glastonbury, has published the translation of the Bible, wrought out by herself and sisters, at the cost of \$4,000. It is said to be a literal and valuable work.

MR. A. BRONSON ALCOTT can not remember when he has used any intoxicating liquor. He drinks very little coffee, and has eaten no animal food for fifty years.

ABRAHAM LEVI DICKSTEIN is the oldest paid teacher of children in the world. He is the German government schoolmaster of Heringen, in the province of Limburg. He has taught for sixty years, and is now one hundred and four years old.

CHIEF JOSEPH, of the Oka, a Canadian tribe of Indians, is a man of good education, as is evident from the fact that he has been ordained as a clergyman, and has translated the four Gospels from French into Iroquois. He hopes to finish the translation of the New Testament before the end of the present year.

UNSELFISH people are always polite, because good manners are only the absence of selfishness. They are the doing unto others as we would wish to be done unto.

HAS it never occurred to us, when surrounded by sorrows, that they may be sent to us only for our instruction—as we darken the cages of birds when we wish to teach them to sing?—*Richter.*



In this department we give short reviews of such New Books as publishers see fit to send us. In these reviews we seek to treat author and publisher satisfactorily and justly, and also to furnish our readers with such information as shall enable them to form an opinion of the desirability of any particular volume for personal use. It is our wish to notice the better class of books issuing from the press, and we invite publishers to favor us with their recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

WHITE HANDS AND WHITE HEARTS.—

By Ernest Gilmore. 16mo, 278 pages. Price, \$1.25. New York: National Temperance Society and Publication House.

For a temperance story this is more ambitious in plot and style than the average. Although dealing with a common topic and introducing phases of weakness and sin, which only differ in degree and quality of manifestation from the ordinary type of alcoholic degradation, Mr. Gilmore treats them in a refined way, and impresses the reader at the same time forcibly with the lessons they teach. A religious tone pervades the volume, and contributes a warm glow to the precepts of trust and patience the story embodies.

PUBLICATIONS RECEIVED.

OTHER FOOLS AND THEIR DOINGS. Price, in paper, 15 cts. J. S. Ogilvie & Co., New York.

MR. HORN AND HIS FRIENDS; or, Givers and Giving. By Mark Guy Pearse. Price, 15 cts. I. K. Funk & Co., New York.

THE ORATIONS OF DEMOSTHENES. Translated by Thomas Leland. In two volumes. Price, in paper, 20 cts. I. K. Funk & Co., New York, publishers.

HYGIEO-THERAPEUTIC RELATION OF HOUSE PLANTS. By J. M. Anders, M.D., Philadelphia. A well-written monograph, which discusses certain questions often asked with regard to the effect of house plants upon health. The weight of the reasoning and illustrations is on the side of their healthful influence.

THE TEMPERANCE GEM. A collection of temperance and gospel songs. Paper. Price 10 cts. The American Temperance Publishing House, New York.

PERCY'S POCKET DICTIONARY OF CONEY ISLAND. A very complete description of this island suburb of New York and Brooklyn, with information concerning the railroad and steamboat routes thither, its hotels, amusements, etc., etc. Price 10 cts. F. Leyboldt, publisher, New York.

THE POPULAR SCIENCE MONTHLY. The later numbers of this vigorous representative of general science in America show improvement in topics of interest to the average reader. The August number discusses: The Great Sand-lot Orator, and the Principles of the Agitation which he Represents; Theories on the Structure of the Interior of the Earth; the St. Gothard Tunnel; Types of the Nubian Race; Geology and History, and many other subjects. D. Appleton & Co., publishers, New York.

A SELECTION OF SPIRITUAL SONGS, with music, for the Sunday-school. Selected and arranged by Rev. Chas. S. Robinson, D.D. Price, in cloth, 50 cts. Scribner & Co., publishers, New York.

We doubt not that Dr. Robinson's excellent selection of Spiritual Songs for the Church and Social Worship have been received with much favor by the public, encouraging his further labor in behalf of the Sunday-school. His selections are very judicious. We find but few specimens of the light, trivial, sing-song character, so common in the ordinary Sunday-school hymn-books. As in his other collection, he shows appreciation of the old as well as of the new tunes.

THE WEATHER REVIEW, for June, 1890, is more than usually interesting, the data for variety of meteorological incident being probably unsurpassed by those of almost any month during the existence of the Signal Department. General Myer notes at some length the occurrence of floods, meteorites, droughts, hurricanes, the army worm, auroras, etc.

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[WHOLE No. 508



SOJOURNER TRUTH.

THERE has lived, for many years, in Battle Creek, Michigan, a very old colored woman, an ex-slave. She is very tall and bony, has high cheek-bones, thick lips, crisp hair, and a forehead fluted with wrinkles. Without education, and removed from the advantages of social life, she is, nevertheless, a thinker and a reasoner. In conversation and in public speech—for she has even been on

the platform—she often kindled into enthusiasm, and at such times she would tear the sophistry of the enemies of her race into shreds, or convert it into a whip of torture for their backs. On the street corners, in the shops of trade, and in public assemblies, her indignant eloquence has scattered her opponents as the needle-gun scattered the Zulus. Many of her keen and witty remarks have passed into proverbs, and there are “mean whites” in the town of Battle Creek who will not outlive the scars her speech has left upon their history. She has been a local queen over the blacks of the city, and her will their law. When able to go about, she has been a welcome guest at the firesides of the best citizens of the place. Her unquestioned piety, her lion-like courage, her devoted patriotism, command the esteem of the best educated and the most refined people of the city and neighborhood. Soon after the late war broke out, she went to Washington to assist in caring for the contrabands who made the Capital the Jerusalem to which they fled from their broken chains and indignant masters. In the *Atlantic* of April, 1863, Mrs. Stowe gave a graphic history of this remarkable woman, and to that sketch we are indebted for some of the facts which follow.

Sojourner Truth (for that is the name of this colored heroine) is known far and near, as an abolition agitator and lecturer. She frequently started on her self-appointed agency, making radical raids here and there, astonishing her auditors with her rude eloquence. She had a “silent, subtle” power of personal presence, and when her tall, thin form towered before an audience, even those who “hated a nigger,” felt the force of her intellectual and spiritual power. Meeting Mrs. Stowe at her house in Andover, the following conversation passed between them:

“So this is you?” said Sojourner.

“Yes,” was the reply.

“Well, honey, the Lord bless ye! I jess thought I’d like to come and have a look at ye. You’s heerd o’ me, I reckon?”

“Yes, I think I have. You go about lecturing, do you not?”

“Yes, honey, that’s what I do. The Lord has made me a sign unto this nation, an’ I go around, a testifying, an’ shewing on ’em their sins agin’ my people.”

The fat, jolly, wooly-headed little grandson, who accompanied her at the time of her visit at Mrs. Stowe’s, distinguished himself as a brave and noble soldier at Fort Wagner and elsewhere during the war.

Among the visitors at Mrs. Stowe’s house at the time of her call, were Dr. Lyman Beecher, Professor Allen, and others. She volunteered to give them a history of her life. She stated that she was born in Ulster County, N. Y., when slavery existed in the Empire State, and over one hundred years ago. She fell into cruel hands; her master and mistress were frequently the subjects of her prayers. At one time she offered the following characteristic prayer: “O God, I been a askin’ ye an’ askin’ ye, an’ askin’ ye, for all this long time, to make my massa and missus better, an’ you don’t do it, an’ what can be the reason? Why, maybe ye can’t. Well, I shouldn’t wonder if ye couldn’t. Well, now I tell ye, I’ll make a bargain with you. Ef you’ll help me to get away from my massa and mistress, I’ll agree to be good; but ef you don’t help me, I really don’t think I can be. Now says I, I want to git away, but the trouble is jess here; ef I try to get away in the night, I can’t see; ef I get away in the day, they’ll see me, and be after me.

“Then the Lord said to me, ‘Git up two or three hours before daylight an’ start off.’”

She was pleased with the suggestion and started off, and finally found shelter in the house of a Quaker. Never having slept in a bed, she surprised her hospitable friends by camping under the bed upon the floor, instead of getting in between snow-white sheets. She remained at the Quaker’s a long time, but beyond her promise to be good, in her own words:

"Pretty well don't need no help, and I gi'n up prayin'."

While she was there, the slaves in New York were set free, and her old master called on her at the Quaker's, and invited her to return to her old home. She concluded to accept the invitation, and was on her way to the wagon, when, in her own words, "I met God, and says I, 'O God, I didn't know you was so great.' An' I turned right 'round an' come into the house, and set down in my room; for 'twas God all 'round me. I could feel it burnin', burnin', burnin', all 'round me, an' going through me, an' I saw I was so wicked, it seemed as ef I would burn up. O, I sed, O, somebody; somebody stand between God and me! for it burns me.' Then, honey, when I sed so, I felt as it was somethin' like an amberall (umbrella) that came between me an' the light, an' I felt it was somebody—somebody, that stood between me an' God, an' it felt cool like a shade, and says I, 'Who is this that stands between me and God? Is it old Cato?' (a colored preacher). But then I seemed to see Cato in the light, an' he was all polluted an' vile like me, an' I sed, 'Is it old Sally?' an' then I saw her, an' she seemed jess so. An' then says I, 'Who is this?' An' then, honey, for a while it was like the sun shinin' in a pail of water when it moves up and down, for I begun to feel it was somebody who loved me, an' I tried to know him." She finally became so happy she exclaimed, "Lord; Lord, I can love *even de white folks*."

When she reached her old home, she found that her mistress had given her son away to a daughter living in Alabama, and she said:

"Missus, have you been and gone and sent my son away down to Alabama?"

"Yes, I have," said she; "he's gone to live with your young Missus."

"O, Missus," said I, "how could you do it?"

"Pooh," says she; "what a fuss you make about a little nigger. Got more of 'em now than you know what to do with."

"I tell you," said Sojourner, "I

stretched up; I felt as tall as the world" (she is nearly six feet): "'Missus,' said I, 'I'll have my son back ag'in'. She larfed, and said: 'You will, you nigger! How are you going to do it? You haint got no money?'

"'No, Missus; but God has, an' you'll see He'll help me;' an' I turned around and went out."

She was very angry, and prayed that vengeance might fall upon her mistress. She said in her prayer: "O Lord, ef I was rich as you be, an' you was as poor as I be, I'd help you, you know I would; an' oh! do help me." She talked with the people, and was advised to bring her case before the Grand Jury; and meeting the "grandest-lookin' man" that came out of the Court House, she asked him: "Are you a Grand Jury?"

This man was instrumental in restoring her son. About the time her boy came home, news came that the young Missus had been murdered by her drunken husband, and the sad tidings had such an effect upon the mother of the murdered woman, that she was prostrated with sickness, and soon afterward died in the arms of her old servant. Sojourner shall tell the story herself: "Well, you see, honey, I tole you how I prayed the Lord to render unto her double. Well, it came true; for I was up at ole Missus' house not long after, an' I heerd 'em readin' a letter to her, how her daughter's husband had murdered her; how he'd thrown her down an' stamped the life out of her when he was in liquor, an' my old Missus, she give a screech, an' fell flat on the floor. 'O Lord, I din't mean all that, *you took me up too quick*.' Well, I went in and tended that poor ole critter all night. She was out of her mind, a cryin' and callin' for her daughter, an' I held her poor ole head on my arm, an' watched for her as ef she had been my babby. An' I watched by her and took care on her all through her sickness, after that, an' she died in my arms, poor thing."

At a public meeting in the city of Rochester, a young preacher became alarmed at an anti-slavery meeting, because there

was a thunder-storm, and he expressed his fears that the judgment of God might fall upon the audience because of the agitation of the slavery question. Sojourner arose like a dusky spirit in the audience, and extinguished the light of the timid little man with the remark, "Why, bless yer poor little soul, I dare say the Lord never heerd tell of ye, don't be skeered."

At a mass meeting in old Faneuil Hall, Boston, Frederick Douglass had given a gloomy picture of the prospects of the negro race in America, when Sojourner convulsed and thrilled the entire audience with the remark, "Frederick, do you think God is dead?" At temperance meetings, Sunday-school conventions, and anti-slavery gatherings, she was often conspicuous and noticeable for her earnestness and originality, which often culminated in true eloquence.

Battle Creek had a brassy lawyer, who was noisy and unscrupulous in his opposition to the unfortunate and downtrodden blacks, and never lost an opportunity to kick with his great foot, the under dog in the fight. His sympathies were with the rebellion, but he left the South because he lacked the courage characteristic of the true Southerner, and came like a craven to his home in Michigan, where he insulted Union soldiers and others who favored the Union cause. He was the subject of the severe criticism of Sojourner Truth, and the following verses, by George W. Bungay, well express the sentiment of the little public who have heard of

LAWYER BROWN.

O lawyer Brown went to de Souf,
Whar he fout battles wid his mouf,
But when de guns of Grant he heerd,
He run'd away, for he was skeered.

He came back to the Norf again,
Dey put upon his wrist de chain,*
And den dey knew he couldn't fight,
He trimbled so, and turned so white.

So Justice, he said, let him go,
He knows but little, we all know;
To punish critters such as he,
To animals is crueltee.

* Reference is made to the arrest and handcuffing of the man at the time of his return from the South, the citizens thinking he was a spy.

And eber sence that 'ventful day,
Dey let the sbyster hab his way;
So on de streets all day in town,
Chawing his cud, is "lawyer Brown."

Squire Quibble one day took him in—
In partnership wid law and sin—
And all de folks larf in de town,
'Cause Squire Quibble took in Brown.

Sojourner Truth is a name the old heroine selected for herself; she was a sojourner in the land, and she intended to proclaim the truth. She is the mother of five children, all of whom, we think, are living. The son who was restored to her from Alabama, has been a seaman most of his life; his name is Peter Van Wagner, and is supposed to be living in Canada. She is said to be one hundred and four years old, and lives with daughters who are married, one at Battle Creek, Michigan, the others in Rochester, N. Y. She was never taught to read and write, but has managed to pick up a good deal of Biblical knowledge.

Dr. Lyman Beecher was once introduced to her as a famous preacher. Sojourner stretched herself to her full height, and exclaimed, "Why, you dear lamb, de Lord bless ye. So you preach. Why, I'se a kind o' preacher myself."

"Do you preach from the Bible?" inquired the doctor.

"Law, no, I'se can't read a word. I allys preach from jess one text, and that text is 'When I found Jesus.'"

She seems even in her great age to have as much executive force as half a dozen ordinary women have. Last spring the townspeople of Battle Creek celebrated Sojourner's one hundred and fourth birthday, making it an occasion of great enjoyment to the worthy woman, and of much interest to themselves.

OCCASION seems to be the father of most that is good in us. As you have seen the awkward fingers and clumsy tools of a prisoner cut and fashion the most delicate pieces of carved work, or cut through walls of masonry, and saw iron bars and fetters; 'tis misfortune that awakens ingenuity or endurance in minds where these qualities had never come into activity, but for their harsh experiences.

NOTES ON THE PHYSIOLOGICAL PATHOLOGY OF THE BRAIN (Continued).

THE long known and accepted plan and arrangement of the nervous system in man and in mammals, as well as its acknowledged varieties and functional endowments, are sought now to be shrouded by experiments of a character at once so startling and damaging, that one is driven to claim the privilege of questioning the views advocated so persistently by Drs. Hughlings-Jackson and Ferrier. In fact, the mere presence of primary "motor centers" in and about the convoluted surface of the brain would of necessity disarrange all our accepted ideas of the anatomy and physiology of the cerebro-spinal system, as such are handed down to us; and which ideas bear the impress of a form of truth not to be shaken by a series of vivisections on the lower animals—vivisections at once unnecessary and cruel. To insist on "motor centers" forming parts of the "hemispherical ganglion," is to give a denial to the teachings of our most accomplished investigators: teachings which are to the effect that the conscience in man and many animals—or what is the same thing, though more practically rendered, the intellectual powers and the higher emotions or affections of our nature—are located in the brain proper—that is to say, in the anterior and superior cerebral lobes; whilst the sentient or mere animal endowments are the outcome of the cerebellum medulla oblongata and the parts adjacent; and what is more, that these higher and lower planes of nervous matter are united from above downward by the peduncles of the cerebrum, and from below upward by the inferior peduncles of the cerebellum. No one can doubt the perfect adjustment of those several parts of the cerebro-spinal organism, and their several yet mutually dependent uses in the animal economy—in other words, their functional entirety or completeness. The attempt to enrich the superior or convoluted brain surface, already so well provided with an especial force of its own, at the expense of the base of the

encephalon and the medulla, etc., to the integrity of which we owe the excitatory phenomena, must and will come to grief. The position here insisted on is of the first importance; and such being the case, I will venture to quote here the words of the late Dr. J. Hughes Bennett, as found in the article "Physiology" in the *Encyclopædia Britannica*. He writes thus:

"By cerebrum or brain proper ought to be understood that part of the encephalon constituting the cerebral lobes, situated above and outside the corpus callosum; by the spinal cord, all those parts situated below this great commissure, consisting of the corpora striata, optic thalami, corpora quadrigemina, cerebellum, pons varolii, medulla oblongata, and medulla spinalis." In this way, he adds, "we have a cranial and a vertebral portion of the spinal cord. . . . In the cerebrum, or brain proper, the ganglionic or corpuscular structure is external to the fibrous or tubular. It presents on the surface numerous anfractuositities, whereby a large quantity of matter is capable of being contained in a small space; this crumpled-up sheet of gray substance has been appropriately called the hemispherical ganglion (Solly). In the cranial portion of the spinal cord, the gray matter exists in masses, constituting a chain of ganglia at the bases of the encephalon, more or less connected with each other, and with the white matter of the brain proper above, and the vertebral portion of the cord below. In this last part of the nervous system the gray matter is internal to the white, and assumes the form of the letter X, having two posterior and two anterior cornua—an arrangement which allows the latter to be distributed in the form of nerve tubes to all parts of the frame. Further, the brain proper furnishes the conditions necessary for the manifestation of the intellectual faculties properly so called, of the emotions and passions of volition, and is essential to sensation. That the evolution

of the power especially connected with mind is dependent on the hemispherical ganglion, is rendered probable by the following facts: (1) In the animal kingdom generally, a correspondence is observed between the quantity of gray matter, depth of convolutions, and the sagacity of the animal. (2) At birth the gray matter of the cerebrum is very defective; so much so indeed that the convolutions are, as it were, in the first stage of their formation, being only marked out by superficial fissures almost confined to the surface of the brain. As the cineritious substance increases, the intelligence becomes developed. (3) The results of experiments by Flourens, Rolando, Hitzig, and others, have shown that, on slicing away the brain, the animal becomes more dull and stupid in proportion to the quantity of cortical substance removed. (4) Clinical observation points out, that in those cases in which disease has been afterward found to commence at the circumference of the brain and proceed toward the center, the mental faculties are affected *first*; whereas in those diseases which commence at the central parts of the organ, and proceed toward the circumference, they are affected *last*. The white tubular matter of the brain proper serves, by means of the diverging fibers, to conduct the influences originating in the hemispherical ganglion to the nerves of the head and trunk," including of course the extremities of both man and beast. "The spinal cord, both in its cranial and vertebral portions, furnishes the conditions necessary for combined movements; and that the nervous power necessary for this purpose depends upon the gray matter, is rendered probable by the following facts: (1) Its universal connection with all motor nerves. (2) Its increased quantity in those portions of the spinal cord from whence issue large nervous trunks. (3) Its collection in masses at the origin of such nerves in the lower animals as furnish peculiar organs requiring a large portion of nervous power, as in the *triglia volitans*, the *torpedo silurus*, etc. The white matter of the cord acts as a con-

ductor, in the same manner that it does in the brain proper, and there can be no doubt that the influence arising from impressions is carried, not only along the fibers, formerly noticed, which connect the brain and two portions of the spinal cord together, but along those more recently discovered, which decussate or anastomose in the cord itself (Brown-Séguard), and are connected with the ganglionic cells of the gray matter."

We see, then, that according to Bennett, the cortex of the brain proper must be held to be the starting-point of not only those powers or faculties called intellectual, but also of those essentially moral in their operation, that is to say, of our affections or feelings or emotions and passions. But of these we learn nothing from Ferrier, so far as his teachings have yet reached us. The hard and thoroughly practical labors, the ever-famous discoveries of Gall, indicated as these are in the words of Bennett, just quoted, can not, must not, be so shelved, so ignored, as some among us would have them. However, Bennett was but one of the many who in a time gone by gave good and earnest support to the first principles or groundwork of the phrenological school. To come down to this present time, we find Dr. Maudsley helping on the good cause of a sound psychology, and lending his aid to uproot or to get rid of the wild fancies and vain imaginings of the metaphysicians or immaterialists; and whilst doing this much we find him also putting a drag, and a sound one too, on "the teachings of Dr. Ferrier himself." But I will quote here Dr. Maudsley's own words, so pregnant as such are with the author's especial force and eloquence:

"It is most necessary to be on our guard against the danger of misapplying ideas derived from internal observation of the functions of mind-centers to the interpretation of the functions of lower-nerve centers, and so of misinterpreting them. Assuredly we have sad experience enough to warn us against involving the latter in the metaphysical haze which

still hangs over the functions of the supreme centers."

Again: "Those modern inquirers who have pushed farthest their physical researches into mental functions and bodily organs, have notoriously been at great pains to discriminate between the nervous centers which minister to sensation and those which minister to reflection, and have done much to elucidate the physical and functional connections between them. They have never been guilty of calling all knowledge a knowledge only of sensations, for they recognize how vague, barren, and unmeaning are the terms of the old language of philosophical strife where an attempt is made to apply them with precision to the phenomena revealed by exact scientific observation. The sensorial centers with which the senses are in direct connection are quite distinct from, and subordinate to, the nervous centers of ideation and reflection—the supreme hemispherical ganglia. It is in these, which are far more developed in man than in any other animal, and more developed in the higher than in the lower races of men, that sensation is transformed into knowledge, and that reflective consciousness has its seat."

The late Sir H. Holland—although, like Dr. Maudsley, uninformed, or, it may be, prejudiced against a really practical psychology (Phrenology)—confessed himself assured of the plural functions of the gray matter of the cerebral convolutions, whilst he failed to accept the evidence of Gall and his followers in regard to the location of the several primary qualities, intellectual and emotional, of the mind. The best among the metaphysicians—those very peculiar philosophers who will ignore matter and will give to airy nothing an habitation and a name withal—are without doubt growing into a knowledge of Gall's discoveries, and making what use they can of the principles and facts taught and proclaimed by him. That this is the case I would refer, as an example, to the "Study of Character," including "An Estimate of Phrenology," by Professor Bain.

Mr. Herbert Spencer, too, one of the most profound thinkers of the day, remarks: "No physiologist who calmly considers the question in connection with the general truths of this science, can long resist the conviction that different parts of the cerebrum subserve different kinds of mental action. Localization of function is the law of all organization whatever; separateness of duty is universally accompanied with separateness of structure; and it would be marvelous were an exception to exist in the cerebral hemispheres. Let it be granted that the cerebral hemispheres are the seat of the higher psychical activities; let it be granted that among those higher psychical activities there are distinctions of kind, which, though not definite, are yet practically recognizable; and it can not be denied, without going in direct opposition to established physiological principles, that these more or less distinct kinds of psychical activity must be carried on in more or less distinct parts of the cerebral hemispheres. To question this is not only to ignore the truths of physiology as a whole, but especially those of the physiology of the nervous system." Mr. Spencer further adds: "Either there is some arrangement, some organization, in the cerebrum, or there is none. If there is no organization, the cerebrum is a chaotic mass of fibers incapable of performing any orderly action. If there is some organization, it must consist in that same physiological division of labor in which all organization consists; and there is no division of labor, physiological or other, of which we have any example, or can form any conception, but what involves the concentration of special kinds of activity in special places."

Let me ask, Does Dr. Ferrier, or those who think with him, hope or expect to prove that physiologists of the mold of Gilbert Blane and Marshall Hall wrote or taught in vain, and that their experiments were failures? It has been demonstrated by many, and especially by those just named, that the inherent irritability of the muscular and nervous tis-

sues (*i.e.*, the contractile movements) or the excito-motory phenomena in man and animals "are strictly connected with the integrity of the spinal cord," and that all such "irritability" or such "phenomena" may exist separately from, and independently of, any cerebral or mental acts. This being the case it must be seen, and plainly seen, by all who desire the truth, that the effects of the vivisections practiced by Dr. Ferrier are due only to the certain diffusion of the electric current employed by him throughout the cerebral mass of the cat, dog, or monkey operated on, and the consequent excitation of the basic ganglia, *i.e.*, the lower planes of gray matter; such ganglia being the *bonâ fide* "motor centers." On these the stimulus employed is exhausted, and hence the movements of whatever kind.

The foregoing extracts from the writings of the late Dr. J. Hughes Bennett, Dr. Maudsley, and Mr. Herbert Spencer, together with the references or allusions made to the teachings and opinions of the late Sir H. Holland, Blane, and Hall, may be said to supply a basis, firm and lasting—"a point of departure" to or for those who would rise to the high level of a sound and enduring psychology, or in one word, *Phrenology*. Those medical men taking an interest in this "localization" question, should read Dr. Dodds' "Historical and Critical Analysis in Respect to the Localization of the Functions of the Brain," to be found in successive numbers of the *Journal of Anatomy and Physiology*. On the authority, then, of Dr. Dodds, Dupuy, and even Hitzig, attach a high degree of importance to the very certain diffusion of the electric current employed, from the cortex to the base of the brain, and parts adjacent; and which "plainly enough throws discredit on the idea of the position of 'motor centers' in the cortex itself, to the exclusion of the basic ganglia so termed." Hitzig, we learn, is disposed to credit the blood-vessels rather than the white, the conducting tissue of the cerebrum, with this diffusion of the current; but whatever

the source of such diffusion, the same must of necessity prejudice the results of the experiments performed. Dr. Dodds writes: "There can be no doubt that diffusion of the currents forms a possible explanation of some of the phenomena of brain electrization, and further that the danger of this must be directly as the tension of the electricity used." By these words I understand him to mean that the danger or probability of such diffusion must be in proportion to the persistence and strength of the stimulation; and that such is really the case is shown by the investigations of Drs. Carville and Duret, who affirm, according to Dr. Dodds, "that by progressively increasing the strength of the stimulation, we may obtain very different results; the electrodes remaining all the time at the same point." Now it is pleaded or claimed by Dr. Ferrier, that in his latter experiments the objection taken to the diffusion of the electric stimulus applied to the *motor centers* (as he calls such) of the cerebrum is duly and completely, as I understand him, silenced and got rid of by "the use of the induced, in preference to the continuous current for the purpose of excitation." But I fail to recognize this position; given the employment of the "stimulation," the mere form of it can signify but little. It may be there are those among us who, sufficiently enamored with these new views of the physiology and pathology of the brain in man and the higher vertebrates, will accept Dr. Ferrier's views so far as the "induced" and "continuous" currents are concerned; but what can his supporters advance calculated to cover the crushing fact proclaimed by Dupuy, *viz.*, "In one experiment the nerves at the base of the brain were divided to prevent the transmission of nerve excitation, and yet they could still be excited by electrical stimulation of the cortex"?

(To be Continued.)

A MAN of true nobility of character may be homely in feature, but never repulsive; when once known his physique is forgotten.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER III.—Continued.

THE ETHMOID AND SPHENOID BONES IN THE QUADRUMANA.

THERE remain two bones more which must be studied to complete our concise descriptions of the bony envelope

known as ethmoidal cellules, which are so broad and so developed in man, do not exist at all in the ape. We notice

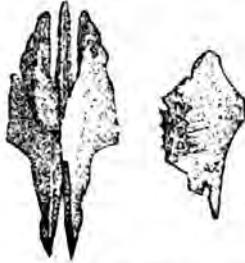


Fig. 144.—ETHMOID OF APE. OUTER SURFACE. Fig. 145.—VERTICAL BLADE OF ETHMOID.

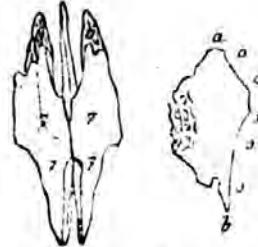


Fig. 146.—ETHMOID OF APE. OUTER SURFACE. OUTLINE. Fig. 147.—VERTICAL BLADE OF ETHMOID. OUTLINE.

of the brain, viz.: the ethmoid and the sphenoid. The first of these bones has very little relation to the encephalic mass, and so offers only a secondary interest to the student of cerebral anatomy. Its development appears to have connection with functions of the nerves distributed around the membrane which lines this bone. The sphenoid, as we shall see later, lies in contact, by its upper surface, with several parts of the encephalon, and on this account deserves the attention of phrenologists, especially as the cerebral parts, to which it corresponds, have been very little considered by those who have occupied themselves with the physiology of the brain.



Fig. 148.—ETHMOID OF APE. INNER SURFACE.

only on each side of the osseous plate a little depression, forming, as in man, the lower anterior region of the orbits, 7, 7. At the center there is a perpendicular blade articulating with the lower edge of the vertical plate, and sustaining, as in man, an extremely small crest (Fig. 145); upon the sides of this are two rows of holes, which represent channels of the olfactory nerves of man, only they are less numerous than in him. Seen below, or by its lower surface, the ethmoid in the ape shows, as in man,

two cornets, or horns, 6, 6 (Figs. 148, 149), the whole surface being lined by the olfactory membrane.



Fig. 149.—ETHMOID OF APE. INNER SURFACE. OUTLINE.

THE ETHMOIDAL BONE IN THE CARNIVORA.

The ethmoid in the carnivora is much more complicated than it is in the quadrumana, being composed of two lateral masses, formed of a



Fig. 150.—ETHMOID OF CAT. INNER SURFACE.

On comparing the ethmoid of the ape with that of man, we find a marked difference in form (Figs. 144 and 54). The whole cellular mass, occupying the margin of the apophysis, *crista galli*,



Fig. 151.—ETHMOID OF CAT. INNER SURFACE. OUTLINE.

multitude of thin layers, rolled in the form of cornets, and leaving between them dissimilar spaces (Figs. 150, 151, x, x, x).



Fig. 152.—ETHMOID OF CAT. OUTER SURFACE.

The disposition of these layers is well seen on examining the bone. Laterally, at the center, there are two masses terminated in front by the cornets, which are more prominent and broad, v, v, v, v (Fig. 151), and a little backward is noticeable the ethmoidal crest, n, n, n,

and on each side the apertures which afford passage to the olfactory nerves. Seen from below, or by its nasal surface, we find on the right and left two masses composed of small layers, extremely thin (Fig. 153), o, o, o, o, o, o, the extreme division of which is designed, doubtless, to increase the surface upon which the pituitary membrane is elaborated. These two masses occupy almost half of the lower surface of the ethmoid. Between them, running from front to rear, and upon the medial line, is seen the vomer, c, c, c, c, which early unites with the lower surface of the posterior cornets.



Fig. 154.—ETHMOID OF RABBIT. OUTER SURFACE.

THE ETHMOID IN RODENTS.



Fig. 156.—ETHMOID OF RABBIT. INNER SURFACE.

The form of the ethmoid in rodents differs somewhat from that of the same bone in the carnivora. Compare the ethmoid of the cat (Fig. 150), with that of the rabbit (Fig. 156). While the same general features will be found in

both, there are very evident differences of extent and configuration. On its upper surface the ethmoid of the rabbit appears

to be composed of two distinct parts (Fig. 157), the anterior, c, c, c, c, composed of two lateral masses separated by a groove, q, q; the posterior, 5, 5, 5, 5, formed of a thin plate, compact in tissue, and pierced with numerous holes, showing at the center a little swelling representing the ethmoidal crest. The anterior part is made up of diverse or irregular layers and hollows, of which the more external are covered by the under surface of the external process of the frontal bone, e, e, e, e. The posterior part represents absolutely the ethmoidal in man, the quadrumana,



Fig. 153.—ETHMOID OF CAT. OUTER SURFACE. OUTLINE.

and carnivora, as designed for the passage of the olfactory nerves. The openings or perforations, as shown, are numerous. The lower or outer surface of the ethmoidal in the rabbit (Fig. 155) is much



Fig. 155.—ETHMOID OF RABBIT. OUTER SURFACE. OUTLINE.

less complicated than in the cat. Upon the lateral parts are some leaf-like plates, separated by a groove or hollow, v, v; in the center, x, is the vomer, which early becomes united with the ethmoid. All this surface is lined by the olfactory membrane.*

THE SPHENOID OF THE QUADRUMANA.

The sphenoidal bone in the quadru-



Fig. 157.—ETHMOID OF RABBIT. INNER SURFACE. OUTLINE.

* It is unnecessary to add anything concerning the ethmoid in birds. The part of this bone which has any relation to the cranium is almost nil. It is that which forms the little blade which separates the two optic openings which lie at the base of the skull in the hooded crow.

mana is composed of two portions or pieces, which unite only at an age considerably advanced. One represented in



Fig. 158.—SPHENOID OF APE. LOWER SURFACE.

Fig. 160, or the anterior sphenoidal division, is much smaller than the other (Fig. 158), which represents the sphenoid of man. These two parts occupy the same place relatively as in the human cranium. Observed by their superior surface, which is more interesting to the phrenologist, they show the following features: 1. A smooth surface, back of that two openings, c, c, separated by a



Fig. 159.—SPHENOID OF APE. LOWER SURFACE. OUTLINE.

bony blade, which afford passage to the optic nerves (Fig. 162). 2. Behind these openings, and upon the median line, a small attachment, m, presenting an unequal surface and articulating with the middle part of the posterior of the sphenoidal division which presents the following features: At its center part a depression where the pituitary body lies; on each side of this two bony plates, the



Fig. 160.—ANTERIOR SPHENOIDAL DIVISION.

“great wings,” showing the impressions of the inferior and middle convolutions of the brain, 1, 2, 3. (Fig. 164). They show near their base openings for the passage of the nerves, which are distributed on the face. Their uneven edges articulate with dif-

ferent bones of the cranium. All this surface is lined by the dura-mater. The lower surface of the two sphenoidal

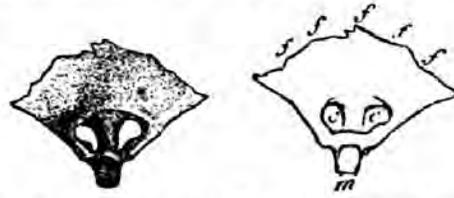


Fig. 161.—ANTERIOR SPHENOIDAL DIVISION, INNER SURFACE. Fig. 162.—ANTERIOR SPHENOIDAL DIVISION, INNER SURFACE. OUTLINE.

divisions (Figs. 158 and 160) is very irregular, especially that of the posterior piece. The anterior presents, as observed in the figure, two depressions or hollows, and the lower orifice of the optic openings at the center of the bony process articulating with the ethmoid. The lower surface of the posterior division shows at the center the inferior surface of the main



Fig. 163.—SPHENOID OF APE. INNER SURFACE.

body of that bone, and at the sides that of the great wings. Between these and the body are two appendices representing the pterygoid apophyses of the human sphenoid. One does not notice, as in man, the cavities called sphenoidal sinus. The sphenoid of the ape articulates with the same bones of the cranium as in man.

On comparing the posterior sphenoidal



Fig. 164.—SPHENOID OF APE. INNER SURFACE. OUTLINE.

division of the ape with the sphenoid in man, of which that division appears to be the analogy, the observer is surprised by not finding at the base of the wings of

that of the ape the cleft known under the name of "sphenoidal." It exists there, however, but is very much smaller than in man; in other words, it forms a true aperture, and is made by the groove which is seen at the base of the great

wing in part, and in part by the posterior margin of the little bony process which contributes to form the optic opening. It is evident that this cleft or aperture can be seen only when the two parts which form the sphenoid are united.

THE LITERATI OF CONCORD.

CONCORD, Massachusetts, has, for many years, been known as the center of transcendental thought in New England. Here have lived, or visited, Channing, Alcott, Thoreau, Margaret Fuller, Hawthorne, and Emerson, all of whom aimed to attain superior excellence in the conduct of life. They have been sneered at as mystics who sought the unattainable, and worshiped an ideal perfection beyond the reaches of mortals. Their lives and teachings have been an oasis in the barren desert of realism, and the cold regions of material philosophy. Their influence has greatly modified the old Puritan theology and softened its harsher features. God has ceased for them to be a hard task-master, piling up cruel burdens upon humanity, and become the all-pitying One, who tempers the wind to the shorn lamb. Life has grown milder, sweeter, nobler, for their teachings. They have lifted us out of the sphere of harsh labor and pain, into an ideal region of growth and spiritual exaltation.

We no longer grovel beneath the curse, we only bow to receive a benediction. We strive to make life pure, tender, holy, because they have taught us that it may become so at our will. We need more such teachings, not less; there is no danger that the American will ever become unpractical or painfully mystic.

And there is nothing the mass of people need so much as this lifting of the soul from the cares and pains of earth into realms of ideal peace and glory. The human being that does not aspire is little better than the animal or clod. Margaret Fuller, one of the brightest of this circle of choice spirits, was early taken from earth, and amidst the wild tempest, found

rest from a storm-tossed life beneath the cruel waves of the angry Atlantic. Earnest, studious, high-souled, she was a rare being. Channing said recently: "When Margaret Fuller was with us she listened, then fused and molded our crude thoughts into one glorious whole." Alcott says of her: "She spoke best what others tried to say, and what women speak the best. Hers was a glancing logic that leaped straight to the sure conclusion; a sibylline intelligence that divined oracularly, knew by anticipation, in the presence always, the open vision. Alas, that so much should have been lost to us, and this at the moment when it seemed we most needed and could profit by it!"

Thoreau, who also left life early, was a remarkable character; he believed that all days should be lived in a noble spirit, that no one day was particularly sacred, and that a person should not be superstitiously careful to observe one day, whilst careless in what spirit he passed the remainder.

A lover of the fields, flowers, woods, waters, and indeed of all nature, it has seemed to me that Hawthorne must have had his peculiar personality in mind when he created Donatelle, the fawn-man whom he suggested as a compound being, with a dual life. His profound passion for nature was clearly shown by his retirement at Walden Pond, in order to have leisure to observe, think, and write. He built a slight dwelling in the woods, near Concord, upon the banks of that water which he has made memorable, and there passed nearly two years. When his purpose was accomplished, he returned again to active life.

His observations upon wild apples, wild

flowers, autumnal tints, winter scenery, and walking, are full of quaint, original flavor; his spirit was essentially antique—like the ancient philosophers of Greece, he sought the soul of things beneath the outward. Primitive, yet ideal and subtle, the exquisite delicacy and correctness of his notes upon nature often failed to be understood by people less susceptible to the divine life that pervades the flowers and the grass. Self-reliant and self-poised, he worshiped the wild and the hidden in nature, with the quiet devotion of one who had received a baptism into the old Greek faith that made every tree, stream, and grove sacred to some divinity, some God.

That his characteristics were marked and varied, will not surprise those who consider his ancestry; the paternal grandfather, from the Isle of Jersey, was a Catholic Frenchman, whilst the paternal grandmother was a canny Scotch woman, named Jenny Burns. The mother's family were English, and one ancestor, the Rev. Charles Dunbar, a graduate of Harvard, was a minister in Salem. Thus uniting in himself somewhat of the traits and thoughts of three different European peoples, and a strong love of freedom that distinguishes the American, it is not strange that a marked individuality should have characterized Henry Thoreau.

Ralph Waldo Emerson is the eighth in descent from Reverend Peter Bulkeley, an English rector in Bedfordshire, a Puritan minister who, unwilling to obey Charles Stuart's bishops, emigrated to Massachusetts in 1684, and in company with Major Simon Willard, planted the town of Concord, in September, 1635. At his death, in 1869, his sacred office was given to his son, Rev. Edward Bulkeley, whose daughter married a clergyman, and, about thirty years later, her son married Rebecca Waldo, from whom Mr. Emerson is descended. The Waldos are descendants of Peter Waldo, a leading man among the Waldenses. The Waldos, after emigration, were merchants in England.

We can not but believe that from ancestry thus marked by strong and distinguished traits, the intellectual power and high moral tone of our Emerson has naturally descended, modified by the culture and influences of American life and thought. It is but natural that a fine receptive intellect should gain a closer insight into nature and the soul of man from the direct contact that our institutions and open lands afford. We are, as yet, almost untrammelled by conventionality. There is here a freedom of intercourse that no other country gives. There are here no such broad distinctions of rank and power as in older Governments separate man from man. And that part of our literature which is not founded upon foreign models, reflects the unconventional moods of the writer. He is not trammelled; he shows himself good or bad, strong or weak, as the case may be.

For some years this group of writers suffered from the prejudices of those who could not appreciate the sincerity of their attempts to live nearer to nature, their searches after higher truth, and a higher standard of life; but at last their earnest endeavors, their devotion to the main thought of their existence, has proven to the world that there may be a life of the mind, of the spirit, nobler and more worthy than the struggle for those things which perish in the using.

From the plain, simple, white house which Emerson occupies in Concord, shaded by fine pines situated in the midst of a quiet landscape, has gone forth an influence, a power that has molded the lives of thousands of young men and women far and near. There have been held many of Mr. Alcott's "Conversations," and often upon the still Sunday afternoons a band of choice spirits gathers there to exchange views upon the conduct of life and the immortality of the soul. Mr. Emerson's life is so pure and sweet that he is a perpetual sermon as he walks, with bowed head and slight figure, among his fellow-men.

Another well-known writer has his

home in Concord—A. Bronson Alcott. For many years he followed the profession of teacher, and as long ago as 1834 he was teaching his famous Temple School in Boston. He introduced many new ideas into school-life, giving the pupil more freedom, and using a more rational system of education than other instructors of his day. Mr. Alcott was also an active member of the Transcendental Club, which first met at Rev. Geo. Ripley's house, in Boston; two years later it met at Dr. Bartol's in Chestnut Street, Boston, when Pantheism was discussed.

A few years later, in company with others, Mr. Alcott bought a farm and endeavored to establish a community which was called "Fruitlands"; this project proved a disappointment, and in January, 1844, it was abandoned.

It is said that Mr. Alcott regards this as a turning-point in his life, when he ceased to try to change so much the outward condition of mankind, and tried rather to purify and enlighten their inner life. Returning to Concord, he bought a small farm, re-built the house, and named it Hillside; a few years after it became the property of Mr. Hawthorne, who re-named the place Wayside, a title it still retains, though now in possession of Mr. Lathrop, the son-in-law of Hawthorne.

In 1868 Mr. Alcott published a volume of essays, called "Tablets." In 1872, "Concord Days" appeared, and other volumes have come from his pen. One of Mr. Alcott's views that has been much discussed, is that of propagating truth in the old Greek way of conversations. This has been a favorite plan, and has found acceptance among many. He has held these conversations in many parts of the country, and tried always to teach the people that the spiritual and the eternal is something more valuable than the fading things of earth; that the charms of religion and philosophy are superior to any and every other.

Another celebrated American lived many years in Concord—Nathaniel Hawthorne; when he came from Lenox, in 1852, he settled at Wayside upon the

Lexington road, and there wrote some of his weird stories. His "Mosses from an Old Manse" was written in a room of the Old Manse, the home of the Congregational ministers for the greater part of the time since its erection, in 1765. In the same house Emerson wrote "Nature," hence it has been trebly consecrated by genius and by piety.

Hawthorne's was a solitary, peculiar nature. Often when people were seen approaching, he made his way into the woods, that he might work better alone, and think undisturbed by any alien influence. Natures sensitive and reticent can not meet and mingle in the ordinary pastimes and cares of life without losing their delicacy and power. The successful writer must dwell more or less within his own soul.

This the non-literary world does not understand, and it resents the isolation and unapproachableness which he imagines the writer to affect.

The work of these men in Concord has led to the establishment of the Concord School of Philosophy, through whose teachings many of the thoughts which have been gathering here will be disseminated, and more and more attention will be given to the diffusion of the last and highest views upon morality, futurity, and spiritual truth.

AMELIA V. PETIT, PH.B.

THERE is scarcely a branch of science which is unaffected by superstition, and surely not that of medical science. Go to any drug-store and note how large a space is given to nostrums, whose advertised virtues are more wonderful than any decoction of ancient fable. Without any great stretch of the imagination you might easily fancy yourself in the laboratory of some alchemist, who had discovered the elixir of life—the potion which was to make old folks young, crooked ones straight, and ugly ones beautiful. The eagerness with which these things are bought by the people is measure of their superstition, and also of the difficulty with which hygiene has to contend.

I WONDER WHY?

I WONDER why there hath
 Forever, ever, been,
 Too dark a veil to hide
 From us the world unseen,
 The river deep once crossed,
 Why never—never more
 Come tidings unto us
 From that returnless shore?

If but one letter brief
 Might come from their own hand,
 To tell us how they reached
 That blessed Fatherland,
 We'd patient lift care's load,
 Nor think time half so long,
 Nor let grief's sigh so deep
 Check all our happiest song.

We sit alone and think
 Of each dear missing face,
 How kind on us it looked
 In its familiar place;
 Until it seems at times
 We can not, can not wait,

Never a word to hear
 Till we shall pass that gate.

Before we thought, they went,
 How often, o'er and o'er
 We wish for one kind word,
 One loving kiss once more.
 We long to lay our head
 Once more upon their breast,
 And hush each wailing grief,
 In their kind arms, to rest.

O, loved and lost! unseen,
 Ye must be near me still,
 Safe in your arms my heart
 Is hushed and folded still;
 Your eye beams on the star,
 Your smile in every flower;
 And in each murmuring wind
 I hear your voice each hour,
 Sweeter than all earth's music;
 I evermore may hear
 Your voices' faintest echo
 Imperishably dear.

LYDIA M. MILLARD.

JAMES B. WEAVER,

THE GREENBACK CANDIDATE FOR PRESIDENT.

THE Convention of the Independent Greenback party, for the selection of names to represent it in the approaching contest for the first national honors, was held in Chicago, soon after the adjournment of the Republican Convention. Although by no means so large, it proved nearly equal in enthusiasm, (the newspapers representing the other political parties say "noise,") and promptly completed its work on the 11th of June by nominating James B. Weaver, of Iowa, for the first place, and B. J. Chambers for the second.

Concerning the phrenological points of Gen. Weaver, we have received a concise view of the man as predicated of a likeness which recently appeared in a

New York weekly, from Mr. L. N. Fowler, of London, who says: "Mr. Weaver looks to be every inch a man, full of vital stock, force, energy, and courage. He has great executive power as well as great power to organize, systematize, figure-up, and make estimates. He has great perceptive power and ability to acquire knowledge and use it after it is acquired, for all his powers are available; and he has great tenacity of memory and of mind in general—vigor of intellect, strength of will, comprehensiveness of mind, and quick penetration are all prominent qualities according to his organization. As a President he would not trifle with compromise, but put everything right straight through by daylight. He

has a fine physical structure, a good, strong neck, strong features, good ears, chin, and nose, and a plenty of cheek ; he has a capital head, and it is well set on his shoulders. He looks more like putting into execution his ideas than to

a man of action. Make him President, and it will be a lively four years not to be forgotten."

James Baird Weaver, the Greenback-Labor candidate for President of the



JAMES B. WEAVER.

talk about them. He is full of life, and there is no nonsense about him. He is watchful, guarded, rather suspicious, wants everything sure and safe, is very intuitive and correct in his perception of character and motives. He is every way

United States, was born on the 12th of June, 1833, at Dayton, Ohio, his parents being Abram and Susan Imley Weaver. His father, also a native of Ohio, now resides in Atchison county, Kansas, being in his seventy-fifth year. The Weavers were originally from England, settled in

New York, and scattered thence over the country. Henry Weaver, the grandfather of James B., removed to Ohio when it was a wilderness, and was a judge of one of the courts at an early day. At one time, during the Indian wars, he had command of a fort at the foot of Main street, where the city of Cincinnati now stands. He also participated in the second struggle with England. The mother of James B. belonged to an old prominent New Jersey family.

The subject of this sketch lived on a farm until fifteen years old; then moved into town, and reaped what educational advantages he could in the rude school-houses of that early day, spending part of his time at this period in carrying at first the weekly and then the semi-weekly mail between Bloomfield and Fairfield, his father having the contract on this route.

About 1850 young Weaver commenced reading law to fit himself for its practice, using what leisure he could spare from business pursuits, at one time being a clerk in a store, at another driving a team to California across the plains for a relative. He connected himself with the Cincinnati law school in the summer of 1854, and graduated in the April following with the title of LL.B. The next month he opened an office in Bloomfield, and has since been in steady practice, except while in the military service.

In April, 1861, at the first call of the President for troops, Mr. Weaver enlisted as a private in Company G, Second Iowa Infantry, intending to go into the first regiment, but the company was a little too late in filling. He was elected first lieutenant of the company; served in that position until October, 1862, having passed through the battles of Donelson, Shiloh, and Corinth. The night before the battle of Corinth he received his commission as major of the regiment. He entered that sanguinary battle the next morning, and during the day Col. James Baker was mortally wounded; the next morning Lieutenant-Colonel Mills was mortally wounded, and Major Weaver

was left in command of the regiment throughout the engagement. Seven days afterward he was unanimously elected colonel, and was commissioned by Governor Kirkwood—a striking example of rapid elevation, rising from lieutenant of a company to colonel of a regiment in one short week. He led the gallant Second until the expiration of the term of service, May 27th, 1864, when he was mustered out. At the battle of Resaca, Georgia, he led the brigade that crossed the Oostanala, found the enemy's position there, laid the pontoon bridge under fire, and after crossing, the brigade jumped into the rifle pits, and drove the enemy before it.

On the 22d of May, 1866, Col. Weaver was breveted brigadier-general "for gallant and meritorious services," the brevet to date from the 13th of March, 1864, the United States Senate confirming the well-merited honor. While in the army he never shrank from the most perilous position, and seems to have been always sanguine of success. In 1866 General Weaver was elected district-attorney of the second judicial district. In 1867 he was appointed assessor of internal revenue for the First Congressional district, and held the office until it was abolished by law.

General Weaver was a Democrat until 1856, when he identified himself with the young Republican party. In 1877 he left the Republicans and declared himself a National, and supported Hon. D. P. Stubbs for Governor on the National ticket, taking an active part in the canvass. In this campaign he engaged with ex-auditor General Cutts in joint debate on the financial question at Oskaloosa, Ottumwa, and Des Moines, gaining a complete victory over his opponent.

In May, 1878, the National Convention of the Sixth Iowa district nominated him for Congress, and after a thorough joint canvass with his opponent, Hon. E. S. Sampson, he was elected by a majority of 2,156 votes, overcoming the former large Republican majority of 4,000.

General Weaver's record in Congress

has been such as to entitle him to the leadership of the minority party of the center. His "Soldier bill," which provides that ex-soldiers be paid the difference between greenback and gold values, obtained for him a wide-spread notoriety, and the friendship all over the country of men who served in the army of the Union. He is a worker in the temperance cause, and an official member of the Methodist Episcopal Church. He was a lay delegate to the General Conference which met in Baltimore in 1876.

General Weaver has a wife and seven children—five girls and two boys. As a lawyer he is recognized for his ability, is strongest on constitutional questions or those involving large results. Socially he is genial, easily approached by all, and as a man much of a favorite even with political opponents.

The strength of his convictions, as well as the style of his oratory, is shown in the following extract from a speech made in July, at Montgomery, Ala., in the course of a campaign tour through the South :

"I find that it is conceded everywhere in your State that the Independent ticket will be elected in August if the people can only have a fair count. This and all other counties in the black belt are overwhelmingly against the Democratic party by more than three to one; yet I am told

on all sides by most respectable persons that you uniformly count out by fraud the men who are honestly chosen, and install in office the candidates who are confessedly defeated. This is the end of all free government. If you strike down a free ballot in Alabama you strike it down in Iowa, and New York, and every other State in the Union as well as in Alabama. I am on a tour of observation through the South, for the purpose of organizing the Independent Greenback party, which is your only hope. The hatred and base blood existing between the old parties is so great as to render relief from that source utterly hopeless. We ask you to come with us and bury forever these sectional issues. When I go North I intend to tell just what I have discovered here. I would rather you would send a bullet through my body this instant than that I should fail to warn my countrymen of the danger which threatens our free institutions from the striking down of the free ballot in Alabama or elsewhere. The humblest man of this country must have the same chance as is accorded to the wealthiest and most influential. Come with us, and we pledge to you over the grave of buried sectional animosities a free ballot, a fair count, and equal rights for all before the law."

INTELLECT AS A MEANS OF OBVIATING OUR FAULTS.

NATURE *puts man's reasoning* faculties in supreme command over him, though he rarely accords them that obedience demanded by his own best good. True, the great thinkers of the race have wielded its sceptres through all ages—strategists in war, like Alexander, Cæsar, and Napoleon; statesmen, like Cavour, Chatham, Kossuth, and Webster; philosophers, like Plato, Aristotle, Bacon, and Locke; scientists, like Cuvier, Agassiz, Audubon, and Huxley; theologians, like Melancthon, Chalmers, Parker, and Beecher. The location of the

reasoning group of organs shows that it should govern all our minutest life affairs; and only when it does, can we at all utilize God's provisions for man's good. Note, first, its position in the head; next, its application to the summary obviation of all our faults.

As we rise from the soles of the feet toward the crown of the head, at every inch of our ascending progress we meet with organs whose functions are more and still more important. The feet do the lowest and most abject service of all, that of transferring man's body where his

mind directs. Rising to the organs in the lower part of the body proper, we find their office far more essential to life; for, though feet are handy servants, yet we can do without them; whereas we can not live long without the lower visceral organs; yet we can live longer and better without them, or with them disordered, than without heart or lungs, organs located highest up in the body proper, and fulfilling its most essential functions, summary death following their inaction. But even heart and lungs fulfill functions far less essential and exalted than brain, which, located above all, fulfills life's most important function, the mental—that for which all else in man, in universal nature even, is ordained.

By like reasoning *the several parts* of this brain must needs fulfill functions the more elevated the higher up they are located; so that the animal propensities, located at the base of the brain, are by no means to be ignored; they are to man what foundation is to house, indispensable; and those located in its crown are still more man-ennobling, and those moral and religious elements which ally us to angels and to God, are located on top of all; yet the intellectual organs are located both as high as any and *farthest forward* of all; the moral, by location, being man's prime ministers, while intellect is his commander-in-chief, the author of all supreme authority, and sovereign dictator of all human feelings and actions.

Reason is man's king, and sits enthroned on top of even the intellectual lobe, besides being his most useful power. To scan a few of the utilities derivable from it:

OBVIATING OUR FAULTS IS OUR SUMMARY BONUM.

They create the majority of our miseries, and interrupt the larger half of our successes. Behead them first, ye who would enjoy or accomplish. A little hole in a rich garment, a lame leg in a good horse, a small flaw in a diamond, spoil them. Think out what evils your imper-

fections inflict on you, and, if needs be, drop every other work on hand while you make sharp, short work of their extirpation.

Of course *learning* then comes first. You can not take an intellectual step in their obviation till you first *know* in just what they consist. Then *how* find them out? Not from consciousness or self-scrutiny; for all men are the poorest possible judges of themselves. The conceited are the last to know that they are so; while the humble are the last to realize that their worth exceeds their self-estimation.

"O, wad some power the giftie gie us
To see oursel's as ithers see us."

This gift, this first and indispensable step in self-improvement, Phrenology alone furnishes. For our fault-obviating purpose, no vague or general self-knowledge can suffice. It must be precise, specific, and proportionate—this fault, 3; that 5, etc.—this required proportion, which Phrenology alone gives. Some can partly learn their "outs" from friends, though only your very best heart-and-soul friends will ever tell you your faults, those who love you so well that they want to perfect you; while partial friends only flatter and fawn. More can learn their faults from their enemies. Get down upon your knees to your worst enemies, who tell you your errors, even though told in wrath and spite; but Phrenology tells them all to all who consult at its shrine, and adds the proportions, of this excess, and that defect. When you have thus learned your faults for sure, you can *summon intellect* to their summary extirpation, and wipe them right out instanter, thus:

Your Hope is 2 and Caution 7 in a scale of 7. Now, be your talents and virtues what they may, you are doomed till you counteract this error in some way; for it will keep you from beginning things, and who can ever accomplish anything he never begins? This fault will also make you prosecute what you do begin so doubtfully, irresolutely, tardily, as to miss your mark. Promptness in decid-

ing and celerity in executing are indispensable to success; yet this phrenological defect forestalls both. Now bring intellect to the front. Install it generalissimo, and follow its directions. It says: "My constitutionally small Hope and excessive Caution make me overrate my difficulties and underrate my prospects about three to one, so that, in actual results, all through life, I shall find my prospects three times better, and difficulties that much less, than I think they are. Where I calculate on getting only two, I shall get six, and hence I will plan and work just as I would if I were sure to get six. Thus I hope to make two hundred dollars in this speculative movement, whereas I shall make six hundred, because I anticipate that much too little. Meanwhile, my great Caution makes me overrate my prospective difficulties, which in this case I fear will be about 6, whereas they will be only 2—my Caution naturally exaggerating them threefold above their reality, and I will act as if they were only two, and shall thus come out just right;" or,

"When Caution is 6 and Hope 3, intellect now says: 'I overrate my obstacles, and underrate my prospects about half; so that since I expect to make about three hundred dollars. In this operation I shall clear six hundred dollars, while those six difficulties will dwindle down to about three, and I will plan and execute accordingly, and then shall operate successfully.'

"My Phrenology says my Hope is 4, and Caution 6; hence I shall get about what I expect, yet find my difficulties less than I fear by about half, and can well afford to grapple them;" or, "My Hope is 6, and Caution 5, which forewarns me that I build some air-castles, and reckon without my host; so that I must be extra careful how I venture. I expect to make some six hundred dollars in this business move, but will proceed just as if I were to make only four hundred, and be thankful if I get that. Besides, my Caution being less than Hope, makes me think my drawbacks only 4, whereas actually they are

six; and I will go 'armed and equipped' to vanquish that much antagonism;" or,

"My Hope is 7 and Caution only 4, so that I always naturally exaggerate my prospects three to one, and fail to appreciate my drawbacks that much, and hence must calculate this business move with two-thirds off; be glad to realize two hundred dollars where I confidently expect to net six hundred, and where, it seems to me, I can easily pay six hundred, I shall find it hard to pay even two hundred, and will promise no more." In short, *business men can make sure calculations* by thus learning their "developments" first, and then summoning intellect to both offset their excesses and supply their outs. The full understanding and practical application of this point warrant this additional illustration of it:

Your right eye magnifies three to one, and your left diminishes, seemingly, all you look at. While ignorant of this optical illusion, you spontaneously act in turn on each to your perpetual disadvantage. If Hope is 7, it becomes your right eye in viewing prospects, and deficient Caution your left in surveying whatever makes against you. Now, your knowing this optical defect brings in your intellect to counteract it thus: "My extravagant Hope is my right eye as to prospects, always enlarging them threefold; so that though I expect to clear fifteen hundred dollars by this speculation, I must lay off my plans as if I should actually get only about five hundred, and I can raise only five hundred, where I think I can fifteen hundred, and will always act and promise on this two-thirds basis." And the converse if Hope is 2 and Caution 6. And intermediately in cases of intermediate developments. In this case you make intellect correct your eyes, your mental aberrations.

Your Benevolence is 7 and Friendship 6, but Secretion and Acquisition each only 2, which renders giving and lending to and indorsing for friends a weakness which you can hardly resist; yet unless it is counteracted, it endangers your waking up some fine morning a beggar with,

a begging family on hand. It is easily wiped right out by throwing this purely intellectual safeguard around yourself—instituting as a business rule, to be inflexibly followed, this resolve: "I will *never* indorse, or lend, or give, except under these and those stringent conditions." And that ruinous fault is both paralyzed for harm and turned into a business virtue by leaving you much less liable to bestow beyond your means than if you had not this "soft spot." Intellect is again your saving clause.

HOW MR. D. STAVED OFF A FINANCIAL FAILURE.

He had small Acquisitiveness, and hence was a poor collector by nature—a ruinous commercial defect. He entered the wholesale grocery business with a large capital, and determined to command a large business, despite established rivals, by starting out with liberal terms and long credits, but soon found notes filing in without receipts to discharge them. Bankruptcy stared him full in the face. He soliloquized thus: "Must I really fail and lose all? Isn't there some salvation? Yes, this: I will write to my long-trusted debtors—'You *must* pay promptly, or I send the sheriff.'" This enabled him to bridge over his "pinch," and induced him to establish this business rule—never to trust any customer over sixty days, of which he forewarned them when they purchased. This purely intellectual stroke of policy counteracted his serious business fault of small Acquisitiveness and large Hope, which, unless offset by sense, would have soon eaten up all his capital. A business rule here annuls a fatal fault, and even turns it into a business talent. Every other business man, with any other business defect, however fatal, by a like intellectual process, can twist it around into a means of success as varied as his defect varies.

HOW A SPENDTHRIFT BECAME A MILLIONAIRE.

A very smart Chicago drummer, having little Acquisitiveness, but large reflection, and with an ardent money-consuming

temperament, put his head under my hands professionally the day Fort Donaldson fell; to whom, in concluding, I said: "You, sir, are remarkably gifted in making money, yet can never *keep* it, and will die a poor man unless you save it up by some such intellectual process as this, for you certainly never will salt down any by instinct. You keep spending your money by driblets as fast as you earn it, and will never get enough ahead with which to make any bold business strike, unless by some pure intellectuality like this—inflexibly laying aside a fixed proportion of your earnings at stated times in something substantial. You must never salt down anything in bank stock or bonds, because some strong surging passion on the rampage will imperiously clamor for money, when away will go your stock, money, and all, with much life-force superadded; but you can and must invest in land—something you can not use till you get a pile of money *embodied*."

Two typos called on me professionally in 1835. To one, I said: "You have Frugality large, and will save as you go, and hence die rich;" to the other, "You, sir, lack this saving faculty, and will spend as you go, and die poor." The same two called together thirty years later, the former a millionaire, the latter then setting type at sixty-five for board and shelter. Now you will be like the latter, despite your great business sagacity, because you will not get enough ahead to operate with, unless you do something like this:

"How much do you make?"

"A good salary—\$100 per month."

"How much do you spend per month?"

"More than I make—am always 'hard up.'"

"*How little could you live on per month by giving up all superfluities, yet retaining all necessities—\$50?*"

"Yes, well, and save my constitution besides."

"Suppose you try and salt down the other monthly fifty in *acres next to city lots!* While paying up back dues and getting a fifty or two for the first pay-

ment, suppose you look around for the largest acreage you can purchase on a monthly fifty-dollar payment, and when paid all up you have a monetary sledge-hammer capital with which to make a telling business strike and become rich; you've talents enough, and lack only capital, which this course will give."

He bought a \$3,000 plot, and got it paid up, when the Chicago fire raised its price, and he sold some, banked on the rest, and soon became immensely wealthy, thus supplying by intellect that money-saving trait which he lacked by instinct. Yet why not employ this identical intellectuality equally to make up for any and every other business out of any and every other faulty business man?

Phrenology tells you your Combative-ness is quite too large, and nerves and brain far too irritable, which makes you violent-tempered. To obviate this grave error, bear ever in mind that you often get provoked without cause, and always far beyond what is reasonable, and mentally resolve—"I *won't* blow out so abruptly, will bite my lips, will get angry only with the best of reasons, and express even that resentment prudently"; and here is a life fault beheaded and good secured.

HOW A NOTORIOUS LIAR BECAME EXTRA TRUTHFUL.

All his relations were a neighborhood by-word and laughing-stock, and scouted as such. Seeing this, though the greatest liar of them all, he determined to tuck ship and always tell only what he knew was precisely as he told it, and quite within his version of it. By this purely cause-and-effect means he became known, noted, and trusted for perfect truthfulness—another fault both wiped out by intellect and turned into the opposite virtue.

This law is equally applicable to the extinction on the spot of any and every fault, whether an excess or defect in any one who may so apply it. Note how it can correct all religious errors of both doctrine and practice; thus: Your Conscience and Firmness are enormous, and

Destructiveness and Self-esteem large, which, together, render you naturally bigoted, dogmatic, and austere in your views of God and censures of men.

Now, keeping this fault ever in mind will render you less censorious and more charitable in conduct than you are by nature, assuring you that those who differ from you are about as correct generally as you are. If Adoration is small, you are not devout enough, and should make allowance for your radicalism and indifference, beside cultivating both.

Any vicious habit can be overcome better by summoning intellect to your help than by all other aids combined. Thus, if you would break off using tobacco, begin by studying up its evils; its expensiveness per week, year, and decade; its injury to health of body and vigor of mind; its perverting effect on your passions and propensities; its annoyances to those around you, and especially to wife, foul breath included; and the bad example you are setting to children and all beholders; and before you are half through your sense will say, "What a fool I am to keep on using it!" and furnish your very strongest dissuasive to its further use. And thus of any and every other bad habit.

These illustrations of this principle should suffice to make it so fully understood that each person can study it up and apply it to his or her individual case, and enable all who put it into practice to wipe every one of their inborn errors and imperfections right out, as they could a chalk-mark with a wet sponge, and turn them around into excellencies. All this, besides cultivating defects and restraining excesses.

All God's provisions for our good deserve our unbounded gratitude and love. Yet what one surpasses, even equals this? Think how really glorious the boon placed within the grasp of all! None are too great or too rich or too good to require it; none too poor or simple to apply it.

Putting it into actual practice might at first seem difficult, because five-sixths of most brains are found in the emotional

regions, as compared with the intellectual lobe; yet even a minor intellect naturally assumes command over major sentimentalities. The stronger feelings one has, the more he needs and craves to put them under the intellectual subjection and guidance of others; hence the power accorded to man of commanding talents in all departments of humanity; and all grades of intellectuality can always ask counsel of its superiors in this fundamental principle.

Behold the acme of human perfection! Not till you subject all your feelings and actions (religions included) to sound, sense-clear and long-headed reason, so disciplining them that when it says,

"Peace, be still;" "act this way, but not that," they obey, should any be self-satisfied. Subjecting all feelings, all actions, all life's affairs from greatest to least judgment, to knowledge presided over by reason, active percepts combined with deep reflectives, this is the pinnacle and summary of all human elevation—is that "wisdom" which surpasses all other human possessions.

This great principle of predominant intellect has an application equally cogent to religion and theology, to political economy and government, to all human interests whatsoever—to some of which subsequent articles may yet call specific attention.

O. S. FOWLER.

INSIDE AND OUT.

"OH, John! I hope *you* will keep in your own class, and not degrade yourself with low associations."

Mrs. Cosgrove reclined on a luxurious lounge in an elegant boudoir, and as she addressed the manly-looking young fellow by her side, seemed, in her interest for his welfare, to be exerting herself far beyond her strength.

"Now, in regard to Earle Davison," the lady continued, "I was surprised and pained when I heard you had been seen in his society."

"Earle is all right!" the young man replied.

"I have heard it said that young men always stand up for each other!" Mrs. Cosgrove went on; "but it must be the spirit of *noblesse oblige* that causes you to defend Earle Davison. If he belonged to your set, of course it would be different."

There was a queer look in John Cosgrove's eyes as he listened to his mother's remarks, but he had evidently not felt called upon to say much until now.

"Your *noblesse oblige* does not hit this case, mother," he replied. "Earle Davison's father has not as much money as mine, it is true," he went on; "but Earle is a manly, honorable fellow, and I like him."

"But what of his drinking?" Mrs. Cos-

grove inquired. "His dissipation is in everybody's mouth, John."

"Mother, excuse me, please, if I ask you a very important question at this point," the young man said respectfully, and in a way which compelled his companion's attention. "I wish to know if you object to Earle Davison as a companion for me on account of his being poor, and out of our set, as you call it, or because of his dissipation?"

Mrs. Cosgrove was intuitive enough to understand this question in its length and breadth, but she did not appear to, but replied with the tremulant she always affected when discussing such matters.

"The Davisons," she said, "once had a place among us; but of late years, and since the loss of their money, they have been dropped by the best society. That ought to be a sufficient answer to your question, John."

"It is," the young man answered. "I might have known," he added, "that you would always be consistent, for had you objected to dissipation, you would have forbidden some of my companions the house long before this. I suppose the fellow who gets drunk with some hundred dollars in his pocket, and belonging to the best society, is superior to the young

man who is poor and does the same thing, but I don't see the difference."

"I do wish you would be a little more refined in your use of words," the lady responded, "and also a little more refined in your ideas. It is terrible to hear you talk in that coarse way of getting drunk."

"Now, mother,"—John Cosgrove hadn't heard a word of the lady's last remark. He had been too busy thinking. "Now, mother," he repeated, "it seems to me that a man in the best society ought to set a good example to others, and because of his position and its advantages, is more to blame when he does a wrong thing, than the man who hasn't had his opportunities. This may not be the spirit of *noblesse oblige* that you speak about, but, at all events, it is a spirit that I can understand and appreciate."

"You always do go off on side issues when talking with me," Mrs. Cosgrove answered, with something more in her voice this time than a tremulant; "and worse than all," she went on, "you always persist in misunderstanding me."

Mrs. Cosgrove drew a long breath, and John rose to leave the room. This lady had no idea of logic, and it was always a hard undertaking to argue with her. John often wondered why he persisted in keeping up conversations of this kind, when the result was always, as now, unrest and annoyance. The young man's own mother had died when he was only a little boy, and the second Mrs. Cosgrove had been selected from the ranks of the ultra-fashionable and aristocratic. There had never been any quarrel or hard feeling between this lady and her step-son. She had always treated him with kindness and consideration, and as far as so great a lady could, attended properly to his physical wants, but this was all. In every crisis of his young life she had proved herself utterly incapable of helping him either by advice or sympathy. Mr. Cosgrove was too much occupied with business to give his son much attention, so whatever the young man knew of truth or right living, he had found out for himself. At the time of the above

conversation, John Cosgrove was in great danger, and needed more than ever in his life good counsel and encouragement; and the strangest part of all was, that he had never quite despaired of receiving what he needed from his mother. Just now the young man was cloyed with sweets. He had taken his place in his father's office, aware that both business and profits would ultimately revert to him. He had all the money he wanted, and that was a great deal. There was no need for him to deny himself anything, or exert himself in any direction. Three or four hours daily in the office, and the rest of the time was his own. John Cosgrove had reached the point where his life seemed utterly contemptible, because utterly selfish, and the worst of it was, he saw no way of making it different. A great longing for something substantial, something he could lay hold of in spiritual things, had taken possession of him. He wanted something in his life beside sham and show, and yet there was not a single person in "the set" his mother spoke of to whom he could open his heart. Now, as he left his mother's room, he was aware that this desire had perceptibly lessened. It looked to him now like a sentimentalism, and he laughed at the idea of ever being anything but what his circumstances had made him.

"What are you going to do now?" Mrs. Cosgrove asked her son, as he was leaving her room. "You know I receive this evening, and you must be here to help me."

"Very well," her companion replied respectfully; "I'll try to remember. I think I'll go now and look at some mustangs, just arrived."

"If you buy one, John," the lady replied, "do try and pick out a pretty one. Some of those animals are hideous."

"The outside again!" the young man said to himself, as he left the house. "Not a word about strength of limb, or power of endurance, grit, pluck—nothing. A pretty mustang!" and John laughed aloud.

As he passed down the street wonder-

ing what it all meant, and what existence was good for anyway, he suddenly came upon Earle Davison, the subject of the boudoir lecture. It needed but a glance to tell that the young man had been drinking. He did not stagger, nor was he in any way stupid or silly, but his face was flushed, and his fine eyes were aglow with excitement. John stopped and shook hands with him.

"I was just thinking about you, Cosgrove," the young man remarked. Now John had an honest liking for Earle Davison. He had always been attracted to him, and never more than at this moment.

"I'm going over to Carl's to look at some mustangs," he said kindly to his companion. "Won't you go too?"

"Are you going to buy?" inquired Earle.

"Well, yes, I've about engaged to," John replied. "Though the fact is, I don't care much about polo."

"You *don't* look particularly jolly," Earle remarked, with a laugh, which had a ring of bitterness in it. "Though I don't see what you've got to fret about. I have just lost my situation. Twenty-five dollars a week gone to the dogs!"

"How did that happen?" John asked, with real interest.

"Oh! spreeing!"

"I didn't suppose you drank in business hours, Earle!"

"Never did, to any extent, but enough to ruin me. The fellow who drinks at all is likely to drink at any hour, and it is all fool's talk to say that he isn't."

"What are you going to do now?"

"Ask me something easier."

"Have you any one dependent on your salary?"

"Yes, sir; father, mother, and sister. Twenty-five dollars a week is what we have lived on for the past two years. My father is paralyzed, you know."

For a moment John Cosgrove felt as if he was paralyzed. But after all, what could he say? He had fooled away money more recklessly than Earle ever had. Of course no one had ever de-

pendent on him for food and shelter, but some one should have depended on him, he told himself. What had he been doing with his money day after day, month after month? Twenty-five dollars a week! Why, he would sometimes spend as much in a single evening. For fully five minutes the two young men walked on in utter silence, then John said abruptly: "Earle, in many ways I have been a fool, and worse than a fool. You seem to have been criminal in one thing only. To gratify your appetite you have risked the maintenance of those nearest and dearest to you. To gratify my selfish fancies, I have forgotten everybody. You are a better fellow than I am, Earle, enough sight."

"You've lost your senses, Cosgrove," Earle replied sharply. "I saw you drinking wine with the boys the other night," he went on, "and I said to myself, If that fellow don't say No right away, he is lost. I was in something such a mood as you are to-day, and as you have been for the past few weeks, when I took my first drink, and I have never stopped since. Drop it, John, if you want to have any respect for yourself."

"I hope you won't be offended, Earle, if I ask you why you don't practice what you preach?" John inquired.

"Oh! it don't make any difference what becomes of me!" was the sad response.

"Or what becomes of your family?"

"If anything should happen to me, Cosgrove, my folks would be taken better care of than I have ever been able to care for them. For their sakes I wish I was out of the way entirely."

It was no use to talk. This, John Cosgrove thoroughly realized. What could he do? he asked himself. There was a vacancy in his father's office which Earle could fill if he would only stop drinking, but surely there was no hope of that. Would it be of any use to extort a promise of this kind from a man already under the influence of liquor? No! and yet something must be done. It was inexplicable, but somehow John felt as if this

was his opportunity. They had arrived now at their destination.

"Let us walk on a little further," John said, and then fell to thinking again.

"Earle," he said at last, "I want you to come to my office to-morrow morning. If you like, I'll put you to work. You shall have as much of a salary as you have been getting, and more if I can manage it."

"But, Cosgrove"—Earle had clutched his companion's arm with a grip that hurt—"I haven't any reference, and *you* surely can not recommend me."

"If I want you to come into our office, that will be reference enough!" John replied.

"But that will be a deception," Earle hurried to say, "for if your father knew I was kicked out of my last place for drinking, he wouldn't employ me."

"Very true."

"Then I don't see how you can honestly make a move in this matter."

"Earle, I may be wrong," John replied, "but I have a feeling that it isn't in your nature to go back on a friend who is willing to put himself in a tight place to help you. If you are, then I am entirely mistaken in your character."

"I'll let you know in half an hour," Earle replied, in a voice that he tried hard to keep steady. "You go back, and I'll meet you presently."

John complied without a word, and five minutes later was discussing mustangs with an apparently undivided interest.

The half hour spent by Earle Davison was a bitter one. If he accepted his friend's generous offer of assistance, he must determine to abstain wholly from the use of intoxicating liquors. But could he make this resolve? The desire even now for another drink was almost overpowering. His tongue was parched, and the craving of his stomach for more stimulant was agonizing beyond description. He stopped at a drug-store, and drank a glass of vichy. Temporarily relieved of the awful thirst and gnawing it seemed at his vitals, he hurried back to the appointed place. He must make

haste to promise before the torture seized him again, for promise he would, if he could keep his senses long enough to do so. Earle Davison had a strange feeling of outward compulsion in this matter, which he had never experienced before. Something seemed to keep saying, "You must promise," "You must be a man," "All things are possible to those who try hard enough!"

John had left the stable; "Gone across the street with the boys to get a drink," he was told. Earle's first thought was to wait till his friend should come out, but something seemed to urge him on, and over he went.

When he entered the room, John was standing at the bar with several other young men of his acquaintance, with a glass of champagne in his hand.

"How are you, Davison?" one of the members shouted to the new-comer. "Come and take a drink."

Earle's face was as white as the face of the dead as he took in this scene. He had come to find his friend, and to pledge himself to a life of sobriety, and here his friend stood with a glass of the tempting stuff in his hand all ready to drink.

"Come on, Earle," said another. "Hurry up, and we'll drink together."

"I am much obliged to you," Earle replied, in so strange a voice that all the young men turned to look at him, "but I've got through;" then passing to his friend's side, said: "Cosgrove, you have been the means of making it possible for me to attempt a decent life, but if you are going to set that kind of an example, you will destroy yourself and weaken me."

"What will you have me do, Earle?" John inquired, setting down his glass as he spoke, while the others looked on in astonishment.

"There's my hand, old fellow," Earle replied, "and I promise with God's help never to touch another drop of intoxicating liquor as long as I live."

"And I take the same pledge," John replied, in a ringing voice, "and the boys here are my witnesses."

During this scene every one of the

number put their glasses down untouched with one exception, and he laughed loud and long at the temperance fanatics, as he called his companions.

"What have you done to-day, John?" Mrs. Cosgrove inquired of her step-son that evening.

"More than usual!" John replied with a smile. "I believe I have been the means of saving a friend from destruction, and in return have been saved myself."

"Indeed, whom were you so fortunate as to save?" the lady inquired.

"Earle Davison, mother."

"Oh! and may I ask who came to your rescue?"

"Earle Davison."

"Never mind," the lady interrupted, as her step-son was going on to explain, "it's of no consequence. I take for granted that it was about drinking; but as I have invariably told you, John, a *gentleman* always knows when he has got enough."

"Then *gentlemen* are very scarce among men who drink," John replied, and here the conversation ended.

Earle Davison took the position so kindly offered him, and filled it so excellently that he was soon promoted, and after a while was taken into the firm.

ELEANOR KIRK.

WHAT A BLIND MAN DID.

IT is a deep misfortune to be blind; whether the darkness is born with us or comes on in the course of our life, it is an undesirable affliction. Yet, when we read of the accomplishments of the blind in the useful spheres of life, we are almost persuaded that they who see can not offer an average of work performed and service rendered which will compare favorably with that of the blind man or woman. This impression has been strengthened by reading a short sketch which appeared lately in the *Waterbury American*, and which relates:

"On the tenth instant there died in the town of Burlington, James Goodsell, who from his birth, during a life of nearly ninety years, had been totally blind. In early childhood, however, he had said that the darkness was in a few instances broken by faint glimmerings of light. Of four children, he and a sister were blind. The sister, though at first possessed of ordinary vision, soon, by a mysterious change, became wholly deprived of sight. This blind man would swing an axe with the dexterity of a woodman, and actually felled trees; he was an accomplished grain thresher, and would frequently go alone a distance of two miles to thresh for the Burlington farmers, climbing the mows to throw down the grain; he could

hoe corn or garden stuff as well as anybody, having no trouble to distinguish the weeds; he would set a hundred bean poles with more accuracy than most people who can see, would load hay, and was so good a mechanic that he manufactured yokes and other farm articles with success. He had an excellent memory, and was an authority on facts and dates. He could generally tell the time of day or night within a few minutes. One instance is given when he slept over one day and awoke at evening, thinking it was morning. For once he ate supper for breakfast, but when informed of his mistake slept another twelve hours in order to get straight again. He was familiar with forest trees, and knew just where to go for any timber desired. He could direct men where to find a chestnut, a maple, or an oak, and the children where to go for berries. He was a good mathematician. In olden days he was quite musically inclined, and, like most blind people, he had a genius in that direction. He was at one time leader of the Presbyterian choir in that place. For two years he and the blind sister kept house together, though she and the other members of the family have long since passed away. To crown all, he possessed one of the happiest of dispositions, and

was ever genial and cheerful. To this end his generally excellent health must have largely contributed."

All this seems wonderful, and its truth should be most encouraging to those who

have not the sense of sight. Nature quickens the remaining senses to such delicacy and vigor that the loss, in time, seems more than made up in the life of the cheerful, industrious man or woman.

O. S. FOWLER, TO THE PATRONS OF THE "PHRENOLOGICAL JOURNAL."

THE year 1832, when Spurzheim visited America, found me a student for the ministry in Amherst College. Phrenology was then scarcely known in this country, and his presence in Boston induced discussions in universities and colleges throughout New England, and in a public discussion in our college, I became so thoroughly imbued with its truth and value as a basis of mental philosophy, as well as a means of human elevation and improvement, that I abandoned the purpose of being a minister over a parish to teach my fellow-men all over the land how to best develop their God-given powers.

After graduation in 1834, I began that course of teaching which I have pursued so diligently and incessantly for nearly fifty years past, and with what benefit and success let my fellow-men judge and my record bear witness.

In the spring of 1838, feeling the necessity of a medium for the largest latitude of discussion on the subject—for the repository of phrenological facts, as well as a public channel for my own thoughts—I resolved to commence this JOURNAL, in which my brother L. N. joined as part proprietor; and so continued till the close of its third volume. At the end of the second volume, so deeply had I become involved by its expense, which, together with that incurred in taking casts of heads for my cabinet, that I felt I could not longer sustain the task and should have to stop it. But it was my idol—the great object of my labors—that for which I mainly lived; and so struggled on till the close of its third volume.

The appalling problem then presented itself only too strongly before my mind—the destruction of my idol, or what was

the same, its death and burial, or perhaps the loss of my health or life, even in trying to preserve it. But encouraging words from my sister Charlotte determined me to risk the latter and open its fourth volume, though with not over one hundred of its former subscribers. The close found it with over nine hundred; and from that time forward its course was onward and upward, till at one period it had attained a circulation of over twenty thousand copies.

From the beginning it has stood alone as the advocate of a new system of philosophy, boldly pushing forth an original cast of thought and base-lines of human progress, taking a new departure from theories till then current and unchallenged. It has wielded a powerful influence among men; forced many new ideas into the literature of the day; essentially modified education, and taught thousands methods of self-improvement, and shown teachers how to adapt their instruction and government to the temperament and mental constitution of pupils. It has modified legal codes, the treatment of criminals and of the insane, softened down parental severity, and substituted love for punishment, and even guided and modified pulpit utterances—its name meanwhile unspoken—and trained the present generation to be far more receptive of its teachings than were their grandparents in 1838.

I left the JOURNAL in 1854, since which time I have traversed many times professionally our glorious country, lectured to and examined the heads of hundreds of thousands of our people; revised all of my early writings, and now in re-entering its pages hope to embody and complete my life-work in its sanctuary,

after an absence of twenty-six years, and at the ripe age of seventy-one.

I do so, feeling deeply conscious that I am fulfilling a duty I owe to posterity, as well as to all true lovers of our science, and with a full appreciation of the great pleasure I derive in a reunion that at once blends early and dearest recollections and associations, and deposits the results of my life's labors, study, and observations in the temple, the cornerstone of which I laid, and which was vitalized with some of the greatest personal sacrifices, as well as consecrated to its work, with many of the dearest experiences of my life.

One special feature of my future work, aside from condensing all my writings into one comprehensive volume, will be to visit foreign countries—Australia, New Zealand, India, Asia, and Europe—to ob-

serve and compare the phrenologies, habits, and customs of the different nations of people; and in visiting India, I propose to take a large survey of each caste; that is, of the specific effects it has wrought upon the phrenologies and physiologies, gaits and postures, physiognomies, and general appearance of its subjects, by both cultivating and then transmitting these faculties, muscles, etc., in this caste, and those in that for hundreds of successive generations, and thus of the other specialties of other peoples.

In this great work of travel and study, I shall be accompanied and aided by my son-in-law, E. W. Austin, and we shall be on the alert, with two pairs of eyes wide awake, to gather whatever we can find especially interesting and instructive to lovers of nature in general, and human nature in particular.

O. S. F.

A PHRENOLOGICAL INCIDENT.

[FROM AN OLD "SUN."]

THE attention of the editor was called recently, by a friend of the *JOURNAL*, to an old copy of the *New York Sun*, in which a paragraph of interest to phrenologists was published. The newspaper dated June 29, 1834, is itself noteworthy, as indicating the status of journalism in our city at that day. The whole sheet covers a space about twenty by twenty-four inches, folded once, thus having four pages of three short columns each. The paragraph we copy covers about one-third of a column. The *Sun* of to-day publishes in one of its seven-column pages probably more than twice as much matter as its ancient predecessor contained on its four. The paragraph is as follows:

"PHRENOLOGY.—Our anecdote concerning St. Clair having excited considerable interest among the partisans of Phrenology, we are requested to insert the following authentic narrative: Some surgical students of Paris, being desirous of laying a snare for the celebrated Dr. Gall (who was then delivering a course of surgical lectures in this city, Paris) contrived to purchase from an execu-

tioner of Versailles the head of a remarkable malefactor, and they placed it among the human skulls deposited before the lecturer to afford illustrations to his discourse, after which they took their places among the audience to enjoy the blunders about to be committed by the unfortunate phrenologist.

"'What have we here?' cried Gall, the moment he cast his eyes on the skull. 'How came this fearfully organized head in my collection? Never did I behold so frightful a development of human passion. The owner of this head must have been under the domination of the most dreadful propensities, and with a singular tendency to their concealment.'

"The skull was, in fact, that of Leger, guillotined a few years since, on confession of having decoyed a young girl into a remote cave of a forest of Versailles, where he murdered her, cooked a portion of her remains, and actually fed upon them. A greater criminal, probably, never fell into the hands of justice. The discomfiture of the hoaxers may be readily gathered."

A WEATHER GUIDE FOR THE PEOPLE.

THE engraving on the opposite page represents the apparatus or "weather case" designed by Gen. Myer, of the U. S. Signal Service, to be set up in some rural post-offices throughout the country, so that farmers and others may have some means by which they can reach a better judgment concerning weather probabilities than they now generally have. As the apparatus is the result of long observation and multiplied experiments in meteorology, it must prove of great practical benefit wherever its indications are intelligently read and followed.

The engraving shows the different parts of the weather case on a reduced scale, but so clearly that its careful study will give the reader a full understanding of their meaning and use. A brief description of each part and their mutual relations, which we derive from an authoritative source, is proper here.

"The pointer or index at the top of the case (No. 1) slides on the brass arc; it is known as the 'sunset barometer index,' and indicates, when set, by the figures to which it points on the 'main barometer scale,' which is just below it, the reading of the barometer at the time of the sunset yesterday. The 'main barometer scale' (No. 2) exhibits all the barometric readings likely to be used with this instrument. The pointer (No. 3) just below the 'main barometer scale' is called the 'reference index,' and indicates by the figures to which it points on the main barometer scale, when the instrument is set, the mean or average reading of the barometer at the place at which the instrument is set and for each separate month. When the barometer reads above or below this reading at any place, such reading is said to be 'above the mean' or 'below the mean' for that place in that month. This reference index is established in the exact central line of the face of the case. The long brass hand over the glass face of the barometer is known as the 'long pointer,' and indicates, by the figures of the 'main barometer scale' to which it points when set, the reading of the barometer when last set. The black pointer on the face of the barometer under the glass face is known as the 'short pointer,' and indicates the existing pressure of the atmosphere at any time the instrument may be examined.

"There are for each place and each month two kinds of winds: First—Winds which, blowing from certain directions, are at that place and in that month more likely than other winds to be followed by rain. These are called 'rain winds.' Second—Winds which, blowing from certain directions, are at that place and in that month less likely than other winds to be followed by rain. These are called 'dry winds.'

The wind direction for any day or time must be seen and taken at each place or station by a vane as well located as practicable. The 'wind disk' (No. 8) consists of a brass circle, on which slide freely two arcs—a red arc, called the 'dry wind arc' (No. 9), and a blue arc, called the 'rain wind arc' (No. 11). In the center of the disk is a pointer turning with a turning-screw, and called the 'wind disk pointer' (No. 10). Around the disk are letters to show directions, as N. for north, E. for east, NE. for north-east, etc.

"The pointer and scale (No. 5) on the right of and below the barometer are called the dry-wind time record, and the pointer (No. 7) is called the 'record pointer,' and indicates, when set, the length of time the wind has been blowing continuously from a 'dry' direction, by the figures showing the number of hours on the scale to which it points.

"The pointer and scale (No. 4) on the left of and below the barometer are called the rain-wind time record, and the record pointer (No. 6) indicates, when set, the length of time the wind has been blowing continuously from a 'rain' direction, by the figures showing the number of hours on the scale to which it points.

"The record pointer on the rain-wind time record (No. 6) is always turned by the thumb-screw, and set pointing at the figure 0 on the scale when the wind is not blowing in the rain-wind direction. In the same way the 'record pointer' on the dry-wind time record (No. 7) is always set pointing at the figure 0 when the wind is not blowing in the dry direction.

"The sunset disk (No. 12) consists of a circular disk one-half of which is colored red and one-half of which is colored blue. The disk turns upon a central turning screw in such a manner that half of the disk shows through a semicircular opening in the face of the weather case. The sunset disk is set as follows: At the exact time of every sunset the western sky and the character of the sunset is carefully observed. The examination ought to be minute and careful, lasting for about fifteen minutes. If the sunset sky is clear or red, or markedly what is known as a 'fair weather sunset'—a sunset such as is generally held to indicate a clear or fair day to follow on the next day—a day on which it will not rain—the sunset disk is turned by the turning screw until the semicircular opening shows all red. The sunset disk, thus turned, is described as set for a 'fair weather sunset.'

"If the sunset sky (the western) is cloudy or foul, or markedly what is known as a 'foul weather sunset,' a sunset such as is generally

held to indicate foul weather to follow on the next day—a day on which it will rain—the sunset disk is turned by the turning screw until the semicircular opening shows all blue. The sunset disk thus turned is described as set for a 'foul weather sunset.' If the appearance of the western sky and the character of the sunset are neither markedly those of a 'fair weather sunset' or of a 'foul weather sunset,' but such as to leave the observer in doubt how to style it, the sunset disk is turned to show half red and half blue, or 'doubtful.' The sunset disk, thus set, is described as set for a 'doubtful weather sunset.'

"In the lower part of the weather case there are two thermometers, a dry bulb thermometer (No. 13) on the left-hand side of the case, and a wet bulb thermometer (No. 14) on the right-hand side. The dry bulb thermometer is like any other thermometer, and shows by its readings the temperature of the air. The wet bulb thermometer is one, the bulb of which is kept constantly moist by the water passing up from the glass reservoir, through the wicking which covers the thermometer bulb. The readings of the dry bulb thermometer and those of the wet bulb thermometer are more and more unlike, or farther and farther 'apart,' as it is called, in proportion as the air contains less and less moisture, that is, is becoming *drier*. The readings of the dry bulb thermometer and those of the wet bulb thermometer become more and more *alike*—are nearer and nearer together—in proportion as the air contains more and more *moisture*. That is, is becoming saturated or *wet*.

"By the side of the dry bulb thermometer (No. 13) is the dry bulb pointer which slides on the brass slide (No. 15). By the side of the wet bulb thermometer is the wet bulb pointer which slides on the brass slide (No. 16). In the center of the case is the 'dry and wet bulb scale,' marked on the paper on which is the central brass slide bar (No. 19), and on this slide move the dry bulb keeper (No. 17) and the wet bulb keeper (No. 18). To set the thermometers examine first the dry bulb thermometer and move the 'dry bulb pointer' (No. 15) on the slide until the outside point is exactly level with the top of the mercury in the thermometers—as near to it as practicable. Examine next the wet bulb thermometer, and move the wet bulb pointer (No. 16) on the slide until the outside pointer is exactly level with the top of the mercury in the wet bulb thermometer, or as near to it as practicable, then turn to the dry and wet bulb scale, and on the 'central brass slide bar' (No. 19) move one of the keepers until it touches as nearly as possible—is on an exact level with the inside pointer of the 'dry bulb pointer;' then move the other keeper until it touches, as nearly as practicable—is on an exact level with the in-

side pointer of the 'wet bulb pointer.' The thermometers are now set and the difference between their readings can be known by counting on the 'dry and wet bulb scale' the number of degrees between the keepers.

"When the thermometers are examined and set again, following the same plan, it will be easily seen whether the 'keepers' are, when set, farther apart than they were at the previous setting, or whether they are, when set, nearer together than at the previous setting.

"If they are farther apart, the thermometers are said to be 'separating'; if they are nearer together, the thermometers are said to be 'approaching.' Other things being equal, the thermometers show, when they are 'separating,' that the air is becoming more dry, one sign of approaching fair weather. The thermometers show, when they are 'approaching,' that the air is becoming more moist or damp, one sign of approaching rain.

"The weather case is not intended to be used independently of the official weather reports, but in connection with them, supplementing the official reports by showing the local instrumental indications and giving other information."

We are indebted to the Signal Office for the use of the engraving.

BIDE A WEE, AND DINNA FRET.

Is the road very dreary ?

Patience yet !

Rest will be sweeter, if thou art weary
And after night cometh the morning cheery,
Then bide a wee, and dinna fret.

The clouds have silver lining,

Don't forget !

And though he's hidden, still the sun is shining ;
Courage ! instead of tears in vain repining,
Just bide a wee and dinna fret.

With toil and cares unbending

Art beset ?

But think thee how the storms from heaven descending
Snap the stiff oak, but spare the willow bending,
And bide a wee, and dinna fret.

Grief sharper sting doth borrow

From regret !

But yesterday is gone, and shall its sorrow
Unfit us for the present and the morrow ?
Nay ; bide a wee, and dinna fret.

An over-anxious brooding

Doth beget

A host of fears and phantasies deluding ;
Then, brother, lest the torments be intruding,
Just bide a wee, and dinna fret.

Leisure Hours.



BEER AND BREAD.

BEEER is the coming drink for Americans. The indications of this are innumerable. The principal indication and the most incontrovertible is the yearly increase in the amount drunk. It is the prevailing drink in England, and we could hardly miss of having it here; but its use was nothing like so prevalent as there until the late influx of German immigration introduced large numbers of lager-beer drinkers and beer-house keepers. Nine-tenths of the saloon-keepers of our cities are foreigners, and a very large proportion of these are German. We have an amazing facility for picking up new fashions, all the way from the Indian pipe, cigar, and succotash down to the latest Japanese fan. So lager-beer became the fashion. Withal, it has been pushed with some enterprise. A very great spurt was given it at the Centennial Exhibition. Brewers' associations, State and National, have been formed; an immense amount of capital has been invested; eligible sites are secured, and saloons are fitted up with latest styles and highest finish. Gardens are laid out with all attractiveness, and, though these have been mostly patronized by the Teutonic population, they are determined to make them attractive to native Americans also. A costly pile has been fitted up in a fashionable up-town quarter in New York city, where exquisite music—an almost irresistible attraction to our

music-loving people—brings in people of refinement, and already even ladies have been seen sipping beer publicly in this popular resort. It is a long stride in the wrong direction. The brewers' associations make no secret of their intentions. Their doings are heralded to the world, and they proudly parade their figures, which tell how the flood is sweeping on. Last year (January, 1879) closed up with the figures at 9,500,000 barrels per annum, and the boast that it would go up to 10,000,000, and over, the ensuing year. We have not yet heard the result. Seeing it is coming more and more, it would be wise, perhaps, for us to understand the stuff and its tendencies, so that we may know what is before us.

One of its first claims is that it is nutritious, and therefore invigorating and wholesome. And it bases that claim upon the fact that it is made of grain—yes, of grain and yeast, and therefore it is like bread, made of the same materials, and it must be wholesome. This specious claim often catches the thoughtless. Let us examine it.

Let us set the two objects before us—beer and bread. They do not *look* much alike, anyway. Let us see how they are made. The baker has his grain ground. The brewer wets his grain, and lets it sprout. That would spoil it for the baker. "Why," he would say, "I am very careful not to let my grain sprout, for it

destroys about one-fourth of the nutrition; besides, I can never make good bread of it afterward." "Very well, you are not to make bread of this. We will spoil it if we please," and the brewer goes on. This sprouting is done to turn some of the starch into sugar, as is usual in the germination of grains for the nourishment of the young plant. In the hands of the brewer, however, the young plant comes to an untimely end. He dries the grain, and the sprouts fall off and are separated. It is now called malt. When he wishes to use the malt it is put into the mash-tub and deluged with warm water, and the most of the sugar and some of the starch is soaked out, and the hulls are separated and removed. This takes away about one-third of the entire grain. If, however, the water should happen to be boiling hot, it would scald the starch that has been washed out, and convert it into paste. This would be nutritious. But this is not what the brewer wants. He prefers to have more of the starch turned into sugar, and, if the water is not scalding, that process goes on, and the liquid is called the "sweet wort."

Yeast is added by the baker. Why? To raise the bread; to make it light, so that it can be more easily masticated. He lets it work a few hours, and the action of the yeast destroys, perhaps, one-fifth of the nutrition of the grain, perhaps less, because some of the sugar in the grain is turned into alcohol and carbonic acid gas, the alcohol being all driven off by the heat, and the gas being entangled in the dough, and expanded by the heat, makes little cavities. Then the gas, too, escapes, and all the remainder of the wheat is in the loaf.

One of the strong points of the comparison is that the brewer uses the yeast also. But let us see for what purpose. He has already lost more than half of the substance of the grain. The remainder he has in the shape of sugar dissolved in a large quantity of water. He boils this wort with hops (not to make it nutritious, for hops are not nutritious), and when it is well cooled he adds yeast, and then

lets it ferment for days and weeks. The baker is very careful not to let his bread "rise" or ferment more than a few hours. We have seen that even in the time allowed the bread to ferment, one-fifth of the nutrition is destroyed, and we are well aware that if it should stand an hour too long we would call it spoiled. It would be too sour, and if the sourness were reduced by "baking powder" it would be chaffy and tasteless, especially after it is twenty-four hours old. This is often illustrated in the bread of commerce. If, then, the fermentation of an hour or two destroys so much nutrition, what may we expect from that of days; nay, of weeks and months?

The special reason for using yeast in promoting this decay is to induce the decay of the sugar first, for the decay of the sugar produces alcohol, and this is the object of the brewer to produce just as much alcohol as possible in the beer. To this end he makes all his plans and bends all his energies. He turns as much of the starch into sugar as he can, and then gets rid of all the remaining portions of the grain while he develops the alcohol. For alcohol in this case, as in all others, is made by the decay of sugar. The elements of the sugar break up, and a part of them rearrange themselves into the substance called alcohol, while the remainder form carbonic acid, which escapes in the form of gas. Every particle of sugar that breaks up forms its particle of alcohol, and sets free a particle of gas which rises to the surface. Any one who is curious to see this process can easily do so by placing some fruit juice in a clear glass jar or tumbler, in the ordinary temperature of a living-room, and when the juice begins to decay or "turn sour," as it is called, this conversion of the sugar into alcohol and carbonic acid can be watched. This is the way in which alcohol always finds its origin; it is a product of the decay of the sugar in a sweet liquid. In the case of the fruit juice the decay in this form is spontaneous; but in many other cases, as in the sweet wort of beer, it is more readily in-

duced by the addition of yeast. But please observe it is decay still, and observe also that it is the decay of a liquid, and therefore never found in nature, because nature has no jugs, nor bottles, nor kegs, to hold the liquor while it decays. As Count Chaptal, an Italian writer, remarks: "Nature never forms spirituous liquors. She rots the grape upon the branch, but it is art which converts the juice into alcoholic wine." We believe nature has been searched in vain thus far to find alcohol formed without the intervention of art and man's device. This much in rebutting the plea that it is "a good creature of God." Even if it were proved to be a natural product, it would not follow that we must use it. There are many poisons which are undoubted products of nature.

We have thus found the object of the brewer. He wishes to produce an alcoholic liquor, and to do this he destroys the nutrition of the grain, and has a drink which is little else than alcohol and water, unless he adds other things, which he usually does, as hops, and salt, and quassia, and copperas. But we forbear.

The baker also uses yeast, but for quite another purpose. We observed that the action of the yeast on the sugar produced two substances—alcohol and carbonic acid gas. It was the alcohol the brewer wanted; it is the gas that the baker wants, not to eat nor to breathe (for it is a poison to breathe), but he wants it simply to make holes or cavities in his bread. We saw that the gas, when liberated in the fermenting liquid, rose to the top and made foam. When this gas is liberated in the dough it can not rise; it is entangled in the gluten. So it makes a bubble where it is, and then the baker applies heat and expands it, and still more heat, which fixes the gluten just there, so that the cavities remain after a still greater degree of heat drives off the gas; so while both the baker and the brewer avail themselves of the action of yeast, and while its two products are both poisonous, the baker uses one simply for a mechanical purpose to make cavities in

his bread, in which he preserves the most of the substance of the grain, while the brewer uses the other product, the alcohol, as a drink, having destroyed or dismissed nearly all that portion of the grain which he could not convert into alcohol. Now, where is the ground for the comparison between bread and beer, or, rather, where is the ground for the assertion that they are both made of the same materials and by the same process, and that therefore the results are at all alike? Yet this is a claim that is put forward by many people, and allowed by many more, even some temperance people not being able to see through it.

It may be well enough to remark, in passing, that there is no necessity whatever for this use of yeast in making the cavities in the bread. Bread *can* be made light without yeast, and, practically, it is done every day by different methods. The aerated bread is made by the injection of gas into the dough. Many kinds of cake and biscuit are made by the use of powders, which, uniting when moistened in the flour, release a gas which makes the required cavities. There are also several methods by which common air can be incorporated and expanded by heat to make the cavities. This fact takes away still more of the ground for the argument that beer is like bread. The objects of the brewer and the baker are diametrically opposed to each other. One aims to produce a nutritious food, the other a poisonous drink.

In this sketch of the subject it becomes very evident that the fermentation which produces alcohol is a thoroughly destructive process of decay. The beer contains in large proportion the very elements which we find so objectionable to health in malarial districts—the decomposition and decay of vegetable matter. If any one doubts the identity or the force of this remark let him visit a brewery in operation, or even its vicinity, with his eyes, and especially with his nose, open to conviction. If it is deleterious to breathe malaria, what must it be to drink it? Logically and naturally, we ought

therefore to infer that it would have a tendency to bring about the same type of decay in the drinker. Did it ever occur to you that this is the fact? Suppose you place in a dish of grape juice, or stewed grapes, or stewed apples, a small amount of decaying matter. See how soon the pollution pervades the mass, and it begins to swell and fester with decay. Now look at the man who has taken these elements of decay into his system. The vital organism, of course, resists and expels as much of it as possible, so that the worst results are a long time in making their appearance. But when the "wine-blossoms" are well developed in the face of the chronic wine-drinker, can you find a more striking picture of them anywhere than by looking into that same fermenting dish of grape juice with which you have just been making an experiment? And these outward signs are sure indications of inward corruption. All the internal organism partakes largely of the same condition. Hear what the doctors say: "A copious beer-drinker is all one vital part. He wears his heart on his sleeve, bare to a death-wound even from a rusty nail or the claw of a cat." Again, a writer from Milwaukee says:

"Physicians of this city who have had wide experience are of the opinion that the person who uses beer habitually is more liable to contract disease, and less able to throw it off, than one who abstains from its use. A case recently occurred of a German brewer, apparently healthy and robust, who accidentally stuck a small sliver in his hand. Soon his arm began to swell and be painful, and the pain and swelling extended to the entire body, and resulted in death. The symptoms were clearly those of a bad condition of the blood, and no other explanation could be given than poisoning by the use of lager-beer."

And this is quite in accordance with the best authority; and with even the earlier stages of disease Dr. B. W. Richardson says: "By common observation the flush seen on the cheek during the first stage of alcoholic excitation is presumed

to extend merely to the parts exposed to view. It can not, however, be too forcibly impressed that the condition is universal in the body. If the lungs could be seen they, too, would be found, with their vessels, injected; if the brain and spinal cord could be laid open to view, they would be discovered in the same condition; if the stomach, the liver, the spleen, the kidneys, or any other vascular organs or parts, could be exposed, the vascular engorgement would be equally manifest."

Dr. Crothers, editor of the *Quarterly Journal of Inebriety*, in speaking of the claim of the brewers, that beer is wholesome, says that these theories are not confirmed by the observation of physicians and chemists; that "in appearance the beer-drinker may be the picture of health, but in reality he is most incapable of resisting disease" (clearly, then, our organs of observation are at fault, mistaking the flush of disease for the rosy hue of health); "that a slight injury, severe cold, or shock to the body or mind, will commonly provoke acute disease ending fatally," and so on. But the most remarkable thing he says, and to which we would call special attention, is that "the constant use of beer is found to produce a species of degeneration of all the organism." In confirmation of this we point to the *prominent* feature in beer-drinkers—their large liver, stuffed out with disease. No one having such a liver *can* be healthful, for the blood can not be cleansed. Some of the morbid consequences of this diseased condition we reserve for another paper.

JULIA COLMAN.

FATAL TOBACCO.—In Paris a porter cut his finger with a knife with which he had been clearing out his pipe. The finger swelled, and the arm became inflamed while tumours appeared under the arm-pits. The medical man called in recognized poisoning by nicotine, and seeing that amputation was necessary, sent him off at once to the hospital, where, at last accounts, he was lying in a very precarious condition.

HENRY S. TANNER, M.D.,

THE GREAT FAST.

THE leading feature of interest, or "sensation," as it has become fashionable to say, in New York city, this summer, was the forty days' abstinence from food by Dr. Tanner, a physician from Minnesota. He came to New York upon the wonderful course of starvation. Upward of sixty physicians and twenty-five or thirty students and reporters, constituted his guard, attending and watching his every movement. On the 7th of August, at noon, the forty days were com-



in response to the offer of a well-known doctor to give \$1,000 to him if he would go entirely without food for forty days, but, failing to make suitable arrangements with him, offered to undergo the test under the supervision of the Faculty of the United States Medical College of this city. The seeming *felo-de-se* was accepted, and at once Dr. Tanner entered

pleted and at once the emaciated man began to eat heartily, and to the astonishment of all his physicians, has rapidly gained weight and strength without a single morbid symptom.

Dr. Tanner is of English birth, coming to this country about the year 1848, at the age of seventeen, studied medicine in Cincinnati, taking his degree in 1859.

During his practice he has been a close observer with reference to the phenomena of digestion and the effects of food in health and disease, and among his convictions is this: that many diseases can be more successfully treated by abstaining from food than by drugs. He has on many occasions abstained entirely from eating for days and even weeks, with the view to curing his own indispositions.

An examination by Mr. Nelson Sizer of our office, made at the close of the fasting experiment, revealed the following characteristics:

The constitution of Dr. Tanner indicates the Motive temperament in a strong degree, which gives toughness, solidity, a kind of wiry positiveness to all his characteristics and all his motions.

He has a fair degree of the Mental temperament, which lies at the foundation of thought, purpose, mind, and character; and this temperament gives intensity and susceptibility. The Motive temperament gives hardy earnestness, a sterling strength of feeling and purpose, which, joined to the sensitive, renders him extremely positive and very susceptible to the influences which are brought to bear upon him.

The Vital temperament in his case is fairly developed; more especially has he most remarkable lung power—the chest is very deep and measures forty inches; to this he adds good digestion, which gives recuperating and sustaining power. He has fineness of quality, and that gives him not only intensity, but susceptibility; he lives more in an hour than some men do in a week; and at the same time, while he is largely influenced by external conditions, he is able to gather himself up and be his own master, and the master of the influences which act upon him.

Intellectually, he had originally a strong predominance of the perceptive organs, which enabled him to gather knowledge from every source; to make himself master of the facts within reach, and to crystallize them into ideas. For the last twenty years he has been using his reasoning intellect more than former-

ly, and has increased the upper section of the forehead in its development.

He is a natural critic of subjects and things, and particularly so of character, motive, and disposition. He reads strangers so readily that he is impressed favorably by some, and very unfavorably by others; and unless he is on his guard, he will show his aversion to people so palpably that they will take offense, and consider him curt and uncongenial, but his impressions of strangers are generally correct.

His tendency to theorize, to have a cause for everything and a reason for all the facts he finds, keeps his mind on the stretch for investigation in the direction of the philosophy of things. Consequently, if he comes to a logical conclusion, he feels as certain that he is right as that certain propositions in arithmetic will produce certain results, and he holds to these opinions with an uncommon singleness of purpose.

He sees the witty side, appreciates the mirthful and funny, and is apt to be rather cutting and stinging in his wit; he sometimes uses wit as a scourge with which to chastise those who deserve it.

His sympathies are strong; he is sorry for a great many people who don't know they need his sympathy, and carries people's cares and burdens mentally, and would render assistance practically if he could. Whoever awakens his sympathy in their behalf will find they have a strong source of help.

He is not very strong in Veneration; hence he does not feel called upon to bow to power, unless it have worth and wisdom in it; would be more inclined to reverence the Creator than to bow to usage and custom among men.

His Firmness is very strong, one of the largest organs in his head, and this acts as a central or pivotal element of character, gathering around it courage, ambition, pride, hope, and logic; and what he attempts to do he feels bound to carry through, when it is a matter of right, or a matter of ambition, or especially when he is opposed in that which he feels to

be right; he is able to bring to bear every force which belongs to his mind and character. People sometimes call him obstinate; they may think him overbearing because he has definite opinions, and these strong points of character backing up his opinions make him feel certain that he is right, and those who oppose him wrong; therefore his determination stands out conspicuously and emphatically.

His Self-esteem is rather large; hence he believes in himself, is not one who has ever been inclined to feel the necessity of advice, and protection, and assistance. From the day he stepped out of the cradle till now he has felt like planting himself on his own center. If he were going to conduct business, he would not want partners unless he were at the head of the firm and had everything his own way, and could have young men to render general assistance and promote business in a way that would be for their ultimate benefit, so that they could afford to put their shoulder to the wheel.

He has very large Continuity, and can bring his whole thought and purpose to bear on a given point, and hold it there; consequently people think he is tenacious, perhaps prosy, that he centralizes his thought and makes a hobby of a peculiarity; and that he would do if he were plowing a field, or doing any other plodding labor, he would stick to what he started till it was done, if he were able to do it.

He is frank, outspoken, open-hearted, almost too much so; if he would soften the truth, and conceal his aversions and objection to people's notions, instead of expressing them in square terms, it would sometimes minister to his popularity. He makes enemies by his frankness and openness and honesty.

He loves justice, and those who know him best will give him credit at least for one trait of character—integrity, justice; and he has so little Secretiveness that he could not play a tricky part if he were to try; he would be sure to expose himself;

but when he believes he is in the right, he utters the straight fact, and expects other people to recognize it.

We have no doubt of his integrity; he is a man whose word and whose obligation would be reliable. He may be a dogmatist, but he is not a hypocrite; he may be headstrong, he is not inclined to quarrel, he is more disposed to argue, discuss, always has been fond of debate, and he can do it without acrimony, without hatred.

He has only a medium share of Destructiveness, he has that element of it which gives thoroughness, and joined with Firmness, Self-esteem, and Continuity, people think him severe, because he will not waver from that which he deems to be right.

He appreciates property, and if he had devoted himself to money-making, he would have been as successful as most successful men are.

He has large Constructiveness, is full of mechanical contrivance, and would have excelled in the domain of invention; in anatomy and surgery he would make his mark; if he had been connected with the construction and use of machinery, he would have taken good rank. He is also fond of the beautiful in art and nature. Enjoys poetry and appreciates refinement.

He is not extravagant in Hope, never expects anything which he does not earn by legitimate means, consequently "luck" to him is generally out of the question. He believes in the absolute, in dynamic power, in rendering a full equivalent for results; consequently with his critical intellect, and with his determined character, he would regard human physiology as a mechanism, governed by fixed laws, and he would expect results equivalent to the means he employed; he would believe that a certain remedy in case of a given disease would bring out a requisite result, and he would rarely hope for more than he would get, hence he lives in the realm of the real, rather than the ideal and imaginative.

He has strong Vitativeness, or love of life, which gives him not only a strong hold on life, but the tendency to cling to it pleasurably, and whatever he has of constitution, will always come to his rescue.

His Language is fairly developed, and if he were accustomed to speaking or writing, he would talk well, would be so straightforward and direct and absolute in that which he said, and would make it so clear and practical that everybody would accept his statements without stop-

ping to question them; would suppose they must be true.

We notice that he has a very thin skull, for there is a sensible vibration of it when he speaks, consequently his brain is larger than is common for a twenty-two inch head; he has just the temperament to give deep convolutions of brain, which produce mental vigor, and intensity of thought and feeling, and it makes the character emphatic, influential, and powerful.

THE VALUE OF HEALTH AND LIFE.

IN seeking profitable truth it is important to ascertain its relative value. As we rarely find two things precisely alike, so are they seldom found of equal worth to us. Even the one which in dollars and cents will cost less than another, may contribute the most to our weal. This, it would seem, however contrary to prevailing notions, is the true test of value. If a cool drink of pure water, when dry, a wholesome meal when hungry, or a book of pure, practical instruction, at little or no cost, contributes more to our actual comfort than costly attire, jewelry, or diamonds, then are they indeed worth more, and should be that much the more esteemed. At once it must be seen by all that without the means of comfortable subsistence no costly apparel or display can make us happy. The fortunes of Stewart, Vanderbilt, or the Rothschilds, are of little avail when facing the grim monster. So of gaudy honors. Napoleon imprisoned at Helena, stripped of his power, tortured with aches, and horrified by the ghostly sepulchre, received no comfort from his past greatness or unprecedented honors. Indeed, the recollection of these but enhanced his grief. As the once brilliant Randolph is said to have written "*remorse*" as his last word, so must it have been at the eleventh hour stamped upon the heart of the great emperor. Health, peace, and contentment had been to him as his life waned away of far more value than all the world

beside. So must we all concede that to gain the whole world, and yet lose one's self, is to make a most foolish and fatal exchange. Such a blunder climaxes all blunders; therefore let us take heed to our ways that we run not into it.

Besides the pains and penalties of the body attendant upon bad health, the mind is likewise implicated. The twain are so joined together that no man can put them asunder. Mutually do they act and react upon each other. Hence ill health pertains not merely to a part, but to all of us; not merely to a fraction of our being, but to our whole man. Concede, then, that the slight estimate many Christians are wont to put on the body as compared to the soul, is justifiable, still when we show that the sufferings of the latter always involve the former, even they must, in turn, concede that our argument for the health of the body is conclusive.

As charity begins at home, as the apostles were to begin to preach at Jerusalem, even so should our logic and all our efforts for good begin with ourselves. First let the beam be cast out of our own eyes; first let the physician heal himself; then may we relieve others. External possessions, we repeat, are of little avail while the internal are wasting away. As Job has well said, "All a man hath will he give for his life;" and while the renowned men are of no more value to themselves and families than the obscure,

yet they serve better for examples. Hence we refer to the untimely fall of at least a few of our conspicuous countrymen to illustrate further the pre-eminent value of human life.

Stephen A. Douglas, from circumstances of poverty and limited education, rose, by force of native talent and close study, to a lofty position in the councils and honors of his country. Sickness, from causes which could be shown to have been controllable, invaded his strong constitution, and in Chicago he painfully perished, exclaiming, "Is this death?" His contemporary and rival, Mr. Lincoln, toiled his way from the lowest, hardest point of life to the highest and most triumphant, and there, in an evil hour, fell, and draped the nation in mourning unprecedented and universal. Such a scene demonstrates the exceeding value forty millions of his countrymen placed upon his life. Gen. Lee, the greatest in the Southern Confederacy, has likewise fallen while in a sphere of more usefulness and honor than when he was marshaling his mighty army of Confederates with warlike weapons. The same sad regret must be expressed over the untimely end of Seward, Greeley, Johnson, Sumner, and Wilson—all eminent statesmen, and of deserved renown in our nation. Though none of these were young, none were old. Like scores of others little less conspicuous, we could, and may in future papers, submit facts to prove that their lives, save Mr. Lincoln's, might easily have been prolonged. They died neither by chance nor miracle, but from causes which, if studied, would range within the control of each. As the old prophet said, "My people perish for lack of knowledge."

But we now have to do with the value of their health and lives, their irreparable loss.

An aged deacon was persuaded into an experiment to improve his circumstances by peddling shovels. Taking his son along, and a cart-load for each, their trip was prolonged till his brethren grew un-

easy as to their safety. On their return the inquiries were frequent, "How have you made out?" and the good deacon would answer, "We have done quite well; since, by the help of the Lord, we have *saved ourselves*, but lost our shovels!" This was his common-sense view, though too often ignored in our race after filthy lucre.

The toil of a good man and his wife, with a dear little daughter, was rewarded by a lovely home. Finally, at midnight, they were aroused in the midst of flames, barely escaping in their night-dresses. Gazing upon the sad scene as the cottage and its contents melted away, the husband and father exclaimed in despair, "All is lost!" The simple-hearted, trustful little daughter, turning her soft eyes up to the woful face of her father, says: "Pa, are you not mistaken?" "Why, Alice, tell me what is saved?" "Why, pa, you are here, ma is here, and, little as I may be worth, I am here; and surely we three make something." The deacon thought himself and son were worth more than their shovels; Alice, her parents and self of more value than their cottage and its contents. Even in our fast money-loving age, whose common sense can gainsay this?

HEALTHY CITIES.—According to the tables of vital statistics, lately published by the Health Department of New York city, which relate to the death-rate in more than three hundred and fifty cities—foreign and American,—Burlington, Iowa, with a population in 1875 of about 20,000, has the pre-eminence for health, its annual death-rate being only 4.84 deaths per 1,000 souls. Stockton, Cal., stands next, 7.47; but this is sixty-two per cent. more unhealthy than Burlington. There are very few, if any, places in all the world, that can rival Burlington in this respect. The death-rate for New York city is 23.93 per 1,000; New Orleans, 50.71; London, 23.40; Paris, 24.71.

THE YOUNG CHEMIST'S REVELATIONS.

[THE following is written in a lively vein of satire, but there is truth enough in its statements to warrant its being placed here. Competition, which characterizes every branch of trade, cheapens prices, and in the effort to undersell one's neighbor practices of adulteration are resorted to, so that a degree of profit shall be realized. It is a fact that the commonest staples of life—sugar, coffee, and so on—are adulterated, and this fact is extensively known among the very people who use them daily.—ED.]

I AM not well up in chemistry. I have a great respect for it, as I have for anything that seems too profound for me to "tackle," but my knowledge of the subject consists of some hazy recollections of a dingy lecture-room, furnished with very hard benches, and a group of unhappy boys yawning at a sober-looking gentleman who used a great many hard words—nearly as hard as the benches—and made miraculous combinations and changes in the contents of his bottles and things, and deafened us by touching off bladders of oxygen gas—or perhaps it was hydrogen—and blinded us with calcium lights, and suffocated us with unsavory smells, which he poured out somehow from his bottles. But my eldest son, Ahasuerus—who is learning to be an apothecary, and has taken to analytical chemistry (using his bed-room as a laboratory) as naturally and earnestly as his brother Solomon has to private billiards in *his* bed-room—has turned his scientific battery in a direction that is producing distrust and dismay in the bosom of my family.

I have a great respect for science, particularly where I don't understand it. But when science pokes sticks, so to speak, among the wheels of my domestic economy, and deranges their running; when it takes upon itself to inspect my victuals, and find fault with them in a way that is calculated to unsettle my faith in my breakfast, dinner, and supper, and disturb the repose and equanimity of my mind, which I find necessary to perfect digestion, I don't like it.

The results are no doubt highly satisfactory to Science and Ahasuerus, but I can't help feeling a sense of personal injury when he assures me that he has analyzed the prepared coffee which my grocer sends done up in such nice packages, and has found that it is *prepared* with a vengeance. Mrs. P. used to mix it with the proper proportions of cream and sugar, as she alone knew how to do, and hand my cup gracefully across the table; and I used to take it with a relish, and think it remarkably nice; and there was the highest degree of mutual confidence between us on the subject. Now, when she hands it to me, I am oppressed by the consciousness that I am keeping a secret from her; which she would not like, if she knew it. For how can I tell that excellent sharer of my joys and troubles that she is about to poison me with a fluid extract of chiccory and mangel-wurzel root, and roasted wheat flour, and roasted beans, and roasted acorns, and carrots, and parsnips, and sawdust? and that the chiccory and wheat flour were themselves adulterated before they were used to adulterate the coffee?

How can I tell our venerable aunt, who frequently drops in just about supper-time, and from whom we have expectations, that the tea, of which she always takes three breakfast cups, is a decoction of beech, horse-chestnut, oak, willow, and half a dozen other leaves?—that the white sugar, with which Mrs. P. sweetens it so artistically, is improved by a mixture of powdered marble, chalk, whiting, bonedust, and salt?—that the cream, with which she mollifies its strength and feeds the twins, may be skim-milk bedeviled with chalk, calves' or sheeps' brains, turmeric, and annatto, with water added to thin it, and gum tragacanth to thicken it, and soda to keep it sweet?

Manifestly, if I were to tell them all this, I should never get any more coffee, and our venerable relative would never drop in at supper-time again, and would cut us out of her will beside.

Ahasuerus is evidently a born analytical chemist; for this discovery concerning the coffee and tea, and their "condiments," as the prairie damsel styled them, has started him upon a general investigation of everything of a gastronomical character that comes into the house. The result has been that he has made some other discoveries, accompanied, in the process of making, by a remarkable succession of odors, uniform only in unsavoriness, and a condition of bed-room which Mrs. P., who is a neat house-keeper, has on several occasions emphatically denominated as "nasty."

The first thing he attacked after spoiling my coffee, was a paper of fruit drops—a kind of small candy pellets of various flavors—which I had brought home for my son Madagascar, aged three. I had incautiously opened it, and was about handing it to the boy, when Ahasuerus suddenly diverted it into his own hand, and swiftly disappeared, muttering something in which I thought I distinguished the words "analyze" and "bucolic," leaving Madagascar's mouth, which had opened in rapturous anticipation, hanging open in wrath and dismay. I didn't see him again until next morning, when he produced the paper, somewhat depleted of its contents, and, in answer to my question, whether he had found anything bucolic in the drops, said: "Well, no; I never found that anywhere but in Virgil; but I'll tell you what I *have* found."

"Sugar flavored with fruit essences," said Mrs. P.

"H-m-m!" said Ahasuerus. "Look here; fruit essence, number one, pear—made of concentrated sulphuric acid and fusil oil, distilled with acetate of potash; number two, apple—made of the same, distilled with bichromate of potash; number three, pine-apple—made of diluted butyric—not bucolic—acid."

"The pine-apple is very nice," said I, crunching two or three of the pellets of that flavor, and holding another ready. "What is butyric acid?"

"Something *very* nice," said our chem-

ist; "it is obtained from butyric ether, which is made from sugar—I've told you what that is—by fermentation with sour milk, chalk, and putrid cheese. Try some more of 'em."

I didn't. My appetite for candy diminished suddenly.

As we were about leaving the house—I for my office, Ahasuerus for the store—Mrs. P. asked me, unfortunately, in his hearing to bring home some oil of bitter almonds to flavor the pudding she was going to make for dinner the next day. He said nothing, but when I brought my purchase home I found that he had also brought a vial of it from the store. He immediately seized upon mine to analyze it, and the next morning informed me that it was made from coal tar.

"I guess you had better use *my* vial," said he, quietly; "I know what it is, for I made it myself."

"Now, look here, young man," said I severely, "I want you to tell me whether anything we eat is itself or something else; if you go on in this way I shall be afraid to eat anything except unseasoned meat and boiled eggs, and oysters on the half-shell."

"You are not safe if you go much beyond them," said he. "The vinegar you put on your oysters is made of water, sulphuric acid, burnt sugar, grains of paradise, and pyroligenous acid; and the pepper is composed of linseed meal, mustard-husk, wheat-flour, sago, rice flower, pepper-dust, and saw-dust."

I had the pepper-box in one hand, and a pickled oyster on my fork in the other; I laid them down.

"Try some mustard," said Mrs. P., "that is pure at any rate."

"Hold on," said that uncomfortable youth. "I've analyzed some of that very mustard, and I know just how pure it is. It is made of wheat-flour, covered with yellow-ochre, and sharpened with cayenne pepper (made of ground rice, turmeric and the husk of white mustard-seed, and colored with red lead) and ginger (made of sago meal, tapioca, ground rice, cayenne pepper, mustard-

husks, wheat-flour and turmeric) and plaster of Paris, which I believe is pure. Try a little."

I didn't see my way quite clear, and put the mustard-spoon back into the cruet.

"Your very medicine is adulterated," he went on; "at least you are not sure of it, unless you get it at our store, and we have been fooled sometimes; for instance, in a lot of ipecacuanha, which proved to be a mixture of tartar emetic, chalk, wheat-flour starch and saw-dust."

"As if medicine wasn't musty enough, anyhow!" said Mrs. P.

"And that fine brandy you got for mince pies," continued Ahasuerus. "I gave that a trial, too."

"You didn't find anything the matter with my brandy," said Mrs. P., in a fright. "Why, all the mince pies are seasoned with it."

"I didn't find any *brandy* at all," said Ahasuerus, with that exasperating quietness of his. "I found some rectified corn whisky, hoccussed with cream of tartar, acetic ether, bruised French plums, and refuse grape skins; it was colored with burnt sugar and roughened with tincture of kino. Being 'fine old brandy,' it was aged by an infusion of oak saw-dust and tincture of grape stones, and flavored with grains of paradise and several other equally harmless ingredients."

In view of the revelations concerning coffee, I had informed Mrs. P. that I thought that cocoa or chocolate would agree with me rather better; and that amiable woman, only solicitous for my welfare, had gone out herself, and selected a cake of "warranted Caraccas cocoa," and prepared some of it for breakfast. I had taken one foaming cup of it with relish, and had passed my cup to be replenished, when Ahasuerus asked to "have a shy at it." Mrs. P. winced, but gave it to him. That confounded boy took one sip, twitched up his left nostril with a quick sniff, set down his cup, and looking at his watch, said he was late and must be off to the store.

"I wonder if that boy will ever learn manners?" said Mrs. P. despairingly, as he disappeared—"smelling at his cup in that way!"

"I'm afraid he smelt a rat in it," said I incautiously.

Mrs. P. gave me a look of resigned despair, but I went on. "Depend upon it, he has found something to pry into, and we shall hear from him to-morrow morning."

Sure enough, it came, and I don't wonder he sniffed—maranta, arrow-root, Indian corn, sago, tapioca, chiccory, cocoa-shells, old sea-biscuits, coarse flour, tallow, and lard, and colored with Venetian red!

This boy is becoming a very uncomfortable treasure to possess, with his disposition to meddle with everything and show it to be something else. Not content with spoiling the prepared coffee, which we all thought so nice, and spoiling the sugar and cream and Madagascar's candy, and his mother's pudding and mince pies, and my oysters; taking liberties with the mustard-pot and shaking my confidence in the "ipecac," which is my reliance as a "steady" corrective—I verily believe he picked it out on purpose, so that I shall be afraid to get sick again—and our venerable aunt's sangaree and my chocolate; he has had the assurance to tell me that my scented rappee—I have a habit, a very bad one, Mrs. P. says, of using snuff—is composed of chromate of potash, red lead, carbonate of ammonia, lime, powdered glass and powdered orris-root; that our morning twists are adulterated with mashed potatoes, alum, plaster of Paris, and bone-dust; and that the mixed pickles, whose bright green so delighted Mrs. P., owe their color to acetate of copper!

I am reduced to despair. I can't live on unseasoned meat and boiled eggs. Mrs. P. says she won't make any more doughnuts, nor fry any more catfish or anything else, until she can get some lard that she is sure is not mutton-suet mixed with potato flour and carbonate of soda; she won't make any more gruel

until I can get oatmeal made of something better than barley flour and rubble; and where is she to get arrow-root for the twins when Ahasuerus has demonstrated that she has been making it of potato starch?

I have requested him to suspend his analyses for the present, and allow us to eat our meals in peace; suggesting that,

as he has got us into a very thick wood of difficulty, he should show us the way out.

"The way's plain enough," said the enterprising youth; "buy everything at *our* store!" Whereupon he seized his hat and decamped.

That boy has an eye to business.—*Lippincott's Magazine.*

NOTES IN SCIENCE AND AGRICULTURE.

North Pole Stations.—A beginning is about to be made, says *Nature*, to carry out Lieutenant Weyprecht's proposal for a circle of observing stations around the North Pole region. The Danish Government has resolved to establish a station at Upernivik, in West Greenland; the Russian Government has granted a subsidy for an observatory at the mouth of the Lena, and another on one of the Siberian Islands; Count Wilezek is to defray the expenses of a station on Nova Zembla under the direction of Lieutenant Weyprecht; the Chief of the United States Signal Service has received permission to plant an observatory at Point Barrow, in Alaska; and it is expected that Canada will have a similar establishment on some point of her Arctic coast. At the Hamburg Conference it was announced that Holland would furnish the funds for a station in Spitzbergen; and it is expected that Norway will have an observing post on the extremity of the province of Finmark. This course for reaching the North Pole was suggested years ago in the PHRENOLOGICAL as the only sure and economical method.

The Topophone is a new instrument for determining the exact position of any source of sound. It consists of two resonators or sound receivers, which may be connected with the ear by flexible tubes. If the resonators are turned toward the sound, and the tubes are of exactly the same length, they, catching the sound, will reinforce each other and increase it; if, however, the tubes differ in length by half the length of a sound wave, an interference will occur and the sound will be destroyed. One of the tubes may be varied in length so as to cause the production of either of these effects. The direction of the sound is determined by turning the resonators till their openings face it, when, of course, it will be most intense, and can be "turned on" or "shut off" by adjusting the length of the tubes. With this device, steamboats need not mistake the direction of their whistles in times of fog.

Pear Blight.—A correspondent of the *Fruit Recorder* says: "I have been cultivating the pear for eighteen years, and have tried every remedy that I could hear or think of,

but to no use, until I noticed, some three years ago, an article published in some agricultural paper that the blight was almost unknown on the Pacific and Atlantic sea-coast, and it was supposed that the salt spray was the cause of the exemption. So when I read, I went to the store and got a half bushel of coarse common salt that fish are packed in; I sowed it around my trees as far as the limbs extended, so thick that it looked as if a severe hail-storm had taken place. I used the salt about the 20th of June, and it required several weeks for it to evaporate, and in the morning, after a heavy dew, all the leaves and limbs would taste quite salty. Since then I have had no blight, while in the next lot adjoining, and just across the street, they have plenty of it. Others that have tried my remedy have no difficulty with the blight."

Red Snow.—On the 25th of April there fell in the French departments, Basses-Alpes and Isere, an abundant snow strongly tinged with red dust. The red matter was so abundant that from Barcelonnette all the mountains looked ochrey up to 2,800 to 3,000 meters. Above this the snow remained quite white. A Notary of the place had a quantity of the snow collected, and, after fusion and filtration, sent some of the dust to M. Daubree, who found in it a large proportion of carbonate of lime; also mica and two felspars, one of them being orthoclase. The powder, then, had probably a terrestrial and not a cosmic origin; but it appears not to be volcanic, like the ash which has sometimes fallen in Scandinavia after Icelandic eruptions; it also differs from the sand of the Sahara, often carried great distances by winds. The point whence it came is still uncertain, but it is interesting to note that the same kind of substance had fallen in 1846, precisely in the same departments, and in 1863 in the Eastern Pyrenees. Showers of similar dust seem to have fallen in Saone-et-Loire on the 15th of April, and in certain parts of Algeria on the 24th.

Adulteration of Sugar.—In a lawsuit at Buffalo, N. Y., certain testimony was given by a manufacturer of glucose or grape sugar, which suggests the extent to which this article is made and sold for the purpose of adulterating cane sugar, and many sweet-

ened articles in common use. This manufacturer, a Mr. Williams, said :

"Glucose and grape sugar are one and the same thing—glucose being the sugar in a liquid form. When it is called grape sugar it is in a solid form. This is being used considerably in New York in making sugar, making what is called improved sugar. Witness understood that the Buffalo Grape Sugar Company was interested in this mixing of sugars in New York. At the present time the demand for grape sugar exceeds the supply, and the price of it has increased. In 1874 thirty pounds of sugar were made from one bushel or fifty-six pounds of corn. The price was then from $3\frac{1}{2}$ to 4, and sometimes $4\frac{1}{2}$ cents a pound. The refuse is sold for feed, and the price of it was from seven to eight cents a bushel. In mixing sugar the grape sugar is pulverized, and about twenty-five per cent. added to cane sugar. It improves the color of the sugar, and enables dealers to sell it for a better price.

"During 1874 and 1875 the earnings were about \$15,000 a month, and in 1876 they averaged from \$19,000 to \$20,000. In 1877 the earnings for one month were \$35,000. Witness did not see many of the statements during 1878. A starch factory was run in connection with the sugar works, about 500 bushels of corn being used in a day. Witness did not know much about the earnings of the starch factory. He was aware that the business was profitable. He understood all of the processes of the establishment, and had charge of the manufacturing of the sugar, glucose, etc. He made estimates from time to time of the cost of turning a bushel of corn into sugar, and in doing so took into consideration the outlays, cost of machinery, building, etc. He estimated it to be about 25 cents a bushel, and the net profit of a bushel of corn, at 45 cents a bushel, when turned into sugar, to be 70 cents. A number of small manufactories have sprung up in this country, but there are only four or five of any account. The amount of corn consumed in 1879 was from 4,000 to 6,000 bushels a day. In some respects it costs less per bushel to run a large amount of corn than it would to consume a small quantity. The net profit per bushel from 1874 to 1879 was from 40 to 50 cents."

Adam a Peruvian.—An eminent philologist, Dr. Rudolf Falb, who has devoted much time to researches in South America, has published a summary of his conclusions in a Vienna paper. He says that the language spoken by the Indians in Peru and Bolivia, especially in Quichua and Aymara, exhibit the most astounding affinities with the Semitic languages, and particularly with the Arabic—in which tongue Dr. Falb himself has been skilled from his boyhood. Following up the lines of this discovery, Dr. Falb has found, first, a connecting link with the Aryan roots, and, second, has arrived face to face with the surprising revelation that "the Semitic roots are universally Aryan." The common stems of all the variants are found in their purest

condition in Quichua and Aymara, from which fact Dr. Falb derives the conclusion that the high plains of Peru and Bolivia must be regarded as the point of exit of the present human race.

Proof of Death.—Electricity enables us to distinguish with absolute certainty between life and death; for, two or three hours after the stoppage of the heart, the whole of the muscles of the body have completely lost the electric excitability. When stimulated by electricity they no longer contract. If, then, when Faradism is applied to the muscles of the limbs and trunk, say five or six hours after supposed death, there be no contractile response, it may be certified with certainty that death has taken place, for no faint, nor trance, nor coma, however deep, can prevent the manifestation of electric muscular contractility. Here there is no possibility of mistake, as there certainly was when the old tests were employed. Muscular contractility under the Faradic stimulus disappears gradually after death. It is instantly diminished, but only finally extinguished in about three hours; and hence Dr. Hughes Bennett has suggested that electricity may sometimes be of use in medico-legal investigations, by affording evidence as to the time of death.—*Med. News and Circular.*

Profit from Hens.—There are some farmers who say that it is a losing business to keep hens; but they produce no statistics to prove their assertion. From a somewhat extended experience I can produce facts to prove that there is profit in keeping them.

In the year of 1845 I kept twenty-five hens, and the profit from their eggs was seventy-five cents each. At that time corn was worth seventy-five cents per bushel, and the average price of eggs for the year was fifteen cents per dozen. Last year I kept ten hens, and the profit from them, in eggs, was ten dollars. The average price of eggs that year was twenty cents per dozen, while the price of corn was the same as in 1845. In this estimate no account was made of rent for the hen-house or for work in taking care of them, or for the guano-like fertilizer, made from their droppings, which is said to be worth fifty cents a year for each hen.

I now have nine hens, and during the months of March and April they produced 403 eggs.

In regard to hen-house and food, I will simply say that hens take delight in a dry, warm, and cleanly apartment. They may be kept free from lice by a plentiful use of wood ashes, as I know from a long experience. I feed hens with meal of a mixture of oats and corn, boiled potatoes or turnips, in small quantities, green cabbage or early cut hay; in winter, corn, wheat, etc., and a little meat, and oyster shells, when they do not have the privilege of roaming in the fields.

From long experience and from a strict account of the value of the product of eggs, and the expense of food for hens, I know that there is a profit, and to myself a pleasure in keeping them.

P. L. BUELL.



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LIBERAL CULTURE FOR WOMEN.

THE fears entertained by certain of our old-fashioned doctors concerning the effect of high education upon young women have not, to all appearance, retarded the increase of colleges for their special training, or the growth of a public sentiment in favor of supplying all the advantages for the cultivation of the feminine mind, which are at the command of the masculine. Vassar has found it necessary to add departments for the study of sciences and languages, which are usually pursued by the few who make them special subjects of investigation. Smith College finds it expedient to expand its curriculum to meet the demand of a growing student roll and an advancing scholarship.

Even old Harvard has yielded to the pressure of influence, and opened her doors, with certain conditions not altogether fair, we think, to young women who aspire to high scholarship, and who can *pay* liberally for the instruction.

The West has been somewhat in advance of the East in affording academic opportunities to girls, mixed and special colleges having been in existence in Ohio,

Illinois, Indiana, Wisconsin, and other States for twenty-five or more years; and they have performed a noble work in raising the tone of moral and intellectual character of the Western population.

The recognition of woman's equality carries with it an admission of her right to a liberal education, and her liberal education, we think, will do more toward resolving successfully the complex problem of her sphere in society than any other method.

The thousands of cultured women who now grace the walks of professional and even business life, have demonstrated in the most practical manner, not only their capability for good work in vocations once regarded as belonging peculiarly to the masculine intellect, but also that they may prosecute such vocations without injury to health, and without relinquishing a degree of true womanliness.

We can no longer assert that systematic study is more detrimental to the health of girls than boys, for it has been found that under like conditions girls exhibit a better physical average than boys, and so are even less likely to break down under mental strain. This being considered, we would naturally expect the declaration which has been made by certain of our leading educators, that the young women are outranking the young men in the studies of the average college curriculum. To our masculine ear this utterance goes somewhat "against the grain," but may we not apologize for our sex by pointing to the *very* manly athletic exercises which take up so much of the time of young men in our best institutions—the rowing, ball-playing, etc., which have their advocates among learned sanitarians as quite essential to vigorous physical development?

We are in favor of high mental training for American women. The character of our institutions early brings into activity the selfness, individuality, or sense of independence inherited from independent, self-helpful fathers or mothers, and they need liberal education for the general work society has for them to do, whether as wife and mother, or as one who must earn her own living.

CABINET COLLOQUY.—No. 9.

(Concluded.)

BUT a little while ago all Christendom rang with the atrocities committed by Turkish soldiers in Bulgaria upon a people not of their faith. Did the powerful nations that so wrathfully rebuked Turkey pause to consider how far her brutal madness in war is due to the undevelopment of the Mohammedan mind, particularly in its moral perceptions? In other horrible deeds which have been committed in the name of religion, by nations and peoples, we see to what extremes of cruelty the propensities of man's physical nature will carry him when to their low motives is added the impulse of a blind conviction that the cause of religion and duty will be thus promoted. Over and over again have fire and sword been carried into peaceful lands, and cities and villages desolated by a ruthless host for the sake, professedly, of that Christ whose mission, his apostles declare, was one of love, and who illustrated it by "doing good" to his *enemies* as well as to his friends.

A reasonable faith countenances the expediency of kindness on all occasions, and the love even of *enemies* is enjoined by that wonderful system which the world owes to the meek Nazarene, and

which must be admitted to be the best exposition of the conduct of a moral life. Superstition always loses its sway over minds in proportion to the enlightenment of the intellect and the commensurate appreciation of the utilities of life.

"But, my good sir," urged our visitor, "are you not going too far with your utilitarianism? Religion, like love, friendship, sympathy, is a sentiment, only much higher than these; and it seems to me that its effects upon the character proceed from an extra utilitarian source. The enjoyment people experience in religious exercise appears to be proportioned to their forgetfulness of self and worldly interests. Indeed, to map out a course in which utility must be the standard of every action would be to deprive life of most of its charm. Ever to be thinking of consequences makes the heart dull and the forehead sombre."

But, my friend, how are you to bring about a due regard for social order without culture and attention to the proprieties and economies of life, whether religious or secular? I grant you that it is very delightful to assemble with others for religious exercises and to interchange opinion on spiritual things, but is not the true object of the church-gathering and of the prayer-meeting one of utility? Is it not that the participants may gain better and higher views of this mortal life; that they may be encouraged to meet more firmly the duties and cares which throng around them in their homes and in their business; that they may perform their daily work patiently, cheerfully, and successfully? What consideration have you for the loud exhorter on Sunday, who lashes himself into an ecstatic fervor, but on Monday is found lolling in idleness or capriciously indiffer-

ent to his obligations to family and friends?

No, happiness, rightly contemplated, is seen to possess, in a large measure, the quality of use; in other words, is an experience resulting from the normal adaptation of various instrumentalities. The thought and labor of man are directed toward this one object. Governments, with all their complex machinery for the protection of individuals, and the array of population into communities, societies, and families—in a word, the assertion of the different faculties and powers of the mind according to their degrees of development and inter-relation, all have a common aim—happiness. In this is constituted all that is desirable in life, and he whose conduct is practically adverse to its attainment is considered by his fellows to be lacking in that clearness of intellectual discrimination which is termed common sense. You may style this prosaic doctrine if you will; it is, nevertheless, the doctrine which lies at the basis of human energy. Manifestly one's personal enjoyment does not consist in a reckless, erratic activity of certain faculties. That is but excitement, which an accompanying sense of inharmony and distraction, and the inevitable sequel of weariness, prove to be of a nature quite contrary to that of enjoyment. The poet Moore, I think, caught the true idea in the lines:

"Wisdom and she are both designed
To make the senses more refined,
That man may revel free from cloying,
Then most a sage when most enjoying;"

for true enjoyment is the free, complete, and harmonious exercise of the faculties, powers, and propensities of the mind. Normal exercise gratifies faculty and strengthens it. "There is a time to

weep and a time to laugh; a time to mourn and a time to dance," says the wise man, and man is organized for the exhibition of these and many other humors, and all are proper and beneficial in their respective seasons. As men increase in knowledge they become more capable of using their faculties to advantage in the different spheres of thought and action, and thus enhance their power to enjoy the materials supplied in exhaustless profusion by our beneficent Creator.

Here we see men and women of fine intellectual gifts and well educated, but unhappy; there we behold people with excellent moral organization, high forehead and crown, and very sensitive to impressions regarding duty, ceremony, worship, but also unhappy; elsewhere we see people with broad forehead and side-head, appreciative of what is called the practical, and careful about their food and clothing, their comfort and convenience, but also unhappy. Why? Is not the reason obvious? One-sided development. It is a grave mistake to think that certain faculties of the mind are so much nobler than others that *they* only should be educated and trained while the others may be left to take care of themselves, and it is this mistake which furnishes society with men of fine literary culture, but of poor practical ability—men who can write a learned essay or turn a charming couplet, but can not use their earnings economically and discreetly, or keep on good terms with vulgar people, especially their creditors.

The same mistake is made in the matter of special moral training. The majority of men who devote their lives to the cause of religion neglect the physical and practical sides of their mentality,

and, as a necessary consequence, are deficient in self-reliance and positive energy. Business talent is as valuable in the walks of the Christian ministry as in any lay vocation, and the clergymen who possess it win the esteem and confidence of people, and by their activity, method, and directness, build up and establish flourishing churches, while licentiates of superior intellectual endowment, and of that moral delicacy which shrinks from contact with the asperities of energetic, physical industry, languish in ill-paid and unsympathetic parish connections.

CONCORD PHILOSOPHY.

THE article on "The Literati of Concord" will interest the reader, and if he possess a vein of transcendentalism in his thinking it will be agreeably suggestive. Getting away from the rude and severe side of the practical in life has been one of its aims, and we must confess to not a little sympathy with such an endeavor. Miss Petit reviews appreciatively, though with compelled terseness, the eminent names that have imparted lustre to New England thought generally and made Concord famous. We heartily commend a school of philosophy which reaches down to the common things of life, and seeks to ennoble them; that tends to make drudgery less monotonous, less wearisome, to the drudge. The great mass of society must toil and plod ever. In every household there is common, fatiguing labor which must be done, if neatness and order are to be maintained, if health and comfort are to be enjoyed. Blessed, say we, is the teaching which helps to glorify and spiritualize the common routine of the house, the farm, the shop, the store, the street. Most of the

philosophy preached by our cultured men and women seems anxious to get away from the commonplace, and loves to dwell in an atmosphere of dreamy speculation upon the beautiful. The rude and vulgar necessities of our being are allowed no place in it, although their existence casts a gloomy shadow over the delightful rhetoric of its teachers in spite of all attempts on their part to ignore them. We are hopeful that the Concord School of Philosophy will not leave the hewers of wood and drawers of water in the lurch, but that its learned votaries will offer many an excellent suggestion toward resolving the problems of socialism now pressing so earnestly on the attention of State and Church. We fear, however, that discussions of Neo-platonism, the propositions of Kant, and the agnosticism of Hegel, which have been made conspicuous features in the lecture-room at Concord, will not help much toward the objects that we have indicated.

OUR NEW DEPARTURE.

ON the 9th day of July, 1880, the business name of S. R. WELLS & Co. was merged in a new firm, under the old and world-renowned name of FOWLER & WELLS, composed of CHARLOTTE FOWLER WELLS (representing S. R. WELLS & Co.), O. S. FOWLER, and EUGENE W. AUSTIN. The history of this house may be briefly summarized thus:

O. S. & L. N. FOWLER, constituted	1835
FOWLERS & WELLS,	" 1845
FOWLER & WELLS,	" 1855
S. R. WELLS,	" 1865
S. R. WELLS & Co.,	" 1875
FOWLER & WELLS,	" 1880

The AMERICAN PHRENOLOGICAL JOURNAL, which has been the organ of Phre-

nology in this country, was established in Philadelphia, in 1838, where it was published for three years, at the expense of the FOWLERS, and edited by Dr. NATHAN ALLEN, now of Lowell, Mass.

In 1841 O. S. FOWLER, having become the sole owner of the JOURNAL, removed it to New York, and became its Editor. In 1845 Mr. SAMUEL R. WELLS, having previously married Miss CHARLOTTE FOWLER, became a member of the firm. Ten years later O. S. FOWLER retired from the firm, and since then he has devoted himself to lecturing and writing books.

In 1860, the brother, L. N. FOWLER, and Mr. WELLS, visited Europe, and made an extended lecturing tour, and in 1863 Mr. FOWLER decided to settle in London, where he still remains at the head of a phrenological office and publishing business. Mr. WELLS, in 1865, became sole proprietor of the New York office, and continued the phrenological business and the publication of the JOURNAL until 1875, when death released him from his labors; and his widow, CHARLOTTE FOWLER WELLS, has since continued the business.

Deeming it now expedient to combine the strength and influence of the old workers with those who are younger, and who must ultimately bear the burdens and wear the honors of the field, late negotiations have resulted in a cordial harmony of interests, so that henceforth O. S. FOWLER, whose well-known name has been so intimately connected with Phrenology in America, will resume his old place in the firm, and the fruit of his prolific pen will hereafter appear in the AMERICAN PHRENOLOGICAL JOURNAL. Mrs. WELLS will continue to devote herself, as she has done since 1837, to the business and interests of the office. E.

W. AUSTIN, who was for years associated with his father-in-law, O. S. FOWLER, in the lecturing field, and who, for the past five years, has been connected with the New York office of S. R. WELLS & CO., and has thereby acquired a general knowledge of the publishing business, now takes a more prominent place before the public by entering the firm, and expects to devote his labor and his life to the cause of phrenological science as a publisher, lecturer, and examiner.

Mr. FOWLER does not propose to abandon the lecturing field, but in addition to that important line of effort, will furnish contributions to the columns of the PHRENOLOGICAL JOURNAL.

The phrenological family of co-workers, therefore, congratulate themselves and the public on the promising prospects before us. As we have been formerly successful together, and also afterward separately, the science meantime having grown in public utility and esteem, we now, under the new union, hope to go on to higher attainments in prosperity and to richer results for the public. Mankind needs that which we teach. Tens of thousands have received incalculable benefit from our work in the past. We are better prepared than ever to give the world the benefit of our large experience, backed by facilities never so good as now.

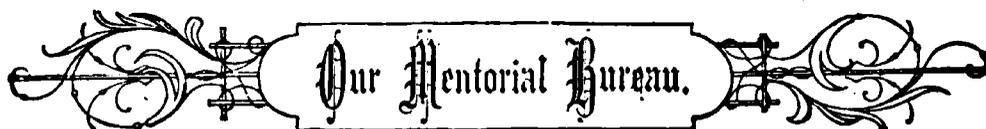
We shall endeavor to make the JOURNAL, as well as our professional work, command the respect of the world, by deserving it, and therefore we confidently look for hearty co-operation by every lover of the race.

A FUND FOR PHRENOLOGY.—A correspondent of the London *Phrenological Magazine*, inquires with regard to the

disposition of a sum of money lying idle in the hands of certain trustees. That sum, as appears by a late statement, is over £9,700 sterling, about \$48,500. Unless the donor of that handsome gift for "the practical application" of Phrenology restricted its benefits to Great Britain, we would call the attention of the trustees to the fact that an institution specially organized to make Phrenology practical exists in this country, and is in need of funds to make its work more useful to the public, and to establish it upon a permanent footing. The American In-

stitute of Phrenology has a museum with abundant material, and a corps of learned and competent instructors; but having no endowment, finds in the fees of its pupils, a very inadequate maintenance. The aim, which is to supply all the student may need in the way of illustration and practical example, and to make him well versed in the essentials of professional Phrenology, far more than absorbs the income.

In this connection it is fitting, perhaps, to say that the opening of the term for 1880 is at hand—October 1st.



Go Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. But one question at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of an early consideration.

IF AN INQUIRY FAIL TO RECEIVE ATTENTION within two months, the correspondent should repeat it; if not then published, the inquirer may conclude that an answer is withheld, for good reasons, by the editor.

WE CAN NOT UNDERTAKE TO RETURN UNAVAILABLE contributions unless the necessary postage is provided by the writers. IN ALL CASES, persons who communicate with us through the post-office should, if they expect a reply, inclose the return postage, or what is better, a prepaid envelope, with their full address. Anonymous letters will not be considered.

CLIMATE OF MINNESOTA.—*Question*: "Please answer a constant reader, if you think the climate of Minnesota as well suited to a delicate person as one more mild?"

Answer: If the delicacy be due to a general decline of health, owing to weakness of organic function, and not to distinct disease, we would say that Minnesota offers a climate in the main favorable for restoration, but we advise the patient to go to that State early in the year, say in the month of April, and remain there, so that on the approach of winter he or she may become acclimated. We think it a mistake in feeble people to go to such a region on the approach of winter. We think consumptives and those who are enfeebled by disease of a special kind would

better winter further south. Numerous places might be mentioned where the atmosphere is dry and soft, and comparatively equable.

CORPULENCY.—*Question*: "What do you think of the much advertised "Anti-Fat Remedy?"

J. C.

Answer: It is stated on good authority, for instance by the *British Medical Journal*, that the "Anti-Fat Remedy" is an extract of the *Fucus Vesiculosus*; and that the plant itself is largely used as a food for pigs and by no means interferes with their growth. The writer in the *B. M. J.* says that he visited a sty to verify the fact that it was really the *Fucus* which the pigs were getting. Now as pigs are deemed of little value unless they are fat, it would seem inconsistent to ordinary people to allow pigs to feed upon an article which prevents an accumulation of fatty tissue. But aside from this view we have no confidence whatever in the preparation.

LOVE AND HOME.—*Question*: "I would very respectfully like to hear the views of the JOURNAL and its correspondents on the following assertion: "A home without love as its foundation is worse than no home. Do you not think so?" This occurred in a letter from a lady friend. In my answer I assumed that love had little to do with making a pleasant or a happy home; if congeniality between the parties did not exist, all the love in the universe could not make them happy.

C. S.

Answer: To discuss fairly this matter would require much more space than can be given here.

First, we must consider the nature of love. Science recognizes Amativeness as the basic element in domestic association, the essential feature in the family tie. We scarcely can understand how true congeniality may exist between husband and wife without some influence emanating from Amativeness. Mere friendship will not bind people together in the relation of husband and wife, for the reason there is not enough of intensity in the sentiment *per se*, so too with the sentiment of parental love. Conjugality comes nearest to Amativeness, and we think that its influence is very important in the home relation. We could not conceive a truly congenial marriage without Conjugality. There must be personal sacrifice on both sides, subordination of personal opinion to secure harmony and happiness; but when such sacrifices are looked on from a matter-of-fact point of view, the conduct of the married parties will assume a very prosaic, sturdy, passive tone, and indifference to the high, warm, and holy sentiments will prevail finally in their relations.

UNEVEN FOREHEAD.—*Question*: Do the protuberances or the irregular surfaces of the forehead show unusual development of the underlying portions of the brain; or, on the other hand, is it the indentations which denote unusual deficiency in this department of the brain?

H.

Answer: The irregularities of surface may be due to bony growth—matter which is largely dependent upon temperament. The skilled phrenologist has no trouble in discriminating between mere bone and development of brain. People who have large cavities at the root of the nose show a ridgy, projecting outline. If, however, there be a smooth surface, the part which is more prominent indicates a larger development of the organs in that region. We frequently meet with heads which in the center of the forehead show a marked indentation, the surface being characterized by smoothness. In such cases the organ of Eventuality is moderate while Comparison above, and Individuality and Form below, are large.

STUDY-TIME.—*Question*: Is it injurious for an early riser to devote the time until breakfast studying books of heavy or concrete science?

H. B.

Answer: You may take a ten-minute walk in open air and then sit down to your books and read or study until the bell rings. We regard the morning hours as the best for the purpose of mental exercise. An hour so employed will not be injurious to the body.

LISPING.—B. W.—Practice reading every day. Commence at first to read very slowly, watching against the unpleasant sibilation; you

can, we think, in time overcome the disposition of the tongue to produce a lisping sound.

STATE NICKNAMES.—Taking the States in alphabetical order, their nicknames, as far as we can ascertain at present, are as follows:

Alabama, Lizard State; Arkansas, Tooth-pick; California, Golden State; Colorado, Rover; Connecticut, Wooden Nutmeg; Delaware, Muskrat, otherwise the Blue Hen's Chicken; Florida, the Beaver State; Illinois, Sucker; Indiana, Hoosier; Iowa, Hawk-Eye; Kansas, the Jay-Hawker; Kentucky, Corn Cracker; Louisiana, Creole; Maine, Fox, otherwise Lumber; Maryland, Gray Vampire; Michigan, Wolverine; Minnesota, Gopher; Mississippi, Tadpole; Missouri, Puke; Massachusetts, Bay State; Nebraska, Big Eaters; Nevada, Sage-Hen; New Hampshire, Old Granite; New Jersey, Blue, sometimes Cinn Catcher; New York, Knickerbocker or Empire; North Carolina, Old Tar; Ohio, Buckeye; Oregon, White Foot, or Hard Case; Pennsylvania, Broadbrim; Rhode Island, Gun Flint; South Carolina, Palmetto or Weasel; Tennessee, Whelp; Texas, Beef-Head; Vermont, Green Mountain; Virginia, Pitch; Wisconsin, Badger.

Several ANSWERS must be deferred to the next Number.



Communications are invited on any topic of interest; the writer's personal views, and facts from his experience bearing on our subjects, being preferred.

THE SOCIETY FOR GUIDING CHILDREN DEFENDED.—*Editor PHRENOLOGICAL JOURNAL*:—When I wrote "The Society for Guiding Children" the thought of discussion was far from me. Even now a monthly journal seems a very unsatisfactory medium for it. But I find my "Society" so misinterpreted by "Cousin Constance," that I feel constrained to make an explanation.

I admit that the heading to my article was calculated to mislead. If I had said, "A Society for the Assistance of Parents in finding the Best Methods for Guiding Children," it would have been more explanatory. Still, I thought what followed made its object so clear that I might with safety, for the sake of brevity, put merely the final aim of the association in the caption, leaving the means through which this was to be reached for consideration in the body of the article.

When my eyes fell on the heading, "Home, the Training-Place for Children," I began eagerly to read, glad that so important a subject was

presented to us. What was my amazement to find that I had been understood as suggesting a society to do away with home training. Far be it from me. As to the place for training children "Cousin Constance" and I do not differ—though I like the word "guiding" a little better. Home is emphatically the place; and I urge the formation of such societies, that parents may come to its meetings and gather to take into their homes that which will enable them both to realize the responsibilities a home puts upon them, and enlighten them on the best means by which they can be met. In the May Number I certainly convey that idea when I say that nearly all trades and professions have associations for the interchange of ideas, and thereby gain much information that is helpful in their various callings; and I believe there are not many parents so wise that they could gain nothing from such meetings. (If such do exist, they ought to join the association for the benefit of others).

But if I advocate teachers' conventions, must I be understood as desiring the removal of schools, as advocating that some other place be substituted? No; it is to establish the school. Just so this "Society" is for the home—to prepare for and assist parents in home training, not to supplant or supplement it.

That the members of this society disagreed is not strange—I have never seen two parents who agreed exactly regarding the training of children; and a larger number could not be expected to agree on all points—more especially as they represented various classes in society.

To arrive at what I want to say now, I must quote and requote:

"One man asked, 'How shall I keep my children from swinging on the gates?'

"Give them a good licking,' said one of the floggers.

"Give them something better to swing on,' was answered, and out of that grew the gymnasium."

The above quotation "Cousin Constance" makes from my article, and then proceeds as follows:

"Was not the question of that father a virtual admission that he had no control of his children? and the reply of the anti-flogger seems to embody the whole gist of modern teaching. 'Buy the child off; if he will swing on the gate, don't compel him to desist, but hire his obedience.'"

To the question asked regarding the admission made by that father, I answer a decided No. If he had asked, How can I? etc., it might have been so construed. It might also be easily answered. Any man of ordinary muscle can easily compel his children to desist from swinging on the gates. Even the benighted flogger suggested how it *could* be done. It was not, How can I? but, How shall I?

This is the question of a man who recognizes the fact that there may be a good way and a bad way of doing the same thing; and the reply of the anti-flogger embodies a grand principle—"embodies the gist of modern teaching." "Cousin Constance" says:

"Give them something better to swing on." Call it "buying off" or what you please—our children have a right to the use of all their powers, and it is our duty as parents who desire their broadest, highest, grandest development to provide them with lawful, harmless means for the exercise of those powers.

If my child marks on the wall, it may be "buying off" to give her a slate and pencil or a piece of paper, or, better still, a blackboard. Nevertheless, I believe it to be far higher wisdom than simply to "compel her to desist" from marking on the wall and furnish her no substitute on which her ability to mark may lawfully be exercised.

Can we look over the world, present and past, and see what restraining, crumpling, and dwarfing have not done for it, and not cry out for something better?

As for "the sturdiness of principle that characterized the rod age"—well, ask the Baptists and Quakers what they think of the sturdiness of principle manifested by the Puritans a century or two ago.

Just a word on lumping responsibility, and I close: We have to "lump responsibility," when we support prisons and poor-houses. Why not do the "lumping" in a preventive way? If the families in each community would "lump it" or each go by itself and get a gymnasium, which would amuse and at the same time develop the muscles, a museum which would train the observation, a good library which would nourish the intellect, and a work-room which would educate the mechanical talent of their children, we might hope for a smaller lump of paupers and criminals. JOSEPHINE JACKSON.

THE NATIONAL WANT: A CONSOLIDATED REPUBLIC; WITH SUGGESTIONS FOR A REORGANIZATION.—*Editors PHRENOLOGICAL JOURNAL*:—When the United States Government was established, it was probably the best that could be devised for that time, when unbroken forests, roamed by nomadic tribes, filled the greater part of the country, the telegraph, railroads, and steamboats being unvented. The Federal Government not being able to govern the nation properly in the old stage-coach and wagon-road days, and when Republican government was an experiment, it was well enough to have separate governments in the States. The idea of our forefathers, however, was that both Federal and State governments should be economically and patriotically administered, and that politics should by no means be made a business as it is by most

of our "statesmen" of the present day. The existence of the Republic for more than a hundred years has clearly demonstrated that Republican government is no longer an experiment here, but during that time we have experienced many dangers and evils under our Constitution. The cardinal doctrines of the Constitution, such as relate to liberty, equal rights, the freedom of speech and of the press, the right to bear arms, etc., are eternal—"not for a day, but for all time to come." But there always have been inconsistencies in it, and all our difficulties have arisen from "State rights" dogmas. The late war was perpetrated by States, and the excitement attending the results of the last Presidential election was brought on by two or three States. In fact, under the present system the State governments are sovereign, but not the people—it should be "sovereign people," not "sovereign States."

There have been, and are now, men in the United States Senate whose titles are not clear, and frequently it has been demonstrated that Legislatures have been bribed. It was formerly considered that Senators, elected by the States, were wiser and abler than Representatives, elected by the people. But is there more wisdom in the Senate now than in the House of Representatives? Are the party politicians to be trusted rather than the people in the election of law-makers?

It is said that Washington was opposed to State governments in his day, even considering them unnecessary. However, some of the States wanted slavery, and perhaps this was the strongest incentive to "State rights." There is such a thing as stupid veneration for the Constitution as it is, whereas it would be the part of wisdom to eliminate the evil from the supreme law of the land and retain the good. Whenever experience teaches that there are great evils to which we are subjected under the present system, it should be modified or changed, and, in fact, the Constitution itself authorizes this very thing.

It behooves the people, then, to take into consideration the necessity of a change, as the preamble in the Federal Constitution says, "In order to form a more perfect union, establish justice, insure domestic tranquillity, provide for the common defence, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity." Every intelligent person must admit, except party politicians, that these blessings are not secured nowadays under our present system of triple government. It is easier now for the President of the United States to govern the whole nation—as much as it need be—by means of telegraphs, railroads, etc., than it was for the Governor of New York to govern this State in the days of the fathers of the Re-

public. Troops can be sent to San Francisco now quicker than they could be from Washington to New York at that time.

What should be done, then? A national convention should be called, the people exercising great care in the selection of delegates, excluding in the main the party politicians, only sending the wisest, most honest and patriotic of all classes. They should change the Constitution so as to abolish all State governments, leaving Congress to make all laws, except purely local; making all officers such as sheriffs, etc., Federal instead of State officers; abolishing all State taxes; the property of the States to revert to the Federal Government, and the State debts to be assumed by the latter; the organic national laws not to exceed fifty, and those of the municipalities not to exceed ten, both codes not to exceed a certain number of sections and words for each law; making municipal policemen the custodians of the Federal as well as local laws; all officers, including postmasters and policemen, to be elected by the people, Congress having power to impeach any officer for cause; the President to be elected by the people, abolishing the Electoral College; Senatorial districts to be established throughout the nation, and Senators elected by the people, or the Senate to be abolished altogether; several grades of tribunals, consisting of twelve men each, elected by the people, to supersede courts and the force of trial by jury; the majority of the members of each tribunal to decide the case; abolishing the United States Supreme Court, with the right of appeal to Congress from the tribunals; prohibiting the Government from creating any interest-bearing debt in the future; the Indian reservations to be broken up and the Indians given citizenship and the right to live where they please, amenable to the laws of the land, and to earn their own living; a good system of free schools, and the laws made so simple and plain as to be read in schools as part of the pupil's education; the term of office of the President to be six years, ineligible for a second successive term; making local policemen and all officers strictly responsible to the Federal Government for all outrages they perpetrate; limiting the number of officers to the lowest possible number; Senators not to hold office, as Senators, for more than six successive years, and Representatives not more than four; the revenues to be raised mainly by stamps to be sold at the post-offices; free trade treaties to be established with other nations; gold and silver coins of all kinds to be made legal tender in any amount, the subsidiary coins to be of the same value as represented on their face, as formerly; Treasury notes, redeemable in gold and silver, to be maintained as legal tenders, and all others speedily retired; ten years after the adoption of the Cou-

stitution the rights of suffrage and eligibility to all offices to be conferred upon women.

After having framed a Constitution embracing the foregoing or similar provisions, the Convention could submit it to a vote of the people for adoption or rejection, but, however, retaining all the best features of the present Constitution. If the people would have such a Government they must establish it themselves, for if they leave it to either of the two ruling parties nothing will be done—professional politicians are more concerned about the spoils of office and how to obtain them, than they are about political economy and the liberty and welfare of the people.

The advantages of a consolidated Republic can not be fully set forth in an article like this, but if the wise men of the country—not the politicians—would consider this matter thoroughly, no doubt they would come to the conclusion that consolidation is the best thing for the country now, both as a means of political economy and the perpetuation of the Government and of the liberties of the people.

F. M. MURKISON.

WISDOM.

“Think truly, and thy thought
Shall be a fruitful seed.”

CONSULT the lips for opinions, the conduct for convictions.

It is an old adage that the tongue can not be easily bridled. But it is easily bit.

THE generality of men expend the early part of their lives in contributing to render the latter part miserable.

OUR motives are never quite so good as we think, and never quite so bad as our enemies suppose. Our best is inwoven with evil, and our worst, let us hope, has some strands of good. Only God can unravel the complexity.—*Edward Higgleston.*

Here, through the feeble twilight of this world
Groping, how many, until we pass and reach
That other, where we see as we are seen,
Do forge a life-long trouble for ourselves
By taking true for false, or false for true!

—*Alfred Tennyson.*

NOTHING cuts the sinews of exertion sooner than to set before ourselves a low standard of attainment. Let a young man say to himself: “I shall never be anything very great in the world,” he will be likely to be something very small.

A FATHER inquires of his son whether he can construe Homer; if he understands Horace, and can translate Virgil; but seldom does he ask, or examine, or think whether he can restrain his passions, whether he is grateful, generous, humane, compassionate, just, and benevolent.

MIRTH.

“A little nonsense now and then
Is relished by the wisest men.”

A MAN has invented a chair that can be adjusted to eight hundred different positions. It is designed for a boy to sit in when he goes to church.

“THAT prisoner has a very smooth countenance,” said the judge to the sheriff. “Yes,” responded the sheriff, “he was ironed just before he was brought in.”

“DIGBY, will you take some of that butter?” “Thank you, ma’am; I belong to the temperance society—can’t take anything strong,” replied Digby.

ONE hour after an “old master” had painted the name of a patent medicine on a big rock a cow came along, licked it off, and died before sundown. No diagram necessary for pointing the moral of this item.

“MR. PEELROD,” said she, according to the *Graphic*, “Mr. Peelrod, we have for breakfast the glyptocephalus cynoglossus.” (Peelrod had always been used to calling them flounders when fishing on a Sunday at the Harlem wharves).

AN emaciated humorist, who had been sick for a long time, was required by his doctor to have a large mustard plaster put on his chest. “Look here, doctor, isn’t that a great deal of mustard, when the quantity of meat is taken into consideration?” asked the sufferer.

MISTRESS (to new arrival, who had been sent to put a letter into the lamp-post box).—“Why, Bridget, where have you been all this time?” Bridget—“Where have I been, ma’am? Sure I’ve been with the letter, ma’am.” Mistress—“I know that; but what kept you so long, and why didn’t you put the letter into the box as I told you?” Bridget (with desperate emphasis)—“Why didn’t I! sure enough! Didn’t I go to ivery wan o’ thim, and the doors of thim boxes was all locked, ma’am. I’m kilt intirely wid travellin’ round the shtrreets all day, so I am.”

PERSONAL.

REV. JOSEPH PARKER, the eminent Congregational minister of London, is in the United States for a brief visit.

OLE BULL, the famous violinist, died suddenly at his old home, Bergen, in Norway, in the latter part of August. He was over seventy years of age, but had planned a fresh concert tour and had returned to Norway for a visit.

SANDFORD R. GIFFORD, one of our best known and eminent artists, died in New York on the 29th of August. Mr. Gifford’s technique was of a high order. His pictures made Americans

acquainted with the scenery of Italy and Egypt in a realistic way, so faithful were his drawing and atmospheric effects. He was but fifty-seven.

DEATH OF GEN. A. J. MYER.—The appearance of the *Monthly Weather Review* for July, reminds us of the recent death of Gen. A. J. Myer, the chief signal officer. We regret his loss to the country, for the order and efficiency displayed in the working of the Weather Service of the United States are largely due to his enterprise and scientific skill. His death was sudden, the result of organic disease with which he had been afflicted for several years.

NANTUCKET, Mass., is the birthplace of James and Francis Lawrence, and Mary, their sister, the widow of the late Edward Paddock, triplets, all living, and now more than 70 years old. They have a sister living in Providence, R. I., and two brothers in California, George A. and Frederic W., all older than themselves. Their father, just before their birth, sailed for Virginia, and was never afterward heard from.



In this department we give short reviews of such NEW BOOKS as publishers see fit to send us. In these reviews we seek to treat author and publisher satisfactorily and justly, and also to furnish our readers with such information as shall enable them to form an opinion of the desirability of any particular volume for personal use. It is our wish to notice the better class of books issuing from the press, and we invite publishers to favor us with their recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

SOCIALISM, WITH PRELUDES ON CURRENT EVENTS. By Joseph Cook. 12mo, pp. 307. Cloth. Price, \$1.50. Boston: Houghton, Mifflin & Company.

We have elsewhere stated, and it has been stated by writers of public eminence, that Mr. Cook is a literary and oratorical phenomenon. He writes and speaks for special purposes. His matter is based always upon personal observation and careful research—and as it concerns living topics, the interests of every life, the rich and the poor, science and morals, it is valuable for the information it contains and for the suggestions it offers. This is particularly true of "Socialism"—the latest volume of the "Boston Monday Lectures."

A digest of the topics considered in this volume is furnished by the Introduction, and may be appropriately added here so that the readers may obtain an idea of the nature of Mr. Cook's discussion.

First we have: a consideration of the perils of our institutions and society from susceptibility to communistic and socialistic disease. The third

and fourth Lectures make up a defense of the principle of self-help as opposed to that of State help, as the hope of the poor. In Lectures fourth and fifth, the experiments in co-operative industry in European countries are described. Tenement-house and overcrowded city populations receive attention in the sixth. High-school education is earnestly supported as a source of united citizenship in the seventh. Lecture eighth considers the value of Sunday as a day of religious worship and rest from secular employment; its sanitary relations are indicated. Next, or in Lecture ninth, we have an examination of the influence of alcohol on the mind and body, in accordance with late physiological researches. And the last Lecture is an appeal in behalf of woman's right to the ballot in its special connection with temperance and education.

THE UNDISCOVERED COUNTRY. By W. D. Howells, author of "The Lady of the Aroostook," "A Chance Acquaintance," etc. 12mo, pp. 419. Cloth. Price, \$1.50. Boston: Houghton, Mifflin & Company.

Mr. Howells has produced so many books that on recalling the list we can scarcely think of him as yet a comparatively young man. Such, however, he is, and American literature is, we think, to be congratulated thereupon, because in his late productions he has indicated a capability of invention, an understanding of character, and a degree of management in arranging his personages that entitle him to a place at least in the front rank of American novelists. Indeed, according to foreign criticism, he is fully abreast with the one other writer who is considered worthy of mention in a select list of the living writers who adorn English prose.

In "The Undiscovered Country" Mr. Howells enters upon a fresh field for the delineation of character and the expression of sentiment and passion. He, in fact, presents us with a psychological study of which the central object is Spiritualism. In Dr. Boynton he personifies well the vague indefiniteness of a highly organized mind which has become enthralled by mysticism, and pursues a phantom of his imagination in the hope of finally solving the riddles of death—and the hereafter. In Egeria, delicate and susceptible to extremes, we have a motherless girl whose affectionate, devoted spirit is subject to the will of her infatuated father, who beholds in her a suitable instrument or "medium" for his researches.

In Ford the journalist we have a capital representation of a well-poised mind, inclined to investigation in things of the psychological type. The life among the Shakers into which Mr. Boynton's "possession" precipitates Egeria and himself is very skillfully pictured, and its effect upon the girl, restoring her physical self and reanimating her personality, is agreeably and naturally

described. The best part of the book, of course, is found in the conversations between Ford and Dr. Boynton, when the latter is dying—and in the quiet but effective love-making between Egeria and the journalist. Mr. Howells does not reveal to the world aught that can dispel the mystery of "The Undiscovered Country," but helps somewhat to indicate the nature of the illusion which people entertain who trust professional wonder-workers.

PUBLICATIONS RECEIVED.

THE NORTH AMERICAN REVIEW. Current numbers received; the September Number contains several very interesting articles, namely: the Ruins of Central America; Trial of Mrs. Surrat; Personality of God; Steamboat Disasters. Dr. J. M. Beard reviews recent works on the Brain and Nerves, saying in one place that "the psychological analysis of a little child is worth more than that of a whole managerie. He who knows well the mind of a little boy or girl is already an expert in psychology;" with which all phrenologists will concur fully. Another statement of his which we very heartily welcome is "that few of the pages which have been written by the million on the relations of mind and brain are worth the reading." "A large work on this subject in our present science is its own condemnation." Another statement, which we can not accept, is "the belief that there is will, volition, or a force outside of, or independent of, the brain, or the mind, a separate, distinct special faculty or organization of faculties, is as baseless as that in astrology, alchemy, and spiritualism." If Dr. Beard in this statement had left out the alternative "or the mind," we could better understand his meaning. It seems to us that he begs the question in this apparently very emphatic assertion by introducing those three little words.

BROWNE'S PHONOGRAPHIC MONTHLY (New York) for 1879, a copy of which, in its neat indigo cover of cloth has been received from the editor, is spirited and purpose-full from beginning to end. Various matters of interest to shorthand writers are described, and lively controversies with reference to this or that "system" of phonography here and there spiced the pages of nearly every number. Indeed, we think the polemical is almost too conspicuous a feature. The engraved illustrations from the every-day practice of phonographers are very interesting, as well as instructive, to the student in shorthand. Mr. Browne evidently advocates the Bena Pitman style of writing, and with not a little warrant, considering its simplicity of arrangement and the facility with which it may be acquired.

THE THEOSOPHIST for June and July has arrived from its far-away office of publication, Bombay, India. It shows an evident improvement in the spirit of its management. We note in the June Number, that magnetism appears to have reawakened attention in Paris and other cities. Societies have been organized in Paris with dispensaries in which the treatment of disease by magnetism is applied. At Vienna the mesmeric experiments and cures of a Danish physician named Hansen, having astonished the public, and at St. Petersburg, even, some eminent savants are looking into magnetism and spiritualism. The *Theosophist* expects great results from this awakening.

VERBATIM REPORT of a Vegetarian and Temperance Fête given to His Most Serene Highness the Prince of Mantua and Monterrat. An interesting document, by the way, particularly respecting its details of the numerous vegetarian dishes supplied to feed the twelve hundred persons present at the fête, and also descriptions of their dress, and of the plate, jewels, paintings, and antiquities exhibited. If one doubt the resources of the vegetarian diet, let him read this document and he will be convinced of their indefinite latitude.

ALCOHOL AND THE CHURCH. By Robert S. Pitman, LL.D., Associate Justice of the Superior Court of Massachusetts. Price 10 cts.

WINE AND TRUTH. By Felix Arbuthnot, Pittsburg, Pa. Is a condensed statement of double value to the temperance advocate.

MODERATE DRINKING. Is it a Gain? From a scientific point of view. By Benjamin W. Richardson, M.D., F.R.S. Price 20 cts.

WINE POISONS. PRESCRIBING ALCOHOLICS, by John Blackmore, M.D., is an earnest setting forth of the opinion, that alcoholic beverages of whatever name are poisons and not foods, consequently their use in the sick-room is altogether unnecessary, if not injurious.

All of the above are published by the National Temperance Society, New York, at 5 cents each.

THE ECLECTIC MAGAZINE of Foreign Literature for September, contains a fine steel portrait of the late George Grote, the eminent English historian, besides a series of articles indicating the excellent taste of the editor as a sifter of current literature.

UNITED WE STAND, DIVIDED WE FALL; or, The Blue and the Gray. A patriotic song and chorus. Words by J. C. Winter; music by Charlie Stewart. Price 40 cents. F. W. Helmwick, Cincinnati, O., publisher.

THE "AMERICAN JOURNAL OF MICROSCOPY" improves with age. To those interested at all in the analysis of the Invisible, this Monthly must be indispensable.



NUMBER 5.]

November, 1880.

[WHOLE No. 504.]



FIVE MEN GREAT IN SCIENCE.

ALEXANDER VON HUMBOLDT, LEIBNITZ, HERSCHEL, LIEBIG, BARTH.

THE portraits which make up the group now offered to the consideration of the reader, represent five of the most distinguished men who have shed lustre upon modern civilization. Each in his sphere was a leader, opening up departments of science hitherto unknown or unexplored, and each contributed vastly to the world's knowledge of useful arts. No one can look carefully at their heads and faces without discerning elements of

greatness—without having the conviction forced upon him that each was eminent in some sphere. The splendid philosophical brain of Humboldt would arrest the attention of the most superficial observer. His magnificent head is large in all parts. The Perceptives across the brow do not appear so strongly developed as they really are, because the upper part of the forehead is so massive; but he was remarkable as a man of ob-

servation and scientific criticism, and chiefly remarkable for that reflective tendency to co-ordinate facts, and work them into philosophy and sound ideas, that made him capable of writing the "Cosmos." The elevation of the head from the opening of the ear and from the eye was great, giving a very high head in front in the region of Benevolence, Imitation, and Invention, and that Spirituality which supplies the sense of a higher and better something which we have not yet reached, and which combining with Constructiveness enabled him to theorize in respect to facts in a manner at once clear and apparently historical. Conscientiousness and Firmness, located on the back part of the top-head, show perseverance, steadfastness, and unyielding determination to master his surroundings, and also integrity of purpose, or the honesty of spirit which rendered his observations and his descriptions and explanations credible. Thus it is that in reading his works one gets an idea that he is thoroughly sincere and upright.

The side-head, in which are located the organs of Selfishness, were not particularly strong. His organization indicates discovery, speculation, theory, morality, and persistency. He had a predominance of the Mental-Vital temperament, the first giving him a studious tendency, the second giving him healthfulness and the power to recuperate.

LEIBNITZ.—This head is unfortunately robed with a wig, and hides much of the contour, but we see by his prominent features an indication of power and toughness; and by the pointedness and comparative delicacy of the features also susceptibility and intensity. His was the Motive-Mental temperament,

giving quickness and toughness. The prominence of the lower part of the forehead shows observation, the desire to investigate and acquire knowledge, and to be particularly positive and certain in his knowledge. The middle of the upper part of the forehead was prominent, showing criticism, analysis, discrimination. At the extreme top of the forehead, in the center, he appears to show the biographical faculty or the sense of character, and the tendency to describe it. He would have succeeded well in mental philosophy, *per se*. The forehead is high and rather broad in the upper part, indicating a desire to organize his knowledge, and investigate the philosophy of facts. The upper central line of the head was high and rather sharp, showing sympathy, reverence, and stability, and we think he had large Self-esteem, which gave him confidence in his ideas, and the disposition to lay down a law as if he were the end of the law in the matter.

HERSCHEL.—In this organization the reader will observe a massive and bony face, with a large, short neck, and deep, broad chest, which are indications of power, endurance, hardihood, and positiveness, and clearness of mind. He had a great base of brain, which gave him uncommon positiveness and force, and the tendency to grapple with difficulty and opposition, to meet and master whatever stood in his way. We see in his head also large Acquisitiveness, which gave him the desire for property, and the tendency to appreciate economy. He had large Constructiveness; his head was full outward and backward from the ear across the temples, where Constructiveness is situated. His mechanical

talent was remarkable. His invention of apparatus and of instruments would have placed him in a first-rate position in any department of mechanical art. His immense perceptive organs, which give such prominence to the lower part of the brow, make him one of the most conspicuous specimens to illustrate powers of observation, ability to gather knowledge and retain it in detail. The line of organs situated midway of the forehead were also large, giving him an excellent memory, and a clear sense of local position. His Order was developed as indicated in the portrait by the squareness of the lower outer corner of the forehead above the outer angle of the eye. He was one of the most systematic of thinkers, and arranged his knowledge in such a way as to have it always at command. The superior part of the forehead shows large Causality and Comparison, and though the head does not seem so square as Humboldt's, he was a great critic and a sound thinker, adapted better to physical science than to metaphysics or to moral science. Humboldt would have taken good rank in moral philosophy and mental science. Herschel's head was enormously developed above and about the ears, indicating courage, restlessness, and the ability to push his cause, smite his way through difficulties, and make himself master of the situation. His Language appears to have been very well developed. He has a very fine head and face, capable of usefulness in any department of science or art, or in any field of business. Had he been living in these days, he might have been a great railroad king, his own projector and surveyor, capable of managing all the details, of mastering his men, and making everything go like clock-work.

LIEBIG.—This head and face indicate delicacy, spirit and precision, method, practical talent, power to gather knowledge and hold it, with more than the common share of literary ability. Had he adopted a literary course, and theology as his channel of effort, he would have made himself distinguished, less so, perhaps, than he has done in chemistry. He was not inclined to confine his research to the laboratory, science and wisdom, but he extended the practical value of chemistry to agriculture and the mechanical arts. To him the theory was of but little value, but practically his idea was, "Of what use is it? How can it be applied to practical purposes?"

He was developed in the realm of beneficence. Benevolence was large, and his labor had in it a special practical tendency toward benefiting mankind, not simply to make himself distinguished as a scholar. His Firmness must have been enormously developed, and having strong Individuality he would follow a given line of effort to the end, however far that end might lead him. He had Self-esteem enough to believe in his own work, and to give such stamp and rank to his discoveries as were due to their merit; in short, his modesty, though he was very respectful and polite, did not prevent his assuming the truth as he understood it, and impressing it upon the attention of the world. He had a full share of the force which gives efficiency to character, and without doubt he had a high moral sense, and so far as he sought fame he desired knowledge in such a way that he would be kindly remembered for the good he had accomplished, rather than for brilliant manifestations of greatness.

BARTH.—In this organization we see smoothness and harmony, and a good degree of delicacy—indications that he inherited from his mother. The temperament is as nearly harmonious as may be. If there were any lack it was in the Motive temperament, which gives definiteness and endurance, and the desire to make a way through difficulty. This organization would seek to glide smoothly, to make a path without great friction. He had Constructiveness and the perceptive organs large, which served to give him executive talent and to invent, and to adapt himself to his surroundings. He would have done well in art or in mechanism or in engineering; would have done well as a scientist, in physiology, in metallurgy, in natural history; and he would have succeeded as a financier. His respect for himself gave him dignity; his respect for power and greatness rendered him polite, deferential, capable, and enabled him to influence people, especially those in eminent position. He could make friends wherever he chanced to be, and at the same time not lose his identity, or place himself in the power of others. He had courage and policy and tact, but not so much caution or prudence or fear. He was a man of harmony and balance in intellect, with that calm force and self-reliance which give sustaining power in the use of mind. He was not rash, but rather shrewd, wise, judicious, able to accomplish results which rashness and dash fail to secure. There are few men who have such calm interior reserve power, who are as free from excitement. Then he was remarkable for his intuition, which enabled him to appreciate that which ought to be done at a glance, and generally

secured the desired results at the first effort.

FREDERICK HEINRICH ALEXANDER VON HUMBOLDT, the greatest of German naturalists, was born in Berlin, September 14, 1760. He and his eminent elder brother, Wilhelm, were educated at home with special care in the natural sciences. He studied at the University of Frankfurt-on-the-Oder in 1787, and the following year returned to Berlin, where he applied himself to the technology of manufactures and to the Greek language. During his long and brilliant career, there was scarcely any branch of natural science with which he did not make himself acquainted or familiar, besides acquiring languages and becoming informed in the various departments of learning. At the Mercantile Academy in Hamburg he studied book-keeping and familiarized himself with counting-house affairs and practiced modern languages, preparing himself for a visit to the tropics. On a visit to his mother the following year he obtained permission to engage in practical mining and went to the mining academy at Freiberg, and while there wrote a description of the subterranean flora and an account of his experiments on the color of plants withdrawn from light and surrounded by irrespirable gases. With Freislebin he made the first geognostic descriptions of one of the Bohemian mountain ranges. In 1792 he was appointed assessor in the mining departments, and subsequently became superior mining officer in the Fichtelgebirge. From this time he made numerous scientific journeys in Europe, was employed in Governmental affairs, and accumulated material for works which he subsequently published.

On the death of his mother he resolved to prosecute his purpose of a great scientific expedition. He visited the volcanoes of Vesuvius, Stromboli, and *Ætna*. While in Paris he became acquainted with the future companion of his travels—the young botanist, Bonpland, in whose com-

pany he appeared in Madrid in 1799, where he had an interview with King Charles V., who opened to his exploration the Spanish possessions in Europe, America, and the East Indies. He arrived at Venezuela, July, 1799, making scientific observations on the way. After spending five years in America, where he had accumulated a larger store of observations and specimens in all departments of natural science than all previous travelers, he embarked for Europe. After his return he was engaged in scientific investigations and filled important Governmental positions. In 1829, under the patronage of the Czar Nicholas, he undertook an expedition to Northern Asia, the Chinese Dzungaria, and the Caspian Sea. He is said to have pursued his scientific labors in his advanced years with undiminished zeal and energy, and died in Berlin, May 6, 1859. No doubt the physical exercise necessitated by his travels and investigations contributed greatly toward sustaining him in his arduous mental pursuits.

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GOTTFRIED WILHELM VON LEIBNITZ, a distinguished philosopher and scholar, was born July 6, 1646, at Leipzig. He was instructed in the elementary studies of a school in his native city, but made his chief advancement in miscellaneous learning during his youth by private reading in a library. He studied with the intention of devoting himself to the law, and spent some time at the University of Jena, and on his return to Leipzig presented himself for the degree in law. He had prepared for the occasion two remarkable essays, but was refused the degree on account of his youth. In his twentieth year he graduated at Altdorf and was offered a professorship, but declined it, preferring the post of secretary and tutor in the family of Baron von Boineburg.

In 1672 he accompanied Boineburg's sons to Paris, and there submitted to Louis XIV. a plan for the invasion of Egypt. In the course of his tour, which extended also to London, he formed the

acquaintance of the most eminent philosophers of France and England, and among them of Newton. He acted as privy counsellor and librarian to the Duke of Brunswick, and in a tour of historical exploration, prepared a series of works illustrating the history of the house of Brunswick. His private studies were chiefly philosophical and philological, and on these subjects his correspondence was very extended. He organized the Academy of Berlin, of which he was the first President; made a plan of the since celebrated Academy of St. Petersburg for Peter the Great, who bestowed upon him a salary of one thousand roubles, with the title of Privy Counsellor. He was eminent in almost all departments of learning, but it is chiefly through his philosophical reputation that he lives in history. The most remarkable peculiarities of his philosophical system may be reduced to—his doctrine as to the origin of ideas, his theory of monads, the "pre-established harmony," and the theory of optimism. There was an unpleasant controversy between him and Newton as to priority in the discovery of the method of the calculus. He never married, and seems to have had little method in the regulation of his daily life aside from assiduous application, for sometimes he scarcely left his desk for months. He died at Hanover, November 14, 1716.

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SIR WILLIAM HERSCHEL was the son of a musician and educated for the profession of a musician. He was born at Hanover, November 15, 1738, and became a teacher of music in the town of Leeds, England, in 1757. In 1766 his attention seems to have first been turned to astronomy, and having fashioned a telescope for himself, he made in 1780 his first discovery—that of a new planet, now called Neptune. This discovery led to his appointment as private astronomer to George III. He took up his residence near Windsor, where he continued his astronomical researches, being assisted by his sister Caroline. He married a

Mrs. Mary Pitt, by whom he had one son, John, who also became a distinguished astronomer. His catalogue of double stars, nebulae, etc., and tables of the comparative brightness of stars, and his researches in light and heat, would of themselves entitle him to the first rank as an astronomer and natural philosopher. His death took place at Slough, his residence near Windsor, on the 23d of August, 1822.

JUSTUS VON LIEBIG, one of the greatest of chemists, was born at Darmstadt, May 12, 1803. He studied at Bonn, received the degree of M.D. at Erlangen, and in 1822 went to Paris, where he studied chemistry. Here he read a paper on fulminic acid, which attracted the attention of Humboldt, and led to his appointment as professor of chemistry at Giessen, where he established a laboratory and gave instruction in chemistry, and labored in his special department of natural science with great activity for more than a quarter of a century. In 1852 he accepted a professorship in the University of Munich, and in 1860 was appointed President of the Munich Academy of Sciences. He gave special attention to organic chemistry, in which he made many discoveries and did much to improve the methods of analysis. His researches have tended greatly to the advancement of the science of agriculture, and also to a better understanding of the relation of organic chemistry to physiology and medication. His "Familiar Letters on Chemistry" are an example of the grace and lucidity of his style. In all his investigations he paid strict attention to what he considered truth and candor, although he was sometimes unsparing and bitter in his criticism. He has been greatly esteemed in America; his works having had a wide sale here, and it is said he at one time contemplated making the United States his home. He died in Munich, April 18, 1873.

HEINRICH BARTH was born at Hamburg on the 19th of May, 1821. He re-

ceived his education in his native town and at Berlin. He became one of the greatest of African explorers—starting on his first expedition to that country in 1845, and proceeding along the Algerian coast, making excursions into the interior to Tunis, Tripoli, and Bengazi. On his journey to Cairo he was attacked by a band of Arab robbers and severely wounded, losing his effects and papers. Before his return to Berlin he extended his researches into Egypt, Sinai, Palestine, Asia Minor, and Greece; being absent from his native country for three years. A part of the account of this journey was published. He made a second expedition to Africa as a scientific companion to Mr. James Richardson, who was charged with a political and commercial commission to Central Africa, but he pursued his researches principally alone; being separated from Mr. Richardson and Dr. Overweg (also one of the party) most of the time, until finally at their death, caused by the unfavorable influences of the climate upon their constitution, he was left quite alone. This expedition, which embraced upward of 12,000 miles of travel, was attended by great hardship and danger, an account of which may be found in his "Travels and Discoveries in Central Africa," published in five volumes, London, 1857-58. He died at Berlin, November 25, 1865.

HATES.

I HATE to press unto the lip
The cup from which 'twere wrong to sip;
For well I know 'twill often go
Where harm must come and often woe.
I hate to say the cruel word
That stings whene'er by mortal heard;
For well I know 'twill often go
To deaden hopes and pain bestow.
I hate to turn my head away,
And hand withhold in saying Nay;
For well I know 'twill often go
To make our charity too slow.
I hate to check the thought to kiss
The dear ones of my life; for this
Full well I know, 'twill often go
To deaden love where love should grow.

HORATIO CRAIN.

NOTES ON THE PHYSIOLOGY AND PATHOLOGY OF THE BRAIN.

[ABRIDGED from the original article, published in *The Journal of Psychological Medicine*, October, 1879].

AS additional elements in the question now being raised in regard to the nature and merits of Ferrier's views, I would add that: (1) The "motor centers" are said to differ in their position on the cortex by different experimenters; thus Furstner disallows Ferrier's centers; that (2) the response of the "centers" to the same measure of stimulation varies from time to time or occasionally. Dr. Dodds writes: "Sometimes centers whose action is *usually easily* demonstrated can not be caused to react even by a powerful stimulus;" (3) Whilst the susceptibility of the posterior lobes of the cerebral mass is denied by some writers of eminence (by Carpenter, for instance), others have affirmed the contrary; thus "Dupuy has shown that in dogs, electrization of points situated at the posterior part of the cerebral hemispheres *will give rise to muscular contractions*" (Dodds). Furthermore, Hermann "denies" in the most unconditional manner "that the different movements produced on stimulation of different cortical areas drives us to the conclusion that the cortex forms the center for those movements" (Dodds). Thus far it appears that the stimulation of any one or other portion of the cortex cerebri can not be so localized as to call forth, simply and exclusively, the function of the part operated on. The evidence, then, as above shown, is altogether averse to the teachings of Dr. Ferrier; and such averse or negative evidence culled, as is seen from the writings of Dupuy, Duret, and Hermann, was, strange as it may seem, put forward by the illustrious Gall himself, something like sixty years ago. In his "System of Phrenology" are found these words, viz: "It is a subject of constant observation that, in order to discover the functions of the different parts of the body, anatomists and physiologists have always been rather disposed to employ *manual means* than to accumulate

a great number of physiological and pathological facts; to combine these facts, to reiterate them, or to await their repetition in case of need, and to draw slowly and successively the proper consequence from them, and not to announce their discoveries but with a *wise reserve*. This method, at present the favorite one with our investigating physiologists, is imposing from its *materiality*; and it gains the approbation of most men by its promptitude and its *apparent results*. But it has also been constantly observed that what has appeared to have been incontrovertibly proved by the mutilator *A*, either did not succeed with the mutilator *B*, or that he had partly found in the same experiments all the proofs necessary to refute the conclusions of his predecessor. It is but too notorious that similar violent experiments have become the scandal of Academicians, who, seduced by the attraction of ingenious operations, have applauded with as much enthusiasm as fickleness the pretended glorious discoveries of their candidates. . . . In order that experiments of this kind should be able to throw light on the functions of each of the cerebral parts, it would require a concurrence of many conditions impossible to be fulfilled. It would first require that we *should be enabled* to restrain all the effects of the lesion to that portion only on which the experiment is performed; for if excitement, hemorrhage, inflammation, etc., etc., affect other parts, what can we conclude? and how can we prevent these inconveniences in mutilations either artificial or accidental? It would be necessary that we should be able to make an animal whose brain has been wounded and mutilated—who is filled with fear and suffering—disposed to manifest the instincts, propensities, and faculties, the organs of which *could not have been injured or destroyed*. But captivity alone is sufficient to stifle the instincts of most animals."*

* How much have these few words of Gall the character of prophecy! How surely do they go far to cover

Furthermore, it should be known, and well known, that Gall was aware of the effects of the application of a stimulus to the brain's surface; and that he maintained, in direct opposition to the current doctrines of the physiologists of his day, and to "the asserted proof to the

the objections made, and very properly made, to the experiments of the Ferrier school! There is, however, one element of difficulty and doubt which Gall's apparent foreknowledge did not cover or embrace; that element is seen in chloroform. However, in spite of the inevitable fear or "excitement" of the dog or monkey—due to the preliminary restraints imposed on the animal—in spite of the "lesions" or "mutilations" themselves, and in spite, too, of the inhalation of a poisonous compound—the result of all which is a condition of being as purely artificial and abnormal as such can well be—it must be confessed that the results are of some value, although they fail altogether to prove the presence of "motor centers" in the gray matter of the brain, which is the prime object sought; and because simply—as Gall puts it—it is impossible "to restrain the effects of the lesions," practiced "to those parts only on which the experiment is performed;" a position, indeed, which Dr. Ferrier has himself admitted in the following terms, viz: "There is, perhaps, no subject in physiology of greater importance and general interest than the functions of the brain, and there are few which present to experimental investigation conditions of greater intricacy and complexity. No one who has attentively studied the results of the labors of the numerous investigators in this field of research, can help being struck by the want of harmony, and even positive contradictions, among the conclusions which apparently the same experiments and the same facts have led to in different hands. And when the seemingly well-established facts of experimentation on the brains of the lower animals are compared with those of clinical observation and morbid anatomy in man, the discord between them is frequently so great as to lead many to the opinion that physiological investigation on the lower animals is little calculated to throw true light on the functions of the human brain. . . . The serious nature of the operations necessary to expose the brain for the purposes of experiment, and the fact that the various parts of the encephalon, though anatomically distinct, are yet so intimately combined and related to each other as to form a complex whole, make it natural to suppose that the establishment of lesions of greater or less extent in any one part should produce such a general perturbation of the functions of the organ as a whole as to render it at least highly difficult to trace any uncomplicated connection between the symptoms produced and the lesion as such. Moreover, the degree of evolution of the central nervous system, from the simplest reflex mechanism up to the highest encephalic centers, and the differences as regards the relative independence or subordination of the lower to the higher centers, according as we ascend or descend the animal scale, introduce other complications, and render the application of the results of experiment on the brain of a frog, a pigeon, or a rabbit, without due qualification, to the physiology of the human brain, very questionable, or even lead to conclusions seriously at variance with

contrary afforded by the experiments of Flourens and other mutilators, *the competency of the surface of the brain to originate muscular movements.*" This very interesting and important fact is recorded in a private letter now extant, from Gall to Baron Retzer, bearing date 1798.*

well-established facts of clinical and pathological observations."

In the *Spectator* for March 3, 1877, there is a review of Dr. Ferrier's "Functions of the Brain," in which the annexed paragraph occurs. It is worthy of notice on account of the strange and present ignorance in regard to Gall and his discoveries—discoveries made and promulgated now close on three generations since:

"A singular and instructive fact, upon which we are inclined to lay considerable emphasis, is that although so many severe operations upon animals have been instituted by Professor Ferrier and others, for the avowed purpose of determining the localization of the various sensory and motor centers, *contemporary physiologists have agreed only to regard the position of a single one as actually settled*, and that was ascertained purely by means of anatomical knowledge, combined with the observation of cerebral disease in human beings, the very nature of the manifestation of such disease rendering it inaccessible to study by means of the vivisection of animals. We refer to the localization of the faculty of articulate and written speech in the third frontal convolution of the left side."

Truly Gall settled the position of the "organ of language." His first successful "localization" was the faculty of "articulate and written speech in the third frontal convolution," but not "of the left side" only. Herein we recognize a grave error of Broca—an error which has been pointed out by many in very recent times. The late Sir James Simpson was, I believe, the first to disprove the position of Broca, and, as a consequence, to fall back on Gall's view of the matter, to the effect that the "faculty" had its location on "the third convolution" of not one only but of both hemispheres of the brain. Though entertaining a high regard for Dr. Ferrier's earnestness in the pursuit of medical science, I am inclined not a little to think with Dr. Brown-Séquard, when he says that "the teachings of vivisection on the functions of the brain and nerves are a tissue of mistakes, created by vivisections, but rectified at last by correct clinical observation during life, and careful examination of the diseased structures after death." The harmony of such views of Brown-Séquard with those of Gall is directly apparent.

* This fact is highly interesting, and the "extant" letter referred to as from Gall to Baron Retzer is, indeed, of much value. Taking it for granted that Mr. Prideaux has fallen into no error in regard to this letter, then, indeed, must Dr. Ferrier see the mistake he has made in writing thus: "The views of Hughlings-Jackson, published from time to time in the form of scattered contributions to the various medical journals, and now happily being collected by their author, were regarded by many as ingenious, but rather fanciful speculations, and devoid of experimental corroboration, seeing that all experimenters on the brain had failed to

However, Gall, unlike the modern "experimenters," duly appreciated such "muscular movements." Gall saw clearly enough what Dr. Ferrier has failed to perceive, viz, that the "movements" begotten were but secondary, and the outcome or effects only of the conduction of the stimulus employed from the surface to the base of the brain, and parts adjacent thereto. To confine the operation of the electrodes to the upper and convoluted surface of the brain would be to beget phenomena of a purely *psychical* nature; but inasmuch as this can not be brought about, else than as an exception to a very general rule, or under circumstances to be considered in another place, then the phenomena induced are necessarily of another, a *motor* character. Such is the close relationship of our mental and bodily natures—*i. e.*, the "psychical" and "motor." Between the convoluted surface of the brain and the basal ganglia so intimate and close a relationship exists in man and animals—so continued is the interchange of impressions from above downward, and from below upward, that the independent action of either, whether in health or disease, may be said to constitute an exception to the rule. To think is for the most part to act and even *vice versa*. The comparative absence of the hemispherical ganglia (Solly) in a large proportion of the vertebrates, whilst it denies them the higher mental attributes, the purest affections or emotions, and the tenderest sympathies, leaves them prone as is man to the various nervous derangements or maladies, so often named in this paper. In man the intimate and close relationship between these upper and lower strands of nervous matter common to the brain and the "medulla spinalis" is shown by the occurrence of epilepsy, or chorea, or tetanus, in him, for example, subject to acute mental anxiety, or suffering from brain exhaustion. The same relationship is made manifest by the loss of brain

produce any such phenomena by irritation of the surface of the cerebral hemispheres.

In so recording the failures of "all experimenters," he, Dr. Ferrier, has but repeated what is very generally believed and asserted.

power (imbecility) common to, or the effect of, epilepsy of long standing. Whilst the first is the effect of diseased action acting from above downward, the second is the effect of morbid action acting in the contrary direction. If Dr. Ferrier were informed of Gall's great and imperishable discoveries; did he know the precision with which Gall and Spurzheim have located on the brain's surface the many primitive qualities, intellectual and emotional, of our mental nature; did he enjoy the many advantages inseparable from a good practical knowledge of Phrenology—if he knew where on the cranium of his friend or neighbor to find the several organs of, say, "Veneration," "Benevolence," and "Wonder"; of "Causality," "Comparison," and "Eventuality"; of "Combativeness," "Constructiveness," and "Destructiveness"—he would then have estimated at their right value the movements or "results" of his experiments; such results would then have been looked at from another or a more truthful stand-point, that is to say, as simply effects of a pre-existing or psychical cause; but this consummation so devoutly to be wished for will yet be realized, or I greatly err. Commenting on Ferrier's views, an eminent writer on matters physiological has these words, viz: "The explanation of the phenomena obtained by the application of stimuli to the surface of the brain, is found in the fact that those innate faculties which require the aid of the muscular system to carry out their behests have the power of originating the movements necessary for this purpose; and hence when Dr. Ferrier applied a galvanic current to the cortical surfaces of the organs of the instinct 'to take food,' 'to seize prey,' 'to destroy,' 'to fight,' 'to construct,' movements of mastication, of 'striking with the claws,' or 'seizing with the mouth,' of 'biting and worrying, of scraping or digging' ensued; whilst the stimulation of the same locality (Constructiveness, which put the forepaws and hind legs in action in the rabbit, would, in the beaver, superadd the motion of the incisor teeth

and the tail. What can be more palpable than that the inferences to be obtained from such experiments are not only far more vague and indefinite than those furnished by the employment of the phrenological method, but absolutely incapable of ascertaining the shape, and defining the boundaries of the organs as has been accomplished by Gall in the case of *Locality*, the shape of which he ascertained to be similar in dogs to its form in man. In short, little more can be said on behalf of these experiments at present than that in a cloudy and obscure form *they lend a vague general confirmation (not required) to the correctness of the localities assigned to the primitive faculties by phrenologists.*"

To Dr. Ferrier, nevertheless, is due in good part the credit of correcting Broca's error in locating the faculty of speech in a portion of the left hemisphere of the brain to the exclusion altogether of the right. Thus far he has confirmed what, indeed, needed not confirmation to those among us who have kept themselves abreast of the progress in psychological science. Gall, it is well known, was the first to locate the memory of words in the lower frontal convolutions, though not in one only, but in both hemispheres of the brain. His followers in this one particular are many, including the late Sir J. Simpson, and Drs. E. L. Fox and Wm. Ogle. Yet a farther credit is Dr. Ferrier's in having written these few words; they would seem to justify the hope expressed above of his conversion ere very long to a sounder mental philosophy than he has yet reached: "I should be inclined to regard the intimate relation subsisting between ideation and the unconscious outward expression of the idea in muscular action as a strong proof of the close local association of the ideational and voluntary motor centers." Now in these words do we not perceive the groove along which Ferrier is moving? must they not carry him even in the near future to the conclusions of the phrenological school? Dr. Carpenter is evidently afraid of anything so desirable, for he writes thus in

Vol. iv. of the "West Riding Medical Reports" at page 23: "The analogy afforded by the specialization of *downward* (motor) action, would lead us to anticipate that a like centralization may exist for *upward* (sensory) action; and that particular parts of the convolutions may be special centers of the classes of perceptual ideas that are automatically called up by sense impressions; and anatomical investigation, particularly in the lower animals—in which such ideas may be supposed to prevail almost to the exclusion of the intellectual ideas—may not improbably throw light on this relation. But in regard to those mental processes which mainly consist in the selection, classification, and comparison of distinct ideas, whether perceptual or purely intellectual, *it still seems to me just as improbable as it formerly did.* (1). That there can be special organs for their performance, such as those named "Comparison" and "Causality" in the phrenological system. I consider, therefore, that the results of Dr. Ferrier's experiments encourage the belief, that by the combination of anatomical and developmental study, of experimental inquiry, and of pathological observation, much light may be thrown on the functions, not merely of the several ganglionic centers which are aggregated in the human brain, but on those of the different parts of the great 'hemispheric ganglion' formed by the convoluted layer of the cerebrum."

It may be, however, that when Dr. Carpenter reconsiders the whole matter, and prefers to dwell on the effects of a galvanic current applied to the organs of "Alimentiveness," of "Destructiveness," of "Combativeness," and of "Constructiveness," shown by the movements "of mastication," "of striking with the claws or seizing with the mouth," "of biting and worrying," and "scraping and digging," he may yet farther modify his judgment. In repeating the experiments of Ferrier, it was suggested to Dr. Burdon Sanderson to slice off the gray matter of the brain, and apply the electrodes to the cut surface of the white or fibrous struct-

ure. It was even then found that the same effects to all appearance followed this mutilation of the animal operated on. The fact is of value, inasmuch as it proves that the movements so called forth can be in no way dependent on the gray matter of the convolutions, or rather on any "physical antecedents" occurring there-to, and of which the psychological phenomena observed in the absence of such mutilation are the direct effects. Strange to say, Dr. Carpenter would disassociate these "physical antecedents" from the "mental states themselves," and because, as he puts his objection, "we can scarcely believe that ideas and emotions can be called up by faradization of a cortical substance in animals" "stupefied by chloroform." The criticisms of Dr. Brown-Séguard are, it will be admitted, of an extreme character. He carries his objections to the localization of function as well as of disease of the brain much too far when he affirms that *the conclusion* of "Ferrier's theory is just the same as though he had said that the seat of the will was in the soles of his feet, because by tickling them the muscles of the face were affected."

It is on record that on one occasion when Dr. Ferrier was pursuing his investigations he was so impressed by the intelligent character of the successive actions elicited as to speak of it as "an evidently acted dream." The remark is highly suggestive. Now, had Dr. Ferrier been an adept in matters phrenological, it seems not unlikely that in this case he would have been prompted to seek in the monkey and dog the precise location on the cerebral surface not of motor centers, but of some at least of the many active powers of mind belonging to the animals named. The "successive actions" linked or embodied in this "acted dream," if rightly comprehended or duly analyzed by one competent to the task, a follower of Gall and Spurzheim, it may then have been found of deep and lasting interest. Such "successive actions" it is likely were simply the outward (bodily) signs of

an internal mental condition artificially induced; *i. e.*, "the muscular expressions of feeling," as Dr. Maudsley terms them.*

* Dr. Maudsley has put the matter in these words, at page 30 of his work entitled "Body and Mind": "Fix the countenance in the pattern of a particular emotion—in a look of anger, of wonder, or of scorn—and the emotion whose appearance is thus imitated will not fail to be aroused. And if we try, while the features are fixed in the expression of one passion, to call up in the mind a quite different one, we shall find it impossible to do so." The above is in perfect accord with the "experiments of the late Mr. Braid on persons whom he had put into a state of 'hypnotism,' for when the features or the limbs were made by him to assume the expression of a particular emotion, thereupon the emotion was actually felt by the patient, who began to act as if he were under its influence. We perceive then that the muscles are not alone the machinery by which the mind acts upon the world, but that their actions are essential elements in our mental operations."

Startling as all this is, yet is there no room to doubt this "hypnotism," so named by Braid, nor to discredit what is much the same kind of thing) the "mono-ideism" of the late Dr. Hughes Bennett? Doubtless the phenomena which go by the several names of "hypnotism," "mono-ideism," and "mesmerism," have a nature in common. That they run into each other and mutually illustrate each other as varieties or modifications of a single force are known to do, there is reason to believe. Such would seem as so many links in the single chain of causation—as elements in Nature's teeming laboratory, wherein all bespeak the reign of law, order, and unity.

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THE CHARM OF SYMPATHY.—The story is told of a famous lady who once reigned in Paris society, that she was so very homely that her mother said one day, "My poor child, you are too ugly for any one ever to fall in love with you." From this time Madame de Circourt began to be very kind to the pauper children of the village, the servants of the household, even the birds that hopped about the garden walks. She was always distressed if she happened to be unable to render a service. This good-will toward everybody made her the idol of the city. Though her complexion was sallow, her gray eyes small and sunken, yet she held in devotion to her the greatest men of her time. Her unselfish interest in others made her, it is said, perfectly irresistible. Her life furnishes a valuable lesson.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER III.—Continued.

THE SPHENOID IN THE CARNIVORA.

THIS bone in flesh-eating animals, as in the case of the ape, is composed of two pieces, which can be easily detached in the adult animal. The anterior (Fig. 167) and the posterior (Fig. 165), occupy the anterior middle and the middle lateral parts of the base of the brain (see Fig. 9, representing the base of the skull of the



Fig. 165.—SPHENOID OF CAT, UPPER SURFACE.

cat). On its upper surface, at the center, the anterior division shows a light or shallow depression, upon which lie the olfactory nerves, q, q, q (Fig. 168); toward the posterior third two openings directed from within outward, and designed to afford a passage for the optic nerves; forward, a hollow separated by a partition, B, and terminating in two appendices, A, A—it is in the two cavities which are separated by the partition, that the cornets lie, on both sides of the vomer; behind, there is a smooth surface, o, o, which



Fig. 167.—ANTERIOR PORTION SPHENOID OF CAT, UPPER SURFACE.

articulates with the anterior division of the body of the sphenoid.

On its lower surface the anterior sphenoidal division (Figs. 171, 172) shows an osseous crest quite conspicuous, x, x, x, x, and on each side two shallows which are lined in the fresh condition

by the guttural membrane. The upper surface of the posterior of the sphenoidal divisions shows a surface of considerable extent (Figs. 167, 168), and is very irregular. We notice two thin plates, b, b, indented on their anterior border, presenting near the inner third two surfaces, a, a, designed to articulate with two sur-



Fig. 166.—SPHENOID OF CAT, UPPER SURFACE OUTLINE.

faces placed on each side of the crest, which is seen at the middle part of the inferior surface of the anterior section (Fig. 172, a, a).

At the center we notice a depression, p, which accommodates the pituitary gland; behind it an articulating cavity, n; the lateral parts or the wings of the middle region are considerably extended and slightly hollowed. They come in contact with a part of the convolutions in the inferior surface of the brain, and

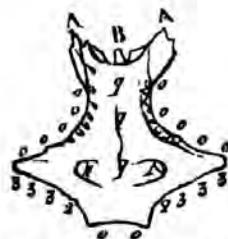


Fig. 168.—ANTERIOR PORTION SPHENOID OF CAT, UPPER SURFACE, OUTLINE.

belonging to the middle lobe. At the base of the wings are seen, as in man and in the ape, openings designed for the passage of certain nerves.

The posterior division shows very much irregularity on its lower surface (Fig. 169).

It affords attachments to certain muscles and the guttural membrane. On its middle lateral part are two kinds of small hooks (or pterygoid processes in the human



Fig. 169.—SPHENOID OF CAT, LOWER SURFACE.

sphenoid), and outside of these the lower openings of the holes which we have noticed at the base of the great wings. The sphenoid of the cat articulates with the same bones of the skull as in man and the ape, besides articulating doubly with the parietal, first by its antero-inferior angle, as in man, and next by the bony plate which, as we have seen, divides the parietal into two parts (Fig. 106). As in the ape the sphenoid in the cat lacks the



Fig. 171.—ANTERIOR PART OF SPHENOID, CAT, LOWER SURFACE.

frontal sinuses. The body or middle region of the posterior section contains a little spongy tissue; the wings on their paternal parts and all the anterior sphenoidal division are quite entirely formed of compact substance.



Fig. 173.—SPHENOID OF RABBIT, UPPER SURFACE.

THE SPHENOID IN RODENTS.

Two bony pieces contribute also to form the sphenoid of the rodent; one anterior (Fig. 175), the other posterior (Fig. 173). The position of these bones

has been reversed as compared with the same in animals heretofore considered—for the purpose of examining them more advantageously—and by merely turning

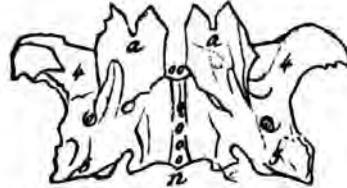


Fig. 170.—SPHENOID OF CAT, LOWER SURFACE, OUTLINE.

the book around the reader will have a view of these two parts of the sphenoid as they appear when in the skull. Some differences quite noteworthy as to extent and form exist between these two pieces when compared with the same in the carnivora. The first division is composed of four kinds of wings, two superior and two inferior, the first being much wider. At the center are two openings for accommodating the optic nerves; behind

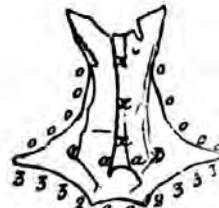


Fig. 172.—ANTERIOR PART OF SPHENOID OF CAT, LOWER SURFACE, OUTLINE.

them two small depressions, in which these nerves lie, and which are very long in the rabbit. The lateral parts of the superior wings are smooth and covered



Fig. 174.—SPHENOID OF RABBIT, UPPER SURFACE, OUTLINE.

by the lower part of the anterior lobes of the brain and the olfactory bulb; their margin is uneven, so as to articulate with the anterior border of the posterior sphenoidal division, in o, o, o, o, o, o, and

with the frontals in x, x, x, x, x, x (Fig. 176).

Seen below, the anterior sphenoidal division offers nothing of particular interest to us. The posterior sphenoidal division (Fig. 178) is considerably de-



Fig. 175. — ANTERIOR PART OF SPHENOID OF RABBIT, UPPER SURFACE.

veloped. It is formed of two distinct parts; one placed at the center of the body, and two laterals or wings. The body of it has a triangular shape, the great extremity being directed backward, presenting a wide surface covered with cartilage, m, and articulating with the basilar apophysis of the occipital bone. Its anterior extremity being much smaller and thinner is provided with an articular surface, q, covered also with cartilage; it articulates with the middle part of the posterior margin of the anterior sphenoidal division.

The lateral parts or the wings, c, c, are slightly concave, and show often a multitude of irregular perforations; sometimes these parts are so perforated that the bone has the appearance of lace. The anterior region, on the contrary, presents a smooth aspect, and contrasts on that



Fig. 176. — ANTERIOR PART OF SPHENOID OF RABBIT, UPPER SURFACE, OUTLINE.

account strongly with the other. Upon the superior surface of the great wings repose the lateral lobes of the brain.

On its lower surface the posterior part of the sphenoidal division appears quite irregular at the middle, x (Fig. 179). The lower surface of the body of the bone shows two processes at the sides of considerable extent, which represent the pterygoids in man; each of these is composed of a small bony blade, separated by a deep fissure. By their union at the

base of the pterygoids they form a rounded opening, always seen in the rabbit. In the rabbit and hare, and especially the beaver, these pterygoid apophyses are much developed. In the latter animal they are so large that the inner wing ar-



Fig. 177. — ANTERIOR SPHENOIDAL DIVISION OF RABBIT, LOWER SURFACE.

ticulates with the ear-drum, and forms thus a wide opening noticeable in front of the ear-bulb. In the cat, on the contrary, there is only a small hook, which represents the interior wing. The position which has been given to the posterior sphenoidal division in our illustration does not enable us to see the rounded opening mentioned.

The sphenoid in rodents is extremely



Fig. 178. — SPHENOID OF RABBIT, LOWER SURFACE.

thin, the two divisions being formed almost entirely of compact tissue. A little spongy substance enters into the articular parts of the main body of it, that portion especially which corresponds to the basilar apophysis of the occipital. Its articulations or connections with other



Fig. 179. — SPHENOID OF RABBIT, LOWER SURFACE, OUTLINE.

bones of the skull are very numerous; thus, it articulates by the body with the occipital, by the superior wings of the anterior sphenoidal division, and by the great lateral wings with the frontal bones, with the temporals, and even with the

parietals, by a little bony tongue which we have remarked at the postero-inferior angle of the parietal. The sphenoid has also connection with the bones of the face by its anterior division.

THE SPHENOID IN BIRDS.

The pieces which represent the sphenoid in the quadrumana early unite in birds. M. St. Hilaire explains this by the activity of their nutrition—a theory which seems to us well founded, if we judge of it by the rapidity with which fractured bones in birds consolidate, and the prompt healing of their wounds. As this bone is found complete, we must content ourselves with considering it pretty much as a whole, or that part particularly known as the body of the sphenoid (Figs. 118, 119-9, Aug. No.) It is upon this that the pituitary gland lies, and that part which represents the great wings, the inferior division of the temporal bone (Fig. 143, Sept. No.), where the quadrigeminal tubercle is lodged. In very young birds—for example, orioles ten days old—the part which forms the body of the sphenoid, and those which compose the wings, are perfectly distinct.

Here terminates our special consideration of the cranium in man and the leading vertebrate animals, and before proceeding to discuss the brain in a comparative manner, we would offer a few conclusions, which are warranted by the data presented, and which we would advise the reader to weigh carefully, reviewing the field if necessary to ascertain their validity.

CONCLUSIONS.

1. The form of the skull of vertebrate animals varies greatly in extent, according to class, order, kind, and species. Each species has a type peculiarly its own, while among individuals are differences in volume, which are at times remarkable, and which explain their differences in nervous capacity.

2. The form of the skull being given, it is easy to estimate that of the brain, excepting, however, in some cases of disease, and in some instances when the sinuses are predominant.

3. The bones which associate in the formation of the skull of vertebrates increase in number as we descend from man to fishes. To have a positive and profound knowledge of human and comparative phrenology, one should possess at least a knowledge of each of these bones in the species which serve for the application of that science.

4. Man is more developed in the anterior part of the skull than any of the lower animals. Next come the elephant, chimpanzee, dog, horse, and the lower apes among the quadrupeds. Parrots, crows, and geese have that region well developed. The turkey, chicken, and several species of shore birds are among those which indicate a small development of it.

5. The complete development of the skull is reached at a period more or less removed from birth; its growth being more rapid in animals than in man, who requires at least twenty-five years for its full maturity.

6. In man the skull shows its sutures at an age far more advanced than in animals. The cranial portions unite earliest in birds. Next come certain carnivora, like the marten, pole-cat, weasel, and badger.

7. The internal surface of the skull shows in a great number of classes, orders, and kinds, depressions in correspondence with the relief or folds of the brain. Man, the quadrumana, all the ruminants, the pachyderms, the solid-hoofed, the carnivora (the mole excepted) are so constituted.

8. The internal surface of the skull of the rodents and birds is smooth, yet depressed or hollowed in harmony with the more salient parts of the brain. In birds generally we find the closest correspondence between the external surface and the contour of the brain—a fact due to the thinness of the bony plates and their almost perfect parallelism. Next come the rodents, then the small carnivora.

9. Age produces changes more or less remarkable in reducing the cranium, its thickness and density. These are frequent in man, but specially in the apes as regards diminution; then comes some of the pachyderms, the badger, and the dog. The rodent and bird experience the least change on account of age.

NAMES AND PLACES.

GLIMPSSES OF THEIR DERIVATION.

ALL names of places were once words. Localities were not christened into names given arbitrarily by sponsors. Local names were not given any more than our power of speech or complexion is given us: they are an integral part of the place. But most of these names have long ago become dumb and fossilized, and it is the work of the philologist to disinter the old skeleton, reclothe it with flesh, and make it declare the history it holds in solution. For instance, how the name of the island San Salvador brings before us that night, the seventieth of his weary voyage, when Columbus saw a light gleaming from a new shore, and landing next morning, flung himself on the ground, which he had dreamed of from his youth, while with streaming eyes and grateful heart he declared that the land should be henceforth honored with the name of the San Salvador, or "Holy Saviour," who had conducted him safely through so many perils. The superstition and mysticism of these brave old Spanish voyagers contrast with the general cruelty and licentiousness of their character painfully enough to teach us that godliness (god-like-ness) is not a necessary concomitant of religion. Columbus on his third voyage saw on the horizon three peaks rising from the ocean. He supposed them to be three islands, but on nearer approach they proved to spring from the same mountain, and the devout explorer, recognizing a symbol of the mystery of the Triune God, named the new island La Trinidad, "the Trinity." Similarly, an island appearing to consist of a little mountain perched on the shoulders of a larger one, the Spaniard named it St. Christopher's, or St. Kitts, as reminding him of the legend of St. Christopher carrying the infant Christ.

Many places are called after the ecclesiastical season during which they were discovered. Thus, though Archbishop Trench thinks Florida gained its name

from its "flowers," Taylor and others, probably with more reason, consider it so called because discovered on Palm Sunday, or "Pascua Florida," from the flowers with which the churches are then decked. Dominica, or Dominique, tells us in its name that it was discovered on "Dies Dominica," that is, Sunday, and Natal, in Africa, was first seen by Europeans on Christmas day—*Dies Natalis*. The Virgin Isles, almost numberless, are said to have been discovered on the day sacred to St. Ursula and her eleven thousand martyred virgins, and the town of St. Augustine, the oldest in the United States, the islands of St. Helena and Ascension, the river St. Lawrence, and many other places, reveal in their names the day of their discovery.

Ethnology, the science of nations, derives much light from names. They supply us with traces of the history of nations that have left us no other memorials. "Egypt has bequeathed to us her pyramids, her temples, and her tombs: Nineveh her palaces: Judæa her people and her sacred books: Mexico her temple-mounds: Arabia her science: India her institutions and her myths: Greece her deathless literature: and Rome has left us her roads, her aqueducts, her laws, and the languages which still live on the lips of half the civilized world." But there have been many nations whose influences have been absorbed by their descendants; whose languages have faded out, and of whom we would know absolutely nothing, did not their names cling obstinately to the soil, when every other vestige has been swept away. In this way, as the geologist can map out the natural history of the ancient world, so the philologist can trace from the names of its places the annals of a country. In England the different waves of population, Celtic, Roman, Saxon, Anglian, Norwegian, Danish, and Norman, leave their rippling marks on the sands of history. The map shows us that almost all En-

gland was once Celtic; it reveals the extent of the Teutonic settlement, and marks the boundary between the Anglian and Saxon kingdoms; it shows us where the fierce Vikings of Norway effected landings; and tells plainly all the essential features of the Norman Conquest.

Almost the only history we have of a nation which in dim antiquity, doubtless many centuries before Christ, inhabited or ruled England, is found in the word *Britain*. We can not find a trace of this word in the Celtic or Latin, or any other language spoken by the nations which at different times conquered or peopled England. No doubt the Romans called their island-province *Britannia*, but that is merely a Latinized form of the name they found—they did not make it. So with the Celts who preceded and the Saxons who followed them. But keen-eyed scholars have discovered the essential part of the word, *itan*, in that family of languages now spoken only by the Laplanders and by the Basques among the Pyrenees. These latter were probably the aboriginal inhabitants of Spain, whom Cæsar found there. So that we may presume that long before Celtic times England was inhabited by people of this race, and that when the Celts came they prefixed to the name they found, *Bro*, their word for country, and hence *Britain*.

It is natural that a superior race coming into a country should give themselves some appreciative title to distinguish themselves from the vanquished. Hence we find many nations calling themselves the "Speakers" or the "People" or "Nation," and all others "the Jabberers" or "Foreigners." The Sclavonians call themselves *Slowjane*, "Intelligible men," the Basques, *Eusculdunac*, "those who have speech," and the earliest name the Germans are known to have had for themselves was "the Speakers." To come nearer home, most are aware that the tribe calling themselves the Dacotahs are, by their neighbors, the Ojibwas, named the *Sioux*, "the enemies." The Egyptians, and after them the Greeks

and Romans, used to call "Barbarians," or Stammerers, all who did not speak their language.

It has been elegantly said that the words of a nation's speech are continually clipped and worn down by constant currency, until, like ancient coins, the legend which they bore at first becomes effaced. The process sometimes resembles that through which animal bodies pass, changing every atom in a few years, and yet retaining their identity. For instance, the French *jour*, meaning *day*, is lineally descended from the Latin *dies*, as follows: *dies—diurnum—giorno—jour*; and *duck*, the name of our domestic fowl, has for its direct ancestors the Latin *anas*.

The changes in the names of persons and places are curious and innumerable. At Fort Vancouver an Englishman is (or was a few years ago) called *Kintshosh*, a corruption of King George, and an American was called *Boston*. The common form of salutation was *Clakhowahyah*, explained by the fact that a man named Clark, visiting the place, was saluted by his acquaintance with "Clark, how are you," which was henceforth supposed by the Indians to be the orthodox form of greeting.

Sailors are notorious for their euphemistic changes of the classical names of their war-ships. For instance, on their plastic tongues, *Bellerophon* becomes Billy Ruffian; *Andromache*, Andrew Mackay; *Areolus*, Ale House; *Courageux*, Currant juice; and *Hirondelle*, Iron devil. Our common term "*joss-house*," for a Chinese temple, is merely a sailor's corruption of the Portuguese word *dios*, god.

The respectable surname *Semple* is derived from the more noble one *St. Paul*; *Sydney*, from *St. Denis*; the rather common English surname *Snooks*, from the highly reputable *Sevenoaks*; and *Boston* is a contraction of *St. Botolph's town*.

Words coming in from foreign languages are being continually changed into a more homelike form. The beef-eaters, certain household servants of the Queen of England, are not so called be-

cause of their well-rounded and rubicund appearance, but because they are buffetiers, or men who stand at the *buffet*. Asparagus is commonly called by uneducated people sparrow-grass; shuttlecock was once shuttle-cork; doormouse is not a kind of mouse, but was once dormouse; wiseacre has no connection with real estate, but is a corruption of the German *weissager*; isinglass is not a kind of glass, but an attempt to Anglicize *hausenblase*, which means sturgeon's bladder; and shamefacedness has nothing to do with face, but is a misimprovement of a good old word used as late as Chaucer's time, *shamefastedness*. A man who had seen Othello played, wishing to name two of his horses Othello and Desdemona, always called them Old Fellow and Thursday Morning; and when Ibrahim Pacha made a visit to England, he was known to the mob as Abraham Parker.

Cape Horn is not so called because it is the southern horn of America, but from its Dutch discoverer, Hoorn; Orange River and the Red Sea are not so called from their color, but the former because it was discovered by the Dutch in the days of the supremacy of the House of Orange, and the latter is a translation of the Sea of Edom. Fitful Head, which lovers of Walter Scott will recollect as the home of Norna, in "The Pirate," was originally Hirt-fell, the white hill. The horrible way in which elegant Norman names have been contorted and racked by stout-jawed Englishmen is enough to make William the Conqueror and his companions-in-arms rise from their graves. *Chateau Vert* has been twisted out of its delicate lordliness into Shotover Hill; *Beau chef* has become Beachy Head; *Burgh Walter* has been rather improved, in being trimmed into Bridgewater; *Beau lieu* has become the honest English Bewley Woods; and *Bon qué*, the good ford, has been masticated into the indistinguishable Bungay. In Grampond we recognize the Norman *Grand pont*; while some swineherd's hand is visible in the execrable change of *Leighton Beau-désert* into Leighton Buz-

zard. I have read, that to tourists visiting this town, the sexton of the parish church points out the brazen eagle which forms the lectern, as the original buzzard from which the town takes its name.

Anse des cousins, the "Bay of Mosquitoes," has become, in the mouths of traders or sailors, "Nancy Cousin's Bay;" Livorno has been changed mysteriously into Leghorn; and the Canadian river, with the utterly unmanageable name, Quah-Tah-Wah-Am-Quah-Duavic, has been rolled up, like a bale of carpet, first into Petamkediac, and still further, like the great genie contracted in Solomon's bottle, into Tom Kedgwick.

Most curious changes have taken place in the names of city streets. In London we have Sermon Lane, originally Shere-monier's Lane, so called from being the business resort of the artisans who used to *shear* the bullion, preparatory to stamping it. When Calais was lost to the English, the artisans of two villages in its vicinity, Hames and Guyness, took refuge in England. They were assigned a residence in the east of London, which happening to be near Tower Hill, the usual place of execution, was called at first Hames and Guyness, but afterward, Hangman's Gains. Gramercy Square, in New York city, is not, as has been supposed, of French origin, but named from *Die Kromme Zee*, the crooked lake, a pond which once occupied the site on which the square now stands.

There have been many amusing transformations in the names of English inns. The Belle Sauvage has become the Bell and Savage; the Pige Washall, meaning the Virgin's Greeting, the Pig and Whistle; the Boulogne Mouth, or the mouth of Boulogne Harbor, the scene of a naval victory, has been transformed into the Bull and Mouth; the Bacchanals into the Bay o' Nails; and the Three Gowts (sluices) into the Three Goats.

The names of Norwegian or Celtic deities and demons linger persistently among us. "Old Scratch" is the Skratt of Sweden, who used, with a wild, horse-laugh, to mock travelers lost on the

moors. "Old Nick" is the Scandinavian water-demon, who demands every year a human victim; and it is curious, as illustrating hereditary influences, to notice how many persons in uttering the dreaded name will instinctively lower their voices, as their forefathers did twenty centuries ago, fearing lest the utterance of his name above a whisper might bring his dreaded majesty before them in person. "Deuce take it" is an invoking of the god Tiw, St. Augustine calling him *dusius*. Bogie, the name with which children are sometimes frightened, is the Sclavonian name for God; and the nursery rhyme of Jack and Jill is a northern version of the tides, in the story of Hjuke (the flow) and Bil (the ebb), the two children of the moon. The morning gossamer is the *gott-cymar*, the veil or trail left by the deity who has passed over the meadows in the night.

Physical changes in localities are frequently revealed by names. For instance, the constant recurrence of *ea* or *ey*, the Anglo-Saxon word for island, in the names of places along the Thames, tells us that that river was formerly much wider than now, and dotted with marshy islands. It is said that most islands in the world contain something in their name revealing their geographical nature. Hence, when we find the islands at the entrance to the Zuyder Zee an exception to this rule, we find a confirmation of the historical fact that it is only comparatively recently the Zuyder Zee has been formed by incursions of the ocean. When we learn that the name Etna means a furnace in the Phenician language, we have a strong presumption that in very early times that mountain was a volcano. The English city of Derby means in Danish a "city of wild beasts," showing us what the condition of that region of country was when the Danes landed in England. The Anglo-Saxon *ceapian*, to buy, may be traced in many English words. The common surname *Chapman* meant little more than peddler; *cheap* is an abbrevi-

ation of *good cheap*, or good trade, still found in the slang phrase, *dog cheap*. *Cheap* and *chipping* are old names for market-places, preserved in Cheapside and Eastcheap; and Wiclif translates the verse about children sitting in the market-place, "They ben like children sitting in chepinge and spekinge togedre." The Danish form of *cheap* is *cope*, as in Copenhagen. The name of Copeland Islands, near Belfast, Ireland, tells us that the Danes occupied them for emporiums, just as the English in the present day hold the island of Hong-Kong.

But it is not all the truth to say that all names were once words. It is equally true that many words were once names. At first sight, we would not be likely to see in the name of the *peach* that it comes to us from Persia; but the riddle is easily read when we follow it through the French *pesche* (old form), the Italian *pesca*, the Spanish *persigo*, the Dutch *persikboom*, and the Latin *persicum*. The *walnut* is not so called because it is the fruit of a tree which in England is trained along the wall, but is the Anglo-Saxon *Wealh-hunt*, and the German *Wälsche-Nusz*, indicating probably that it is the nut from Wälschland or Italy. The word *quince* has suffered many changes in its life-time. Chaucer gives us an adaptation of its French form *coing* in the couplet:

"And many homely trees there were
That peaches, coines, and apples bere."

It is the Italian *cotogna*, and the Latin *cotonium* or *cydonium malum*, the apple of Cydon, a town in Crete. *Brasil-wood* is not named from the country, but strange as it may appear, that vast Empire is named from the wood found there so abundantly. The word *brasil* was known in English long before the country was known. It comes from *braise* or *brasa*, live coals, and *Brasil-wood* is a dye-wood, producing the color of glowing coals. Whisky is a corruption (alas! how great) of the Celtic *wisge*, meaning

water, and *spruce beer* means simply *Prussian beer*. *Shamoy leather* should not be spelled *chamois*, as if it were the skin of the Alpine deer; it is leather from *Samland*, on the Baltic. A *roan* horse formerly referred not so much to color as to breed, telling us that certain horses traced the abode of their ancestors to Rouen, in France. The *lodestone* is not the *leading-stone*, but a corruption of *Lyduis lapis*, the Lydian stone. Our *tabby-cats* are so called because they have the wavy markings of *tabinet*. *Coach* comes to us all the way from Kottsee, a town in Hungary. *Sandwiches* were invented by Lord Sandwich to enable him to remain for twenty-four consecutive hours at the gaming-table. Concerning

Sandwiches and *Spencers* we have the following epigram:

"Two noble earls, whom, if I quote,
Some folks might call me sinner;
The one invented half a coat,
The other half a dinner.
The plan was good, as some will say,
And fitted to console one,
Because in this poor starving day,
Few can afford a whole one."

The *Guillotine* takes its name from Dr. Guillotin, the *bowie-knife* from Colonel Bowie, and the *derrick* from a hangman of Elizabeth's reign. The comic tragedy of *Punch and Judy* and their dog *Toby* is probably a relic of an old mystery-play, in which the chief actors were Pontius Pilate, Judas, and Tobias' dog.

REV. GEORGE C. JONES, A.M.

SANDFORD R. GIFFORD, N.A.

IN the death of Sandford R. Gifford, New York city loses a favorite citizen, and American art one of its most gifted and industrious workers. In person, Mr. Gifford was tall and slender, the Motive temperament expressing itself in his bony features, which, however, were softened by a strong impression of the Mental temperament. His head was high and relatively long, rather narrow in the propensitive region, but quite full in the upper and anterior lateral region. He was a man of strong will, yet did not express his will in arrogant terms, or make any pretensions. His decision pervaded his action, his work, not his language. He was modest, retiring, sensitive, known well only by intimate friends, and really appreciated for himself by few. He was individual in his likings, no imitator, no conventionalist; an artist by profession, a lover of out-of-door nature, he sought his inspiration from the natural, and affected no mannerisms of foreign importation because they were popular or would

pay. In his beliefs, if we read his portrait aright, he was quite independent, not caring to make other people's opinions or convictions his own without first examining the premises and learning if they were tenable from his point of view. He lived mostly in his art—that appeared a large domain to him, and his aspiring and sensitive nature saw no limits to its possibilities of excellence. Perfection was a very wide term to him, and quite among the unattainables.

He was born about the year 1823, at Greenfield, Saratoga Co., N. Y., and his death was the resultant of that dread malady, pneumonia, itself a sequel of a malarial attack. Early devoting himself to painting, he soon acquired prominence in the class of art which he made his specialty, becoming in 1854 a member of the National Academy of Design. In the prosecution of his studies he visited many parts of Europe as well as America. One who has once seen one of his Egyptian scenes is not likely to forget the charm of realism which pervades it; and this

is true of his early work. Indeed, one not a connoisseur of painting, having studied a picture of Mr. Gifford, is likely to recognize his peculiar treatment of the lights in any other picture of the same master without consulting the lower corner. His soft atmospheric effects are always a delight to the writer, and are especially appreciated in his highly esteemed views of Italian seaports.

During the late war he served as a volunteer in the Seventh Regiment of New York, and subsequently painted several scenes from the military life in

ordinary visiting card. On returning to New York after a summer trip, his pockets contained many such souvenirs, which subsequently were re-sketched in oil, on a larger scale, the canvas being, say, twelve inches by eight, and the time consumed not more than two hours. When one of these oil-studies was finished he was about ready to paint a picture from it. The preliminary experimenting—the processes of selection and rejection—had been accomplished; he waited only for a favorable day on which to begin—a day when he was in his best condition physi-



S. R. GIFFORD.

which he himself participated. A writer in the *Evening Post* gives an interesting account of Mr. Gifford's method of composing and painting a picture, as follows:

"Landscape painting he said was air-painting; and the object of the landscape painter was to reproduce the impression made upon him by beautiful natural scenery—and he emphasized the word 'beautiful.' When he saw anything that vividly impressed him, his habit was to make at once a small pencil sketch of it on a piece of paper not larger than an

ordinary visiting card. On returning to New York after a summer trip, his pockets contained many such souvenirs, which subsequently were re-sketched in oil, on a larger scale, the canvas being, say, twelve inches by eight, and the time consumed not more than two hours. When one of these oil-studies was finished he was about ready to paint a picture from it. The preliminary experimenting—the processes of selection and rejection—had been accomplished; he waited only for a favorable day on which to begin—a day when he was in his best condition physi-

heat; he did not criticise his work, he simply did it, as the *afflatus* moved him. No first day was long enough for the ardent painter, but very often at the end of it so much had been accomplished that even an artist friend stepping into his studio the next morning would often express his surprise that Gifford intended to touch the painting again; the rapidity and momentum had been Michael Angelesque.

"On that initial day Gifford had begun, he said, by staining the disagreeable glaring white of his canvas with a solution of turpentine and burnt sienna. Next, with a piece of white chalk he had drawn an outline of the proposed picture. Next, he had 'set' his palette, squeezing from the tubes white, cadmium, vermilion, madder-lake, raw sienna, burnt sienna, caledonia brown and permanent blue, one after the other, along the upper rim, and putting just below them another row consisting of three or four tints of mixed white and cadmium, three or four tints of orange, and three or four tints of green, while along the lower edge were arranged several tints of blue. Since the color of the sky was to be the key-note of his picture, the first thing that he painted was the horizon—the color of the sky at the horizon, this color being the key-note of

the color of the air. The business of criticism, correction, and completion belonged to other days than the first day, and Gifford always liked to keep his picture in his studio as long as possible—the Horatian seven years would not have been too long for him. Pointing to a canvas on the easel, he exclaimed: 'I thought that picture was done half a dozen times. Certainly it might have been called finished six months ago. I was working at it all day yesterday.' The last act in the regular process was the varnishing of the painting with boiled oil so many times, that a veil was left between the canvas and the spectator's eye, the farther away any object, the denser being the veil. This veil served the purpose of reflecting and refracting the light, the surface of the canvas ceasing to be opaque, and becoming transparent, so that the eye looked through it, upon and into the scene beyond. The really important matter, observed Mr. Gifford, is not the natural object itself, but the veil or medium through which we see it."

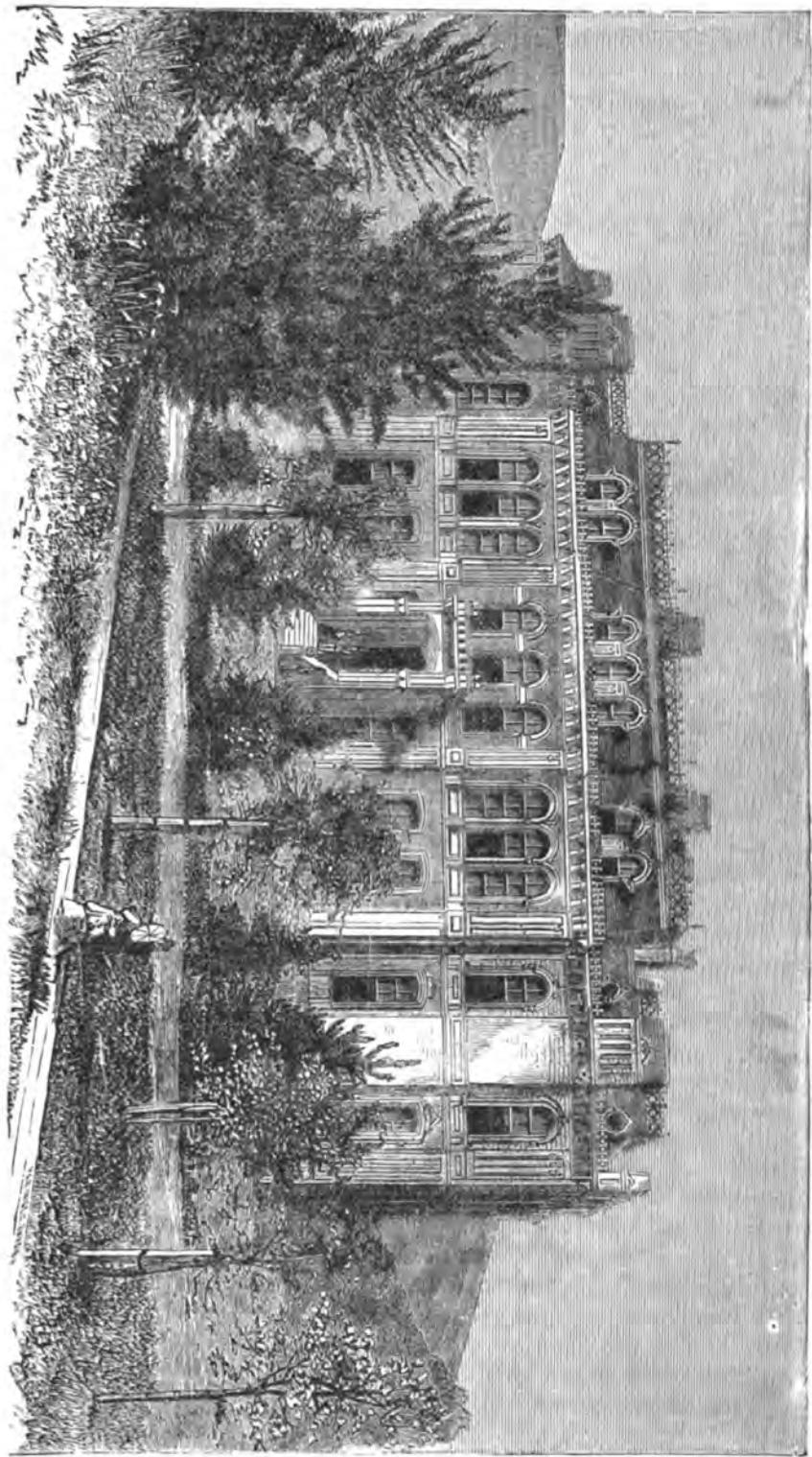
His last pictures were the "Matterhorn" and the "Parthenon," in all the charming glory of an Indian summer sky, a quality of coloring in which he had no equal among his contemporaries.

THE UNIVERSITY OF CALIFORNIA.

THERE lingers in the minds of people accustomed to the growth and culture of the Atlantic States, an impression that in far-off California matters social and educational are still primitive; that the rough ways and pursuits of mining districts must retard the intellectual development of the people there. This is largely erroneous, from the fact that the enterprise and growth of California are due to Eastern men chiefly, and when they removed to the Pacific slope, carried with them their Eastern education, and habits, and feelings. To be sure, they went as to an El Dorado to make their fortunes, but the great majority soon found that

hard work of brain or hand was necessary to get the coveted "pile," and that method and patience were indispensable to success. So they settled in the new country and ere long found it to their best interests to give some attention to the arts of life which are higher than mere money-making. San Francisco, Sacramento, and a score of other towns sprang into existence and grew rapidly, and are growing rapidly still. And the population of the State, which forty years ago was a wilderness, barring its few old and widely-scattered Spanish towns, is now well on toward a million.

The intelligence of the main body of



VIEW OF THE UNIVERSITY OF CALIFORNIA—FRONT

the California people may be inferred from their interest in education. Schools are thick in the settled districts, and higher salaries are paid to teachers than anywhere else. For eleven years they have maintained an institution for the higher education of young men and young women, a view of the main building of the University, as it is called, being given in the illustration.

This University is located in Berkeley, Alameda county. It is a State institution, established by the Legislature, and intrusted to the care of a Board of Regents, which includes the Governor, the Lieutenant-Governor, the Speaker of the Assembly, the State Superintendent of Public Instruction, the President of the State Agricultural Society, the President of the Mechanics' Institute of San Francisco, the President of the University, and sixteen other Regents.

The University was instituted by a law which received the approval of the Governor, March 23, 1868. The instructions were commenced in Oakland in the autumn of 1869. The commencement exercises of 1873 were held at Berkeley, July 16th when the University was formally transferred to its permanent home. The site of the edifice, at Berkeley, is a domain of about two hundred acres, situated on the slopes of the Contra Costa hills, about five miles from Oakland, facing the Golden Gate. It is traversed by two water-courses, is much diversified in aspect, and adapted to a great variety of culture. A part of the site is reserved to illustrate the work of agriculture and horticulture, and is now under cultivation. The grounds have been thoroughly surveyed and studied, with reference to their adaptation to all the wants of the University. So far as possible, such students as desire to earn something by their manual labor will be employed upon the grounds.

For admission to the Colleges of Science, candidates must pass a satisfactory examination in higher arithmetic, in all its branches, including the extraction of square and cube roots, and the metric

system of weights and measures; algebra, as far as the general theory of equations; geometry, the nine books of Davies' Legendre, or their equivalent from another author; English grammar; rhetoric; geography; and history of the United States. The examination is meant to be thorough and strict, but not so technical or exacting as to deter scholars from applying who have not had the best advantages of tuition.

The instruction and government of the students at Berkeley are intrusted to two Faculties, which have hitherto acted as one body—the Faculty of Science and the Faculty of Letters. The Medical and Law Faculties, in San Francisco, are distinct bodies. In accordance with the law, eight colleges have been organized, as will be seen by the following. These colleges or courses are designated in the Political Code as follows: 1. College of Letters; 2. College of Agriculture; 3. College of Mechanics; 4. College of Mining; 5. College of Engineering; 6. College of Chemistry; 7. College of Medicine; 8. College of Law.

The classics do not form a prominent feature in the curriculum, the practical, enterprising spirit of the California people appreciating more the needs of their State for minds trained in science, and the useful departments of every-day industry, than for those proficient in literary directions.

Tuition in the Colleges of Science and of Letters is free to residents of California. Students from other States pay a matriculation fee of \$25, and a tuition fee of \$50 per year. A small charge for chemicals is made in the chemical laboratory. Young ladies are received as well as young gentlemen. Board is obtained in private families at Oakland and Berkeley at from \$20 to \$30 per month (lodgings included). The hours of recitation are such that many students reside in Oakland and San Francisco, being able to attend by the railway facilities with San Francisco, which bring the University within one hour of that city.

THE BRANTFORD INDIANS IN ONTARIO.

THESE tribes of the "sons of the forest" have lived surrounded by civilization for nearly a century; which furnishes a good test of its effects upon them—an interesting and instructive experiment.

They are remnants of United States tribes who aided the British in their wars against us, and have since been cared for by the Government they served. They number over three thousand, and are increasing. They are made up from the "six nations," viz: Delawares, Tuscaroras, Oneidas, Onondagas, Cayugas, and Mohaws, and of Iroquois, and inhabit their Canadian Reservation some six to sixteen miles from Brantford, named after one of their powerful and manly chiefs, Brant, a tall, brawny, athletic brave, who fought us in the Revolution, and died in 1807. I have examined his grandchildren and great-grandchildren, but oh, how sadly degenerated! They are tall, but slim, retaining his Indian movement and physical outline, but only a moiety of his terrific power, and having more white blood than Indian, are decidedly "pale-faced."

I have just visited the Indian Academy, instituted and supported by an English missionary society, taught and managed by whites, containing about eighty scholars, conducted on the industrial plan, and saw some in their various classes, learning to spell, read, cipher, etc., and found some of them certainly as far below the white children of the superintendent as a baboon is below them in their organism and phrenology; and all any way pure-blooded having the Indian low forehead, conical crown, and great width at the ears. Their deficiency in Causality is marked, except in some of mixed blood, which embraced the great majority of them.

In them all frugality—that forepart of Acquisition, which saves up things—is very deficient, while its back part, which acquires, is uniformly large; and many of them are given to stealing, and are arraigned in court for it. They often

steal to sell, yet never to *keep* or lay up. A squaw having two children, by the utmost of begging persistency got four dollars from the superintendent, and the next day bought for her children fifty cents worth of candy; though a winter was on her, and this her only resource for herself and them. Their financial knack seems to be to get the *least* possible good out of their money. Some improvident whites need to take warning from them. They have retiring Causality, and correspondingly evince little foresight, precalculation of effects, or strategy; their large *perceptives* giving them what talents they possess.

In arithmetic they seemed quite good, and fair in scholastic geography, but were dull, stupid readers and spellers; yet one of their mixed bloods carried off the prize in a class of seventy in last fall's competitive examination for admission to college; and three others, nearly half the number sent up, took lower prizes. The half-breeds learn quite easily, but the full-bloods slowly, especially at first, probably because they do not yet understand our language, which they learn slowly.

They speak through their teeth, with their mouths seemingly nearly closed, and very indistinctly; failing sadly in articulation and enunciation, and moving their lips but little, and hence are poorly understood.

I attended a court trial of one for assault and battery, originating in a drunken brawl of two good friends. One full-blooded squaw in attendance was muscular, and a woman of character. An Episcopal minister present had a twenty-three-inch head, a large, powerful body, every way well built and proportioned, and a brain well developed in most respects, yet lacking in frugality and only fair in Causality, but having very large perceptives, good Comparison, a very wide head, and great seeming energy and power of character. He was a Delaware; our little State being named from his

tribe, which once controlled that peninsular, and one of the most warlike and unsubduable of all, and hence scattered by Government among different reservations; yet the same robust, insubordinate, and sagacious tribe still. He was graduated at Toronto College with honor, and often preaches to whites acceptably. His Self-esteem, Secretiveness, and Caution were large, as were all his perceptives, whilst his Firmness, Destructiveness, Locality, and Form were very large, and his walk and bearing dignified, manly, and indicating conscious superiority.

All the young squaws have miserable female forms, flat chests, narrow hips, lean, scrawny persons, stooping postures, and scarcely a sign of that charm belonging to their age and sex. Yet a full-blooded old squaw I met was large, tall, brawny, vigorous, athletic, straight, tawny, paritoed, resolute, cheery—civilization had not spoiled her as a female.

Their superintendent says they utterly lack gratitude, and have no conception

of disinterested kindness. What you give them they take as their *right*—perhaps because they feel as part payment of their manifold wrongs. He also said they were very hard and cruel on horses. But the minister said his tribe still remembered the Pennsylvania Dutch all these intervening generations, and showed marked attentions to any of them they saw, on account of past kindness received from them—a seeming contradiction.

I saw some eight-year-old girls darning stockings with much speed and skill, and their superintendent said they all used tools quite dexterously; besides strictly obeying any rules enjoined on them, showing me a melon patch within their reach wholly untouched. Yankee boys, would you do that?

Their case interested and instructed me very much. I hope it may the JOURNAL readers. Their teachers taught with ability, and with their superintendent merit thanks for their attentions to me.

O. S. FOWLER.

THE PHRENOLOGICAL COMMENTATOR—No 2.

ELIPHAZ, THE PSEUDOMANIAC.

“When one for booty friends betrays,
His children's eyes shall fail.”

—TAYLER LEWIS on Job xvii. 5.

THE Scripture is true to both Physiognomy and Phrenology. This fact to me is a Divine sanction of these sciences. It is only saying that Scripture is true to human nature. Job in its ancientness, like Genesis, affords the best field for finding those old and precious gems of speech that mark the traits of a man by the lines of his face or his physical actions. Job, to me, is demonstrated one of the oldest books of the Bible by the frequency of such therein; one of the first that impressed me being Job xvi. 8: “And thou hast filled me with *wrinkles*.” God honors such form of speech by using it to Cain, when asking him about the first recorded *frown*. “His countenance fell.” Gen. iv. 5.

In my announcement of my discovery of the “Pseudomaniac, or born liar,” I noted

as the most marked sign, that the upper eyelid drooped, so closing up the eye in a measure. The word “fail,” here is “close up.” I also remarked that “flattery” was characteristic of many pseudomaniacs. Our accepted version translates this verse: “He that speaketh flattery to his friends, even the eyes of his children shall fail.”

The same false spirit underlies both versions. He who betrays a man to himself by flattery does as great harm, or the same as he who betrays a man to others. Such habit, and it takes a habit to make a man such as Judas, becoming fixed, must have its effect upon the organs of Conscientiousness, Secretiveness, and Acquisitiveness, etc., and produce an impression upon offspring. T. S. Arthur makes a remark that illustrates this: “A

man who drives sharp bargains need not be surprised if his children are thieves."

This remark of Job was brought out against Eliphaz, from the old man's memory of the father of Eliphaz, I have no doubt. He was stung to it, so contrary to his usual courtesy; for he is the Old Testament gentleman, as Paul was of the New. Neither of them is exceeded by any except Christ in Gethsemane, begging pardon for the delay caused by healing the ear of Malchus. He was stung to such retort by the, to me, savagest sentence in Holy Writ: "God's comfortings, are they too small for thee?" Job xv. 11. (T. L.)

The A. V. says: "Is there any secret thing with thee?" as another translation of the second line. Lewis is right, I think, for two reasons: God Himself clears Job of any guilt, and it was not an idol's presence, as implied in the A. V., but God's absence that worried Job. Also the other four uses of the word in the Old Testament are best illustrated by Isaiah's use of this word "secret," "gentlv." "The waters of Shiloah that go softly."

These words were savage because *soft*. It's another mark, and one of the surest, that a born liar has a soft, creeping voice. The whole attitude of Eliphaz is displayed, especially in Job iv. 12-21:

"To me at times there steals a warning word;
Mine ear its whisper seems to catch,
In troubles from spectres of the night,
When falls on men the vision-seeing trance,
And fear has come, and trembling dread,
And made my every bone to thrill with awe,
'Tis then before me stirs a breathing form;
O'er all my flesh it makes the hair rise up.
It stands; no face distinct can I discern;
An outline is before mine eyes;
Deep silence! then a voice I hear:
Is mortal man more just than God?
Is boasting man more pure than he who made him?
In his own servants, lo, he trusteth not,
Even on his angels doth he charge defect.
Much more them who dwell in houses of clay,
With their foundations laid in dust,
And crumbled like the moth,
From morn till night they're stricken down,
Without regard they perish utterly.
Their cord of life, is it not torn away?
They die, still lacking wisdom."

His whole attitude, as displayed in this

and the following chapter, is that of too many unsympathetic theologic souls attempting to administer comfort by quoting the works of creation and the mysteries of Providence to a *sore* heart. What has the Cosmos to do with a boil? But let such far-fetched abortion of comfort be administered to a man swallowed up in misery, and his whole horizon so narrow that a tear could roof it in, and be its best healer, by a man who is so egotistic as Eliphaz evidently is here, as to think his words a special revelation to him, and the uncomforted a rebellious fool, and in a soft voice, why, hell would be cool to such fury bred in his pent-up heart. If you want to get a vexatiously egotistic man, get one with a soft voice! If you ever chafe, fume, or sweat, and want to hit some one, or do something you know not what, as your "gauge rises," till every muscle hardens, and your every nerve seems on fire with smothered flame, then's the time! You can not hit him. You do not know on whom to waste your suppressed anger, and either tears or a wail will be your answer. Job's is in chapters sixteen and seventeen. I would blaspheme under such circumstances, if under no other. I would have to speak out, cry out, yell out my *unpointed* anger, or I would die.

Many a suffering soul who loudly and bitterly resents such a "vile person" (Daniel xi. 21), is greatly misconstrued, and all the credit is given to the one of softly-flowing speech and demure manner; because people like Eliphaz of old give the credit of Divinity to soft speech and manner. I say "Belial!" and say "Listen! Listen till your soul feels like flying out of your body because of devilishly serpentine inharmony! See the stealthily rising smile of complacency, as that soft voice stabs its victim! Reach out and feel the *hardness* of that 'hand of iron in a glove of velvet!'" I'd rather have all the boils of Job than such a comforter.

The ground reason of such repulsion natural to all sore or honest hearts lies in the hypocritical *putting on* of that di-

vinest attribute—Pity. For pity only in form, and not in fact, is cold charity and all unkindness. What are words, no matter how softly melting, if born on the Iceland of the lips? God himself has not creative power enough to dissemble pity. Such sympathy that a truly suffering heart will respond to, must be life, heart! No assumption of prerogative, no formal Scripture quotation, no matter in the claim, no tone in the utterance will suffice. Here is the mystery of misery, and here is the mystery of consolation. Christ *came down*. And when he had done all else, Christ died.

Sore-hearted Job was answered at last in a truly Divine fashion. But how? "*God answered Job out of a whirlwind!*" Like David of old, I cry: "Let me not fall into the hands of man" in such an hour,

unless it be some *silent* one, who, because he feels how barren his own heart is of similar sorrow, is honest enough to be still; that in the common stillness the sufferer may see the storm from the desert, and from the "clouds which are the dust of his feet," hear God's voice commanding greater stillness, that Job and God may speak face to face! Here is the purpose of affliction and the secret of true consolation!

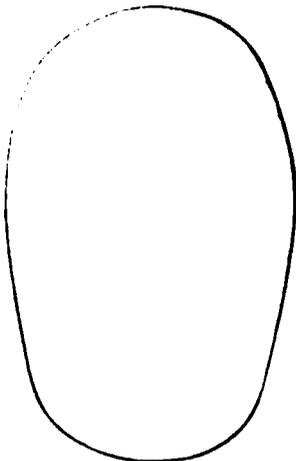
Here, too, lies the mystery of the brother—making discipline of sorrow. "As the sufferings of Christ abound in us, so does also our consolation abound by Christ." A suffering Christ, and in us suffering, is an absolute necessity; for he is humanity perfected by sufferings and glorified in consolation.

ALEX. M. DARLEY.

HOW THEY LOOK IN OUTLINE.

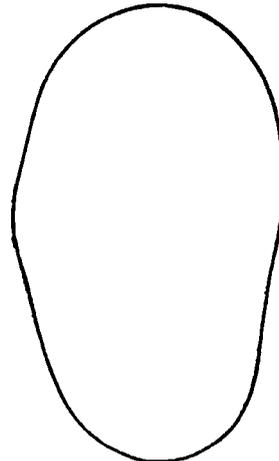
HEADS differ more or less in contour; no two selected off-hand in a large assembly will be found alike. The *New York Hat and Cap and Fur Trade Review* supplies us with some excellent illustra-

formator. Our readers at once perceive from this that the shape is that of the head at the line where the hat is fitted, and which in most persons passes around the cranium in a plane whose margin is about



No. 1.—GARFIELD.

tions of this fact from sources which just now have a commanding importance in popular esteem. The outlines numbered 1, 2, 3, 4, indicate the forms of as many different heads as taken by a hat con-



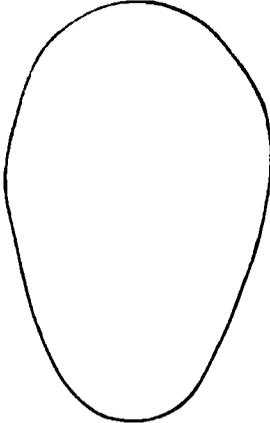
No. 3.—ARTHUR.

an inch and a quarter above the root of the nose, and three-quarters of an inch above the ear lobe.

The outline No. 1 is from the head of Mr. Garfield, the Republican candidate

for President. He wears a $7\frac{3}{8}$ hat, and consequently his head is about 24 inches in circumference.

No. 2 is from the head of Gen. Hancock, and shows a very symmetrical contour, the backhead being well rounded and the side organs large. He wears a



No. 2.—HANCOCK.

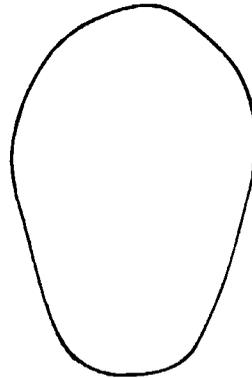
$7\frac{1}{4}$ hat, indicating a head nearly 23 inches in circumference.

No. 3 is from the head of Gen. C. A. Arthur, and shows a predominant development on one side, the right, the length being more than the average for heads of

its size. As he wears a $7\frac{3}{8}$ hat, its circumference is fully 23 inches.

No. 4 is from the head of the Democratic nominee for Vice-President. The size is $6\frac{3}{8}$, or about 22 inches in circumference.

The lower or smaller end of the outlines represents the forehead, and the broadest part approximates the point where a



No. 4.—ENGLISH.

horizontal line would pass through the opening of the ear. With these hints the phrenological reader can deduce some impressions of the intellectual and social characters of the gentlemen whom American politics have brought so conspicuously before the world.

CELIA THAXTER,

POET OF THE ISLES OF SHOALS.

AMONG our living women-poets Mrs. Thaxter takes good rank, succeeding in popular esteem, it may be said, to the place made vacant by the death of Phebe Cary. The portrait represents her as possessing a strong organization mentally, and marked elements of physical stamina. That long, rounded, and prominent lower jaw indicates descent from a robust, enduring, emphatic stock. The forehead is prominent in the perceptive region, showing in that respect and others, that she has inherited her intellect largely from her father. She is fond of observation, gathers facts for herself, and is better

satisfied with a minute's examination of an object than with an hour's description of it in a book or from another. She is earnest and positive in opinion; speaks from conviction, and is ready to defend her beliefs. She possesses a very warm nature socially. Friends and home are to her very dear, and she can not school herself to the shifting, unsteady character of modern society. The loss of a friend is a crisis in her life, while to leave the old home is like rending some of the muscular fibers of her heart. Yet her mind has a decidedly practical tone, and we must mistake greatly in reading

the head, as it is here shown, if it be not true that she has no ambition to be esteemed as a lady of society, having little respect for fashion and the ways of mere convention.

Celia Lughton was born at Portsmouth, N. H., June 29, 1835. When but four or five years old, her father, being disappointed in certain political expectations, purchased Hog Island (now Appledore), and made it his residence, declaring he would never return to the mainland.

resort for summer visitors, and among the first to go to Appledore was Mr. Thaxter, then a Portsmouth lawyer, who, being in delicate health, visited the island to recover his physical vigor, and built a little cottage. He saw the maiden of the Isle, was pleased with her appearance, and in process of time won her affections. Her father at first opposed a marriage, but at last reluctantly consented. Her first visit to the mainland was made on her wedding tour. Since then Mrs. Thaxter has passed her life sometimes on shore and sometimes at the Isles, where



Celia Thaxter.

Here the girl lived for ten years, and during all that time rarely saw other men besides her father and brothers, yet her thoughtful, observant nature found much employment amid the rocks and shoals, and the vistas of the sea which surrounded her. These rougher phases of nature furnished material for many a tender verse which later on found its thousand readers in circles far away from the Isles of Shoals.

At length the lonely rocks became interesting to the outer world, as a seaside

she has a modest and tasteful cottage in the vicinity of the well-known Appledore House, which is kept by her brothers. This cottage is reached by a well-worn path, often traversed by visitors to the island and guests of the hotel, nearly all of whom know the authoress by reputation, as the mixed crowds found at the popular water-resorts in the neighborhood of our large cities seldom make their appearance here, preferring to air their coarseness and lack of intelligence in some more congenial locality.

Mrs. Thaxter's poems and other writings bear so much upon the scenery and life of the Isles of Shoals, among which she has spent almost her whole mortal career, as far as it has extended, that she might well be named their poet and historiographer. Two volumes of hers published in Boston, are entitled "Poems," and "Among the Isles of Shoals," the latter being a collection of prose sketches. Of her poetry, perhaps "The Wreck of the Pocahontas," "Rock Weeds," "The Swallow," "Midsummer Midnight," would be among the favorite selections of those who are familiar with it. A late contribution to the *Atlantic Monthly* appears to us an excellent specimen of her capability, viz :

WEST WIND.

The barley bows from the west
Before the delicate breeze,
That many a sail caressed
As it swept the sapphire seas.

It has found the garden sweet,
On the poppy's cup it weighs,
And the golden ears of wheat ;
And its dreamy touch it lays

On the heavy mignonette,
And it steals its odors fine
On the pansies dewy yet—
On the phloxes red as wine ;

Where the honeysuckle bright
Storms the sunny porch with flowers,
Like a tempest of delight
Shaking fragrance down in showers.

It touches with airy grace
Each clustering perfumed spray,
Clasps all in a light embrace,
And silently wanders away.

Come forth in the air divine,
Thou dearest, my crown of bliss !
Give that flower-sweet cheek of thine
To the morning breeze to kiss.

Add but thy perfect presence
To gladden my happy eyes,
And I would not change earth's morning
For the dawn of paradise.

KEEP A JOURNAL.

AN English periodical gives its readers some good hints on how to conduct a diary or journal. It begins by saying :

"Autumn is as good a time as any to begin to keep a journal, and as we are now near the close of the year it is appropriate that these hints should be repeated. Too many people, old as well as young, have the idea that it is a hard and unprofitable task to keep a journal, and especially is this the case with those who have begun, but soon gave up the experiment. They think it a waste of time, and that no good results from it. But that depends upon the kind of journal that you keep. Everybody has heard of the boy who thought he would try to keep a diary. He bought a book, and wrote in it, for the first day, 'Decided to keep a journal.' The next day he wrote, 'Got up, washed, and went to bed.' The day after, he wrote the same thing, and no wonder that at the end of a week he wrote, 'Decided not to keep a journal,' and gave up the experiment. It is such

attempts as this, by persons who have no idea of what a journal is, or how to keep it, that discourage others from beginning. But it is not hard to keep a journal if you begin in the right way, and will use a little perseverance and patience. The time spent in writing in a journal is not wasted, by any means. It may be the best employed hour of any in the day, and a well-kept journal is a source of pleasure and advantage which more than repays the writer for the time and trouble spent upon it.

"The first thing to do in beginning a journal is to resolve to stick to it. Don't begin, and let the poor journal die in a week. A journal, or diary, should be written in *every day*, if possible. Now, don't be frightened at this, for you do a great many things every day, and this is not a very awful condition. The time spent may be longer or shorter, according to the matter to be written up; but try and write, at least a little, every day. '*Nulla dies sine linea*'—no day without a line—is a good motto. It is a great

deal easier to write a little every day than to write up several days in one.

"Do not get for a journal a book with the dates already printed in it. That kind will do very well for a merchant's note-book, but not for the young man or woman who wants to keep a live, cheerful account of a happy and pleasant life. Sometimes you will have a picnic or excursion to write about, and will want to fill more space than the printed page allows. Buy a substantially bound blank-book, made of good paper; write your name and address plainly on the fly-leaf, and if you choose, paste a calendar inside the cover. Set down the date at the top of the first page, thus: 'Tuesday, October 1, 1879.' Then begin the record of the day, endeavoring, as far as possible, to mention the events in the correct order of time—morning, afternoon, and evening. When this is done, write in the middle of the page, 'Wednesday, October 2,' and you are ready for the record of the next day. Set down the year at the top of each page.

"But what are you to write about? First, the weather. Don't forget this. Write, 'Cold and windy,' or 'Warm and bright,' as the case may be. It takes but a moment, and in a few years you will have a complete record of the weather, which will be found not only curious, but useful.

"Then put down the letters you have received or written, and, if you wish, any money paid or received. The day of beginning or leaving school; the studies you pursue; visits from or to your friends; picnics or sleigh-rides; the books you have read; and all such items of interest should be noted. Write anything you want to remember. After trying this plan a short time you will be surprised at the many things constantly occurring which you used to overlook, but which now form pleasant paragraphs in your book. But don't try to write something when there is nothing to write. If there is only a line to be written, write that, and begin again next day.

"Do not set down about people any-

thing you would not wish them to see. It is not likely that any one will ever see your writing, but it is possible, so always be careful about what you write. The Chinese say of a spoken word, that once let fall, it can not be brought back by a chariot and six horses. Much more is this true of written words, and once out of your possession, there is no telling where they will go, or who will see them.

"The best time to write in a journal is in the evening. Keep the book in your table drawer, or on your desk, and after supper, when the lamps are lighted, sit down and write your plain account of the day. Don't try to write an able and eloquent article, but simply give a statement of what you have seen or done during the day. For the first week or two after beginning a journal, the novelty of the thing will keep up your interest, and you will be anxious for the time to come when you can write your journal. But, after a while, it becomes tedious. Then is the time when you must persevere. Write something every day, and before long you will find that you are becoming so accustomed to it that you would not willingly forego it. After that the way is plain, and the longer you live the more valuable and indispensable your journal will become.

"But some practical young person asks: 'What is the good of a journal?' There is very much. In the first place, it teaches habits of order and regularity. The boy or girl who every evening arranges the proceedings of the day in systematic order, and regularly writes them out, is not likely to be careless in other matters. It helps the memory. A person who keeps a journal naturally tries during the day to remember things he sees until he can write them down. Then the act of writing helps to still further fix the facts in his memory. The journal is a first-class teacher of penmanship. All boys and girls should take pride in having the pages of their journals as neat and handsome as possible. Compare one day's writing with that of the one before, and try to improve every day.

Keeping a journal cultivates habits of observation, correct and concise expression, and gives capital practice in composition, spelling, punctuation, and all the little things which go to make up a good letter-writer. So one who keeps a journal is all the while learning to be a better penman, and a better composer, with the advantage of writing original, historical, and descriptive articles, instead of copying the printed letters and sentences of a writing-book.

"But, best of all, a well-kept journal furnishes a continuous and complete family history, which is always interesting and often very useful. It is sometimes very convenient to have a daily record of the year, and the young journalist will often have occasion to refer to his account of things gone by. Perhaps

some evening when the family are sitting and talking together some one will ask, 'What kind of weather did we have last winter?' or, 'When was the picnic you were speaking of?' and the journal is referred to. A marriage, a death, a birth, an accident, a house-burning, a contract, a visit, or some fact which may, by being preserved, save one's life or reputation, or money, will make the journal very useful. But the pleasure of keeping a journal is itself no small reward. It is pleasant to exercise the faculty of writing history, and to think that you are taking the first step toward writing newspapers and books. The writer can practice on different kinds of style, and can make his journal a record, not only of events, but of his own progress as a writer and thinker."

CONFUCIUS.

THIRTY years ago, and less, we seemed to have as little concern about Confucius and his teachings as we now have about the cogitations of the man in the moon. China was then a very far-off country, we had little or no communication with its people, and there were not, perhaps, fifty natives of the Flowery Kingdom in the entire United States. Within the last twenty-five or thirty years, however, all this has greatly changed. Our present intimate treaty relations with that country, our constant communication with it, and especially the tide of immigration from that vast sea of humanity to our shores, make it important for us to understand better this new element that is being absorbed into our complex population.

Confucius is the great moral teacher of the Chinese. He was the son of Shuh-leang Heih. His father was a gallant soldier, of whose prowess and strength wonderful stories are told. At the time of Confucius' birth, Heih was well advanced in years; his mother was quite a young woman, and Confucius was her only child. Her name was Ching-tsae. Confucius was born in the year 551 B.C.,

in the district of Tsow, of which his father was governor. The eternal fitness of things required that such a child should be ushered into the world with suitable auguries; hence there were wonderful portents accompanying his nativity. Among other things, equally startling, his mother dreamed, shortly before his birth, that she should bring forth a son in a hollow mulberry tree. She inquired of her husband if he knew of any hollow mulberry tree; he replied that there was a dry cave in the south hill that was called by that name. When she told him her dream, he was much surprised, but set to work to have the place properly prepared for her reception. On the night when the child was born, two dragons kept guard, one at each side of the cave; two fairy ladies appeared in the air and poured forth delicious odors; and when the child was born, a spring of water burst up from the floor of the cave, which immediately dried up again as soon as the child had been washed.

The subsequent life of one whose coming had been marked by such prodigies could only be expected to be something extraordinary. At nineteen he married;

and the next year he entered the public service, first as keeper of the stores of grain, and the next year as superintendent of the public lands. As a public officer he set an example worthy of imitation by all subsequent office-holders. As keeper of the public stores, he said: "My calculations must all be right—that is all I have to care about;" and in regard to his duties as superintendent of the public lands he said: "The oxen and sheep must be fat and strong and superior—that is all I have to care about." In his twenty-second year, he began his labors as a teacher. He cared nothing about the fees that were paid him, but he required a proper earnestness in his pupils. If they were wanting in this, he took but little interest in them. "When I have presented one corner of a subject to any one," he said, "and he can not from it learn the other three, I do not repeat my lesson." But while a teacher, he continued his character as a student. In the year 517 B.C., when he was about thirty-five years old, he visited the city of Lo, in order to converse with a distinguished teacher, Laou Tau. Here, observing a picture of the Duke of Chow, with his infant nephew, the king, upon his knees, giving audience to the princes, Confucius remarked to his followers: "Here you see how Chow became so great. As we use a glass to examine the forms of things, so must we study antiquity in order to understand the present"—a speech that would indicate the knowledge and use of magnifying-glasses 2,000 years before the time of Galileo.

Confucius did not long remain at Lo; he soon returned to his former residence at Loo, where he continued his work of teaching. His fame increased, so that his disciples amounted to 3,000. In the midst of the troubles of those unsettled times, his native district fell into confusion, and the philosopher repaired to the neighboring State of Ts'e. On the way he saw a woman weeping bitterly over a grave by the roadside. He inquired the cause of her grief. "You weep as if you had experienced sorrow upon sorrow." The woman replied: "It is so. My

husband's father was killed here by a tiger, and my husband also; and now my son has met the same fate." Confucius asked why she did not leave such a place, and she answered: "There is here no oppressive government." He then turned to his disciples and said: "My children, remember this. Oppressive government is fiercer than a tiger." His ideas of a proper government are eloquently expressed in his memorable saying: "Good government obtains, when those who are near are made happy, and those who are far off are attracted;" and again in the remark, that the art of government lies in an economical use of the revenues. With the restoration of tranquillity, the philosopher returned to his home.

In the year 500 B.C., Confucius again entered public life. In that year he was made chief magistrate of the town of Chung-too. His administration of this office was so admirable, that he was soon appointed Assistant Superintendent of Works, and shortly afterward, again promoted to be Minister of Crime. In all these various capacities, Confucius distinguished himself by the wisdom, vigor, and success of his public efforts. Under his administration, it is said that "dishonesty and dissoluteness were ashamed, and hid their heads. Loyalty and good faith became the characteristics of the men, and chastity and docility those of the women." But the neighboring States became jealous of the prosperity of Loo, and the Duke of Ts'e contrived a scheme by which Confucius was separated from his master, and his influence over him was lost. The philosopher seeing this, concluded that it was time for him to withdraw. He therefore resigned his post, and set forth on his travels. For thirteen years he continued to wander through the various States of China, accompanied by a number of his disciples. Many anecdotes are told of him during these years of wandering. At P'oo, having engaged that he would not proceed to Wei, with which State P'oo was then at war, he went, nevertheless. When asked whether it was right to violate his

oath, he replied: "It was a forced oath. The spirits do not hear such." On one of his journeys the provisions of himself and his companions were exhausted, nor could they obtain more. They endured the greatest distress for several days, but during the whole time Confucius maintained his equanimity, and consoled himself with poetry and music. When one of his disciples said to him, "Must the superior man endure in this way?" he replied: "The superior man may indeed have to endure want, but the mean man, when he is in want, gives way to unbridled license." Again, when he heard that the chief of Ts'oo, to whom he was a stranger, was at a loss what to think of him, he said: "Why did you not say to him—He is simply a man who in his eager pursuit of knowledge forgets his food; who in the joy of its attainment forgets his sorrows; and who does not perceive that old age is coming on?" In the year 483 B.C., Ke K'ang, the new chief of Loo, invited him to return to his native district.

Confucius now returned an old man to his former home. His life had not been a happy one. The life of no great reformer is happy. Upon his mind and heart rested the burden of the needs of humanity. In addition to the other evils and cares of life, old age, though he may have shut his eyes to its approaches, crept on apace, and his friends also began to fall by his side. His beloved disciple, Yen Hwvy, died first, then his own son Le, and finally his stout follower, Tsze-loo. Confucius cried out in his anguish: "Alas! Heaven is destroying me! Heaven is destroying me!" But he did not long survive. He died B.C. 478.

Such is an outline of the life of Confucius. Those who had slighted him during his life-time, canonized him after he was dead. It is the old story over again. The fathers kill the prophets, and the sons build their sepulchers. Temples were erected to his memory, and a degree of homage approaching to actual worship is paid at his shrines. For centuries he has been the potent spell over China. His influence has prevailed

everywhere. The Confucian writings form the body of all learning in China. He has superseded all other teachers.

This influence has been greatly for good, and yet it has not been unmixed with evil. His teaching was not irreligious according to the Chinese standard, but, as Dr. Legge* has remarked, it was unreligious. He confined himself to the earth, and to man's duties here. He was not a teacher of religion. The name of the personal god of the Chinese does not once occur in all his writings. This is itself a remarkable fact. He did not profess to know anything about the hereafter, and he did not attempt to teach what he did not know. He did not profess to know anything about the condition of those who had passed through the gates of death, and he did not trouble himself much about it. On one occasion, when speaking of the duty of sacrificing to the dead, one of his disciples asked him whether or not the dead had knowledge of this service on the part of the living. Confucius replied: "If I were to say that the dead have such knowledge, I am afraid that filial sons and dutiful grandsons would injure their substance in paying the last offices to the departed; and if I were to say that the dead have not such knowledge, I am afraid lest unfilial sons should leave their parents unburied. You need not wish to know whether the dead have knowledge or not. There is no present urgency about the point. Hereafter you will know it for yourself."

Dr. Legge says this was not the teaching proper to a sage. We think differently. For a Christian minister, in the light of revelation, to thus hedge upon an important doctrine would be blameworthy; but to our mind, in the case of Confucius, it was eminently the proper thing to do. Why depart from a pious custom established from old time, on a question as to whether or not the dead could be conscious of the act of sacrifice? Why worry and conjecture over a

* Dr. Legge's learned work on the life and teachings of Confucius, I have made the groundwork of this essay.

problem that is for the present involved in hopeless obscurity, but which will in its proper time be cleared up to the satisfaction of all? Again, on being asked, What is wisdom? he answered: "To give one's self earnestly to the duties due to men, and, while respecting spiritual beings, to keep aloof from them, may be called wisdom."

In these answers we find the key to his character. He was a moralist, not a spiritual guide; he was a practical man, not a visionary. It was to point out their relative duties to each other as members of the same society, as citizens of the same country, that he labored. He believed in the wisdom of the ancients. He attempted no novelties. He only endeavored to expound and enforce the ordinances and teachings that were furnished by the sages who had preceded him. He did not desire any departure from old customs. "Follow the seasons of Hea," said he. "Ride in the State carriages of Yin. Wear the ceremonial cap of Chow. Let the music be the Shaou with its pantomimes. Banish the songs of Ch'ing, and keep far from specious talkers."

But there are two points in particular in which the influence of his teachings have not been for good. The first is in inculcating insincerity of character. We have already seen that in his conduct at P'oo, when he went to Wei, after he had taken an oath not to do so, and his answer in justification of his act. Such teaching has borne its legitimate fruit. The Chinese are proverbially tricky, unreliable, and deceitful. The whole nation has been infected with this poisonous leaven, and has become corrupt.

Again, in the *Le Ke*, or "Record of Rites," which has been attributed to Confucius, or to him mainly; it reads: "With the slayer of his father, a man may not live under the same heaven; against the slayer of his brother, a man must never have to go home to fetch a weapon; with the slayer of his friend, a man may not live in the same State." Whether or not Confucius laid down this statement of the law of private ven-

geance, he did unquestionably enforce it and enlarge upon it in his teachings. This evil principle, as in the other case, has brought forth abundantly after its kind. It has made the Chinaman—who is naturally quiet, submissive, and peaceable—in the redress of his private grievances, vindictive, watchful, and unsparing.

These, however, are but spots on the sun. While Confucius thus falls far below the standard of our Christian ethics, we must remember that he was a heathen in a heathen land, with no lamp for his feet except the dim light of nature and the intuitions of his own conscience. We must also remember that five hundred years before Christ taught on the hill-slopes of Judea, Confucius amid the rice-fields of China had uttered such sayings as these:

"To see what is right and not to do it, is want of courage." "What you do not want done to yourself do not do to others." "The wise are free from perplexities; the virtuous from anxiety; and the bold from fear." "If a superior man abandon virtue, how can he fulfill the requirements of that name?" "If the will be set on virtue, there will be no practice of wickedness." "A man should say: I am not concerned that I have no place; I am concerned how I may fit myself for one. I am not concerned that I am not known; I seek to be worthy to be known." "When a country is well governed, poverty and a mean condition are things to be ashamed of. When a country is ill governed, riches and honor are things to be ashamed of."

Such is a summary of the life and teachings of Confucius. He is, as we have said, the great object of veneration to a population that numbers one-third of the human race. He becomes an object of some interest to us, since tens of thousands of his countrymen have found a lodgment with us. The Chinese question has assumed proportions sufficiently vast to engage the attention of our national councils, and the end is not yet. These men are already among us in large numbers, and others will no doubt come until they will have spread themselves through our population over the whole land. It is well to know something of their history, their principles, and their views.

THOMAS J. CHAPMAN, A.M.



HEALTH IN THE PULPIT.

IN a "Familiar Talk" to the Theological students at Andover Seminary, the Rev. J. J. Munger gives some excellent advice with regard to the habits which should form part of a young minister's every-day life, as follows:

"1. The first and nearly most important thing I could suggest to the young minister is that *he should secure and preserve his health*. When Mr. Carlyle made his address before the students of Edinburgh University, he closed his wise words by a plea for health, saying: 'There is no kind of achievement you could make in the world that is equal to perfect health.' He had not in mind the personal comfort of health; but the basis it affords of doing well any sort of work. And not only is it the basis of all achievement, but it *enters into* the achievement as a quality. Where is this mysterious relation between body and mind that physical condition becomes mental characteristic? Man is one—or, rather, is now linked into such indivisible oneness that you can not say: Here the body ends and the mind begins. This is mental, that is spiritual. A quality runs throughout the whole gamut of our being. If a man is sound and healthy in his body, if he is weak or sickly, he will be sound or sick from his bones to his aspirations. You can not measure the degree and persistence with which the bodily tone asserts itself throughout the

whole range of one's work. We talk about the mind triumphing over the body; but it seldom triumphs to such a degree that a sick body yields sound mind-work. It will show the marks of the struggle; and, if it is strong and cheery, it will be a cheer and strength wrested out of weakness, not that which bubbles up from health and vigor. This is a matter of great importance—whether we preach out of thorough, ingrained healthiness, or preach *as though we were well, not being so*. We can not triumph over Nature. Her color will strike through our cheery and energetic speech, with inevitable suggestion of pain or weakness. And red vitalized blood will tinge the utmost thoughts of the mind. There is no doubt whatever (as gathered from his works) but Shakspeare was a man of most robust health; and Mr. Carlyle well knows that his life-long dyspepsia is a considerable ingredient of his thought.

"Now, there is no man upon whom there rests so supreme a necessity of health as upon the preacher. Not because his work demands endurance, but because the people need a ministration that is charged with vitality. When you come here, you are required to bring credentials of piety from your pastor or others. It is quite as necessary that you should bring testimonials from your physician that you have, at least, average physical

vitality and good bodily habits conservative of health, and are in that general condition that may be called *physical piety*, under the Calvinistic dogma of *perseverance*, and not liable to any Arminian lapsing into flabbiness and inertia. And I most sincerely think that a license to preach should cover the fitness of the body as well as of the mind, and that, after the candidate has rehearsed his religious experience, he should offer some test of the strength of his nerves, the degree of his vitality and physical force, and give some account of his habits as to sleep, exercise, ablution, and food. Immeasurably more than the physician or lawyer does the minister need bodily vigor. I do not mean as a basis for enduring work, but as sending its quality into the work. A physician who is weak may diagnosticate truly, but the weak minister will not preach strong sermons; the languid, lifeless preacher will not awaken healthy sentiments or stir to action.

"I but call your attention to the subject as one of immense importance. I would not have you start in life with an old man's sensitive care or with any self-coddling, as though health were the supreme end. There is nothing much worse than this. But I would have you realize that, along with learning and piety, *health* is an equally important factor of success.

"Others, I have no doubt, have exhorted you on the subject of your spiritual and mental habits, but let me exhort you to vow before God that it shall be a rule of your life to sleep eight hours out of the twenty-four, two hours being before midnight; that you will spend two hours every day in the open air; that you will write mornings rather than evenings; and that you will abstain from pastry and all other well-known dietetic abominations, and that you will rest when your energies sensibly begin to flag. To observe these few rules is not unmanly. Observing them, one may cease to think of health."

MICROSCOPIC ANALYSIS OF MILK.

THE test by microscopy is one of the best for the detection of adulterated or deteriorated food, and is becoming more commonly employed as its definite showings are more appreciated. In the examination of milk the microscope renders deception impossible. The lactometer may fail, like the eye and even chemistry, to show promptly the extent of impurity or adulteration, but the microscope at once reveals unfitness or fraudulent manipulation.

Prof. Piper, of Chicago, has made careful studies of healthy and diseased milk, and drawn its appearance under the microscope in several conditions. The four views herewith given, are reproductions of four published by him.

When the milk is fresh and healthful, it appears as in the upper left-hand group of circle-like forms, made up of innumerable albuminous and fatty globules of various sizes floating in a clear

or slightly yellowish fluid. The globules as seen in the engraving are magnified 340 diameters.

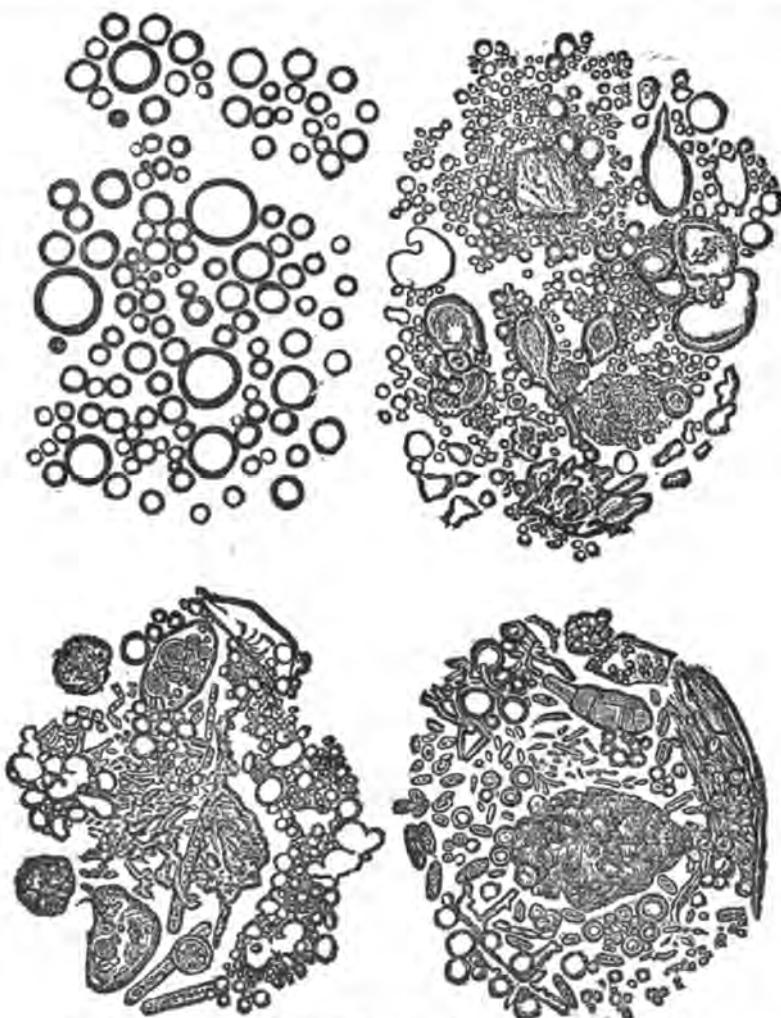
In bad or diseased milk, in some cases, this fluid is quite blue in color. The regular rounded form and freedom of movement of the globules in the fluid seem to be such constant factors in good milk, as to justify the statement of many authorities that any departure from this condition indicates disease. There is to be observed in that which is not sticky or ropy, on the microscopic slide, a constant motion, called the Brownian motion, the globules dancing as if instinct with life. This motion is always present in healthy milk so long as it remains fluid on the slide. In diseased milk this motion of the globules ceases at once, or fails even to be present, when first placed on the slide. The corpuscles aggregate and stick together in groups, or seem to be glued to the slide.

The other three engravings show the

appearance of diseased milk. That alongside of the first mentioned is a sample of milk taken from a milk wagon. There may be seen some regular globules which are doubtless the true spheres found in pure milk, but there is also a mass of foreign matter which doubtless consists of fungus or animal germs and portions of diseased tissue from the

globules aside, and wriggling more or less rapidly across the field of the microscope." These organisms are the agents of all putrefaction.

The fourth diagram represents another sample of diseased milk. It was taken from the food of a sick child, and is a sample of milk supplied by cows fed on distillery swill. The reader bear-



APPEARANCE OF HEALTHY AND DISEASED MILK UNDER THE MICROSCOPE.

udder of the cow. This appearance was gained quite soon after the milk was drawn. After it was allowed to stand overnight, it presented the appearance in the lower left-hand group of forms. Here are seen bacteria, fungi, and vibri-ones, which Prof. Tyndall describes as "long, cel-like organisms, tossing the

ing in mind what was said in the article on Beer and Bread, in the October Number of the PHRENOLOGICAL JOURNAL concerning the method of sprouting grain in vogue among brewers, can not wonder that cows fed on the fermenting half putrid malt should yield a corrupt form of milk.

The vicious condition of the milk which is furnished city people from swill-fed cows may be produced by the introduction of ferments, which enter the blood of the animal from the unhealthy food, and it is also the result of the diseased condition of the udder which accompanies such improper diet. The danger of partaking of poison in their milk, therefore, always overhangs people who use milk from dairies fed upon distillery or brewery refuse. There is also a diseased condition produced in milk by cows drinking stagnant and foul water, which should always be guarded against, both in city and country. It has been proved by the experiments of Prof. Law, of Cornell University, that cows drinking water from impure pools—water containing fungus germs—will have these low vegetable growths conveyed into the circulation, and from the blood transmitted to the milk; that, although the milk did not at first show any signs of the fungi, yet, on standing, it turned out to be bad, and on microscopical investigation, the same fungus vegetation found in the water, appeared also in the milk. The cows, too, on examination, were found to be affected in health,

though to a casual observer they might not appear ailing. The microscopical examination of milk from swill-fed cows has shown not only fungi, but particles of pus, and there can be no doubt that serious troubles have come from partaking of such milk.

The chemical composition of milk made from slop-fed cows as compared with the composition of pure milk, shows marked variations. The following is an analysis of milk from distillery-fed cows of New York, as follows :

Water	93.0
Butter	1.8
Caseine	3.4
Milk sugar	0.7
Salts	0.1
	100

Milk of average quality has the following composition in 100 parts :

Water	87.40
Butter	3.43
Caseine	3.12
Milk sugar	5.12
Mineral matter	0.93
	100.00

Hence it is seen that the swill-milk contains not only six per cent. more water, but is very deficient in butter and milk sugar.

CURING DISEASE BY FASTING.

DR. TANNER'S experiment in living without solid food for forty days is still a topic of popular discussion. The *Adams Transcript* relates an analogous experiment or two in long fasting by a citizen of North Adams, Mass. In the latter case, however, the object was to cure a disease, and not merely to show how long he could starve himself and live.

To quote the *Transcript* :

"Apropos to the experiment of Dr. Tanner, who in New York attempted to live forty days without food of any kind, the experience of Mr. John F. Arnold, of this town, may be interesting. Mr. Arnold, as is generally known, is a radical upon the subject of health and medicine, and advocates theories which

to the majority of people appear dangerous and unwise. His story is in substance as follows: In 1839 he was very ill, and his physicians gave him little hope of permanent recovery. This fact led him to study medicine and the care of himself. About that time Dr. Graham, the well-known founder of the Grahamite system, came here to lecture, and Mr. Arnold attended the lectures and became a thorough convert. He afterward studied books supporting Dr. Graham's views, and from that day to this he has been a consistent believer in the doctor's theory. In 1847 Mr. Arnold studied the books of Dr. Jennings, of Oberlin College, and embraced his theory that disease was not an enemy of the human system, but was simply nature's method of repair, and

was right under the circumstances. The first opportunity to put his theory to practical test was in 1865, when, after a season of hard work, and being thoroughly exhausted, he was prostrated with bilious fever. Dr. Hawkes was summoned, and said that escape from the usual twenty-one days' sickness was impossible. The doctor called regularly and left his medicines, but Mr. Arnold did not take a drop of them, and allowed no nourishment to pass his lips, except pure water, for twenty-four days. For over three weeks he existed without a particle of food, and then he began to eat and regain his strength rapidly, increasing fifteen pounds in eighteen days. Not until he was entirely cured did he reveal his course to the doctor.

"Again, in 1872, after the fright and exhaustion caused by the burning of the Fifth Avenue Hotel in New York, where

he was stopping at the time, Mr. Arnold was again prostrated with bilious fever. This time he called Dr. Lawrence, and told him that he intended to fast again during the three weeks of the illness, and the doctor consented to watch the progress of the case. The result was the same as before, Mr. Arnold coming out of the fever stronger than ever, having taken nothing into his system for twenty-four days except water. Mr. Arnold's theory is that Nature, if left to herself, if the system be not broken down by previous excesses, will 'repair the machine' better than if hindered by drugs and medicines and other unnatural things. Mr. Arnold believes that Dr. Tanner will complete his seemingly impossible task, as the doctor began the experiment in perfect health, while in both instances Mr. Arnold was exhausted to begin with."

CHEERFULNESS AS A MEANS OF HEALTH.

"THE proper regulation of the passions of the mind is of the utmost consequence toward the establishment and continuance of health. He who would enjoy perfect health and long life, should cultivate a perpetual cheerfulness, and maintain a fixed resolution to be pleased with whatever may befall him; this satisfaction and content is within the reach of every one. But he who is constantly repining and fretting for the possession of some visionary bliss, or toiling in the ceaseless pursuit of that which he thinks he has a right to expect the possession of, must not wonder if his health shall be impaired by the delusive chase. Persons who indulge this wayward disposition, easily irritable, and attentive only to that which seems faulty and disagreeable to others, if everything they could wish for were at their command, would make shift to be as peevish and uneasy as if they had real cause for discontent. Subordination is indispensable, and the foot may as well refuse to perform its functions because it is not the head, as man to become dissatisfied

with his state. Every one has an undoubted right to meliorate his condition if he can, but such attempts are by no means inconsistent with the indulgence of continual good humor, with suffering the mind to dwell only on pleasing images, and with acquiescence under disappointment. Nature requires nothing but food and raiment, and some time ago a wise and good man had learned to be quite contented with them. Let us add, as another means, tenderness to all the animal creation. This softens the mind and endues it with an aptitude for the reception of pleasurable sensations, and of the finest feelings of the human heart. It is in the power of every one to exert his efforts to contribute to the pleasure and felicity of all with whom he is connected, even in the minutest incidents. Seek by all means the happiness of others, and you will find your own in the way.

"Let the same procedure be recommended to our fair countrywomen, with this additional argument, that to be *good* is to be handsome as well as healthy;

nothing improves the beauty like cheerfulness, good-nature, and a desire to please. Health, virtue, and beauty are too strongly attached to each other to be separated for any length of time; they are the fondest friends, and like other friends, by their amicable provisions, mutually improve each other. Health adorns the countenance with attractive sweetness; virtue animates every feature; beauty gives them the highest finishing, and all unite in filling the eyes with enchanting and irresistible charms."

The foregoing selection seems to me worthy a place in the columns of THE

PHRENOLOGICAL JOURNAL. Every young man and young woman in our land would be the better by being a subscriber to your valuable journal. I send you a few seeds of the "Umbrella China" tree. It is quite a different growth from the common tree, and takes its name from its resemblance to an open umbrella. If any of the JOURNAL readers desire a few of the seeds, and will send me their post-office address and stamps to pay for mailing, I will send a few of the seeds to each applicant.

ALEXANDER KING,

SAN PEDRO, Houston Co., Texas.

NATURE'S DRESSING FOR WOUNDS.

A LESSON FROM A TOAD.

A FEW years since, while standing in the shade during the heat of the day, a toad hopped along at my feet and attracted my attention from having what appeared to be a very large fore-arm. Stooping down, I found that from the shoulder to the elbow-joint the fore-leg was encased in earth, which was very smooth, dry, and hard. Inquisitiveness being well developed, I had, of course, a natural inclination to see what was inside, so holding "toady," with a piece of stick I broke the crust of hardened mud, and found, to my surprise, a large flesh wound extending from the shoulder to the elbow, half of the muscle being bruised and raw. From the smoothness of the work, I judged the dressing had been made from dry earth and the spittle of the toad, as it would be seemingly impossible for it to handle mud and apply it in such a manner. I thought nothing more of the matter for a year or more, until one night one of my children retired with a very sore toe from some unknown cause, and about midnight was wild and restless with pain. I arose and opened the ulcerated part, and afforded him relief for the time being; but the pain returned, and by the next hour he was as restless as ever. After trying to give relief in various ways I thought of the toad, and,

taking an old stocking, I put some mud, made of clay and water, into the toe part, and drew it on the child's foot. In ten minutes he was asleep, and slept well the remainder of the night, and in the morning the toe appeared nearly well. I have found that a mixture of earth and spittle is preferable, and I have used it since upon every occasion where remedies are necessary for the relief of ulcers or healing flesh wounds, and prefer it to any ointment or liniment that I have ever seen or made during many years' experience as a druggist. Furthermore, I believe that every movement that Christ made while here on earth was for the purpose of "leaving us an example," and when he anointed the eyes of the blind with clay and spittle he was using one of Nature's remedies that is always at hand to the poorest person living. If we were to follow his teachings in all things, we would be far more nearly perfect here, and better prepared for the world to come.

W. T. ALAN.

[NOTE.—With the writer's permission, we would add only that the spittle should be natural and not impaired or poisoned by tobacco-juice, if good results from such an earth-dressing are to be expected.—ED.]

THE BIBLE FOR HEALTH.

HOWEVER much professors of Bible religion may ignore hygiene, the Book itself is for the science. A better system of sanitary laws is rarely found than in the Levitical code, nor by any community were they better enforced than by the Jews. Had no more been done than the prohibition of unclean meats—carnivorous animals—the Jews had thereby been ahead of the thoughtless, indiscriminating, sickly world. But more was done. Cleanliness in all departments of life was strictly enjoined. If palsy and leprosy broke out among them, their code recognized it—especially the latter—as a disgraceful enemy, and strenuously provided for its restraint and cure. A better quarantine regulation was enforced to arrest contagious and infectious diseases, than in any of our modern municipalities.

Now, as the old logicians would say, *a priori*, one must believe that an all-wise, benevolent God would provide for the bodily health of his subjects. That splendid piece of mechanism, the human frame, the human system, most fearfully and wonderfully made, it would seem He could never abandon to ignorant abuse, pollution, and premature death. If there indeed be a God, and he indeed fashioned from the elements of matter, Adam, the progenitor of our race, and through him made all of us, how could he fail to instruct us in sanitary science and law to preserve us? Hence, the *a priori* argument is supplemented by the *a posteriori*. The reasonable expectation from the premises is, to some extent, realized in the Bible. The Old and the New Testaments, the Law, the Prophets, the Psalms, and the Gospels, all favor, not to say enjoin, the care of the health and the care of the body.

As those at all familiar with the Old Testament will recall its provisions for health, they need not here be specified. None can forget its labored details to prevent and to cleanse radically the loath-

some disease of leprosy. Such special care of this distemper obviously indicates the attention bestowed upon all similar afflictions. But an hour since I read an able article in the *Cincinnati Gazette* upon the learning, wealth, dignity, and power of the Hebrew, occasioned as scores like it, by the refusal of a Saratoga hotel proprietor to admit a Jew as a guest. It is thus seen to be impossible to ignore the power of this peculiar people, nor the reason of their success in life. Persecuted as they have been in all countries and ages, they have not only kept themselves out of poor-houses and prisons for crimes, but have amassed fortunes financially beyond any other people. To say nothing of others, the Rothschilds have, by their vast treasures, controlled States and kingdoms.

This has never been accomplished by a puny, sickly, scrofulous people. Nothing short of sound minds in sound bodies could have achieved it, nor anything short of total abstinence from the use of swine's flesh could have given them this soundness. Not a people on earth who use the flesh of that scrofulous animal are free from the disease with which it is cursed, and of which in many cases it is full. But a slight examination into its condition externally and internally, will prove this. Indeed, the name is enough, since *scrofa* means a sow. Then, to keep clear of the distemper, we must keep clear of its cause. While there is much other diet breeding other diseases, none other can surcharge the system with scrofula as the flesh of swine. And while those who keep their hogs on pure food and drink, and from the filthy wallows so many resort to, have meat less polluted than others, yet its nature can never be thoroughly cleansed. Many more dips in Jordan than were taken by the leprous Syrian, would be needed to purify the nature of this unclean beast, and then only the outside could be washed.

WM. PERKINS.

TOM-BOYS.—It is bad for girls morally, as well as physically, to have no muscular enjoyment on which to expend their spare energy. It will go off somehow, and proprietors of ladies' schools had better see that it does not go in a wrong direction. Muscular exercise is as essential to health of mind and body in girls as in boys. Decorum may be a very desirable thing, but everything must not be sacrificed to it. If there were more physical education in girls' schools, there

would probably be fewer French novels, and even worse. The outside of the platter may be scrupulously attended to, and be brilliantly clean, but that is no warranty for the character of its contents. Athletic youth may not always be very strong intellectually, but they are comparatively free from bad practices; and the morals of "tom-boys" would probably compare favorably with those of the demurest boarding-school young ladies.—*Dr. J. Milnor Fothergill.*

NOTES IN SCIENCE AND AGRICULTURE.

Geology and Human Development.—A writer to the *Victorian Review* in discussing the question, "Will the Anglo-Australian race degenerate?" produces data and facts of a very interesting nature, which go far toward an affirmative answer. Observations seem to show that as is the geological development of a country, such is the biological development of the animal life by which it is inhabited; that the human race has obtained its highest development in those regions where the soil had undergone its latest elaboration at the hands of nature. The main differences between the northern and southern branches of the Aryan race, who settled in Europe, is attributed to the influence of the soil. The latest geological formations are found in South Europe, Greece, France, Italy, Spain; also in England. Not so in Northern Europe, Australia, and Russia. In the latter, large areas belong to the transition and secondary periods; while in Persia, Georgia, and Circassia, where nature has carried her inorganic work to greater perfection, we find that here the human race attains its highest beauty and nobility. Note the contrast between Bohemia and the Serb country, as compared with the German or the average Greek; the Dane and Swede as compared with the Lapp and Finn; the Chinese south of Peking and those in the north, around Lake Baikal. In Hindostan those tribes which inhabit a primitive region look like animals, while in the peninsula, in the same latitude, in the neighborhood of Bombay, we encounter one of the noblest and most beautiful types in the world—in soil of later or modern formation. The types referred to are permanent, because faces and figures cast in precisely the same mold are to be seen sculptured on the walls of the temples of Elephanta.

This parallelism between biological and geological development is still further shown from investigations made in France by men of the highest scientific attainments. Mayne says: "The geological distribution of the

soil and the chemical composition of the arable lands, the climate, and certain economic and commercial circumstances, and the displacement consequent upon these, are the causes upon which depend the greater or less precocity of the bovine races." Duval calls attention to the peoples, the sheep and cattle of two districts in the same department of Aveyron. The Segala, who inhabit the older formation, are thin and wiry, while the Causse, who live upon the chalk formation, are more robust and better developed. Tremaux notices that the finest stock in France is reared on soils of recent formation, as in Normandy, Gascony, etc., while in Morvau, La Marche, and Brittany, the animals of the same breed are small and scraggy. In view of all the facts adduced, we can not fail to be struck by the intimate relations which appear to exist before geology and biology. That portion of our own country bordering upon the Gulf of Mexico is of later formation, and here we find that the Negro head makes the most rapid approaches to the Caucasian ideal. If these indications are rightly interpreted, we should look to our Southern States for the future Athens and Rome of America.

New and Popular Blackberries.

—A fruit-grower comments:

"*Wachusett Thornless* is a comparatively new variety, possessing what may be called an 'iron-clad' constitution. It seems especially suited to cold climates, doing even better in New Hampshire and other northern localities than it does further south. The fruit, though excelled in measurement by some other varieties, is yet of very good size and of fine quality. The thornless character of the canes will be appreciated by those whose dresses, faces, and hands do not usually meet with much sympathy from the ordinary blackberry-bush.

"*Taylor's Prolific*.—This is one of the most popular of the newer varieties, having a number of qualities of considerable merit. Though exceeded in size by some of the older

kinds, yet yielding some specimens one and a half inches long, enables it to feel that it is by no means despised. The berries are of good quality, sweet, and melting. The fruit ripens early and has the desirable habit of remaining on the bushes for some time after becoming ripe.

"*Snyder*.—This is a medium-sized berry of good quality. Like the previous kinds, the plants are very hardy. The canes are unusually productive, giving a good crop each year even upon the open plains of the Western States. This habit of productiveness is, next to its hardiness, its most promising feature, the canes at times bending over to the ground under the load of its fruit.

"*Dorchester, Lawton, and Missouri Mammoth* are older varieties of good size, that are liked in some localities. *Wilson's Early* and *Kittatinny* are, however, more general favorites, and give berries of the largest size. They are not as hardy as the others, but in the absence of better varieties have been planted out largely for market purposes."

The Willow as a Preventive of MALARIA.—Mr. Von Lennep, Swedish Consul, writes from "Mahazik, near Smyrna," to the *London Times* as follows: "Before the eucalyptus was ever heard of in Asia Minor, I had seen the bark of the willow used as a febrifuge. I had remarked the easy and inexpensive reproduction of this tree, its quick growth in damp places, its excellent qualities for fuel and for agricultural implements, and its great advantages for strengthening the banks of capricious streams, and had thence taken every opportunity after the winter floods to stick willow cuttings along the banks of streams and in other damp places in my property; also to scatter plane-tree seeds in marshy spots. The result has been that, whereas twenty years ago the full-grown trees in this neighborhood might have been counted, a luxurious growth of willows and plane-trees marks my place, fuel is abundant, fever is steadily decreasing, the meandering propensities of the streams are checked, my neighbors have to come to me for agricultural implements, and I have not far to go for timber for rough purposes."

An Inch of Rain.—Most people appear to think that "an inch of rain" is a small matter—but the "thirsty ground" will show another story. Let us calculate a little. An acre is equal to 6,272,640 square inches; an inch deep of water on this area will be as many cubit inches of water, which at 277,274 to the gallon, is 22,622.5 gallons. This quantity weighs over 113 tons.

Bad Health on Farms.—A correspondent of the *Country Gentleman* writes on this ever-seasonable topic:

"Farmers are wont to think that miasm is mostly confined to cities and large villages, and that country air is pure and farm-houses necessarily healthful; but whoever has carefully inspected the premises of the average farmer, has found abundant occasion for the

low fevers which are the scourge of the country as well as the city. In the first place, all farmers should look well to their cellars. In too many of them will be found rotten apples, cabbages, turnips, onions, etc. In some will be found old brine, with pieces of decayed meat, sending forth an odor, when the cover of the barrel is taken off, vile enough to wrench the stomach of a pig. In others there will be musty cider-barrels, possibly vinegar-casks, in which the vinegar has passed on to the putrefactive stage, disseminating the spores of decay and death, not only through the upper part of the house, but even escaping through the cellar windows and polluting the outdoor air.

"Decaying wood generates one of the most subtle of poisons, because the odor is not particularly offensive. Rotten timber in the cellars and moldy wood or chips in the wood-house fill the air with spores, which, breathed by a person in the full vigor of health, may be thrown off with impunity; but inhaled by one whose blood is low may find a congenial seed-bed and generate disease. Under the cider and vinegar barrels, and around potato bins, may often be found old timbers and boards that are full of dry rot, ready to propagate itself wherever the rotten particles may find a lodgment. In the well, also, rotten wood is a subtle poison, more dangerous than a decomposing toad, as the latter makes his presence known, while few tastes are so keen as to detect the presence of decaying wood. Probably the most prolific source of disease around our farm-houses is the cesspool into which pass the kitchen and chamber slops. In the cities and large villages these are carried off in the sewers, but seldom does a farm-house have any system of sewerage. The slops are too often thrown out of the kitchen door, and left to generate vile odors on the surface of the ground. To keep the air of the cellar and around the house pure and sweet, we have never found anything more economical, pleasant, and efficacious than a free sprinkling, as occasion may demand, of dry, air-slaked lime. Chloride of lime is a greater absorbent of vile odors, but this is itself offensive to most olfactory nerves, and is also quite expensive. Common lime is cheap, and if scattered freely in the cellar and wherever there are impurities, will render the air sweet and wholesome, even in the most decomposing dog-days.

Temperature of Soil during WINTER.—Very careful experiments were made in the *Jardin des Plantes*, at Paris, during the past winter to detect the differences of temperature at moderate depths, beneath the surface of the soil, under different conditions. The severe winter and unusual snowfall there, greatly aided the experiments. A striking difference was observed between the results obtained in soil covered with grass and those obtained below a bare surface of the ground. In the former, before as well as after the snowfall, at all depths below that of 5 centimeters, the tem-

perature never descended below 0° C. Registering 3.5° at the depth of 5 centimeters on Nov. 26th, it slowly sank to 0.18° on Dec. 14th. The presence of grass appeared to effectually protect the earth beneath it from freezing at the lowest temperatures attained in that climate. Quite different results, however, were yielded in the absence of grass. In this case, at a depth of 5 centimeters, the thermometer sank below zero on Nov. 27th. Two days later it registered -2.6°. On Dec. 3d, just before the snowfall, it reached its minimum of -3.17°. After being covered with snow it registered -0.8°, and later -1.4°. The snow here appears to act in a certain measure as a screen against changes in temperature, but its conductive properties are still too marked to prevent these changes from being felt sensibly at a certain depth in the earth. In the case of the agriculturist, this slow conduction, when united to the still slower conductive properties of a tolerably thick layer of dead shoots of cereal crops sown in autumn, may frequently insure immunity from freezing to the roots below the surface.

COUNTRY LIFE.

Me, whom the city holds, whose feet
Have worn its stony highways,
Familiar with its loneliest streets—
Its ways are never my ways.
My cradle was beside the sea,
And there I hope my grave will be.

Old homestead! In that old, gray town
The vane is seaward blowing,
The slip of garden stretches down
To where the tide is flowing:
Below they lie, their sails all furled,
The ships that go about the world.

Dearer that little country house,
Inland, with pines beside it;
Some peach-trees, with unfruitful boughs;
A well, with weeds to hide it;
No flowers, or only such as rise
Self-sown, poor things, which all despise.

Dear country home! Can I forget
The least of thy sweet trifles?
The window vines that clamber yet,
Whose blooms the bee still rifles?
The roadside blackberries, growing ripe,
And in the wood the Indian Pipe?

R. H. STODDARD.

A Strange Injury to the Head.—

Can a man have two skulls? This question has hitherto been answered in the negative, but a remarkable occurrence is related in the *London Lancet*, which seems to admonish us to review our data in cranial anatomy:

"A sequestrum, consisting of the two parietal bones with portions of the frontal and occipital bones, were recently shown to the Academy of Medicine by M. Benea. The boy from whose head these bones were obtained always had a peculiar, if not pathological, profoundness of sleep. At night

neither noise nor blows would wake him. One evening he was left alone in the house. When his parents returned, they found the boy on the floor, his head in the fire, and fast asleep. His cap and hair were burned, and also a large portion of the scalp. He was put to bed still fast asleep. The boy awoke in the morning, and went to the mountains to attend sheep, as usual. Six weeks after the burn, a large slough separated, exposed the cranial vault, and pleased the boy much, as it enabled him to carry bundles of sticks on his head without being hurt by the thorns. Six months later a large piece of bone came away, a portion only being preserved. Oiled linen was applied under the cap, and, a year after the accident, the entire wound was granulating nicely. At one time pulsations synchronous with the pulse of the wrist were observed, but afterward they could not be detected. Hence, it is not improbable a new bony covering has formed. The wound is imperfectly cicatrized, and will probably soon heal. The boy is now well otherwise, and eleven years old. The accident happened three years ago."

Destruction of Ancient Monuments.—One of the most deplorable facts connected with the East, is the destruction of ancient monuments. Marble statues, columns, capitals of exquisite workmanship, and various other works of art, such as exist in ruined cities, are being collected by the natives and burned into lime. Mr. Wood testifies to this fact at Ephesus, and Mr. F. W. Percival states that: "The Temple of Cybele at Sardis has never been excavated, and the soil has accumulated above the pavement, to a depth of at least twenty-five feet; but, even this is not sufficient to preserve it, for I found when I was there that a quarry had been dug on the north side, and that splendid blocks of marble were being broken up into small pieces to burn in the neighboring lime-kilns." Of the Temple of Diana at Tekeh (Artemisia ad Mæandrum), he says: "The walls of the peribolus are standing to a height of about twenty feet, and they have hitherto been the most perfect of their kind existing, but I fear they will soon disappear altogether, for I saw a number of men employed in pulling them down and carting away the stones for building purposes."

There is no apparent remedy for this, and in fact it is no new thing, for this matter of borrowing building materials has gone on for centuries. This system of stealing, also the practice of burning into lime, has been carried to a great extent in Palestine.

Some old ruins have been drawn upon by neighboring and modern towns to such an extent, that almost nothing is left of them. The explorer may be certain he is standing on the site of some ancient and famous city, but it is a matter of wonder to him what has become of it. At the north end of the plain of Gennesareth, there is an important buried town. It is near Khan Minieh, and in our judgment is Capernaum. The walls where

we ourselves saw them exposed, were built of fine blocks of stone, and the whole structure appeared to be of superior workmanship; but these walls are rapidly being dug up by the natives and converted into lime. Facts like these, of which numerous illustrations

could be given, ought to stimulate societies and individuals to press the matter of researches in all parts of the East with all possible diligence, in order to rescue the valuable archaeological and other ancient treasures which still remain.—*Oriental and Biblical Journal*.



FOWLER & WELLS, Proprietors.
H. S. DRAYTON, A.M., Editor. N. SIZER, Associate.

NEW YORK,
NOVEMBER, 1880.

THE CHURCH AND WARFARE.

OUR neighbor, the *Independent*, has been speaking plainly, in a recent edition, to the Church on the subject of war, and rebuking the indisposition of ministers to admonish their people against entertaining a contentious, warlike spirit. We were reminded, while reading the article, of a sermon to which we listened soon after the breaking out of the late war. The minister was one of those warm-blooded, excitable men, who in a public crisis boil over with indignation or enthusiasm, and his address was filled with rousing appeals to the patriotism of his hearers. The text, "Proclaim a war; wake up the mighty men," will, of itself, suggest to the reader the style of oratory that was dealt out on that occasion. I expected, and others, that he would offer his services to the country, after so much hot talk on the duty of citizens, etc.; but he did not. He was a large, vigorous man, a little over forty, and

would have made a good soldier, under good discipline. We fear that the Church is too much on the "militant" side to urge measures of peace and conciliation between nations, notwithstanding the mission of Christianity is "Peace and good-will to men," and in spite of strong declarations like that of St. Paul: "Whence come wars and fightings among you? Come they not from hence, even of your lusts?" We can scarcely see how a war could arise between two Christian nations if the Church were active and zealous in performing its duty. Consider the situation in Europe; powerful peoples armed to the teeth, jealously watching each other, and growling if a slight advantage, territorial or political, seems to accrue to one. What, meanwhile, is the great array of clergymen doing? Comparatively nothing. Rarely a voice, even in some obscure place, is heard in earnest protest against the show of arms and the rancor and pride that maintain the display. Europe is cursed by the standing army system. Her people, particularly the working class, are eaten out by its vast expensiveness, and morally impaired by the many pernicious influences of which it is the parent. War is a great crime against society. To use the words of Webster, it is "a tremendous evil." Inferentially, then, the maintenance of a vast horde of idle men in uniform with deadly weapons in their hands, at the expense of popular industry, is a great injustice, and fraught with evil. The record of all wars shows them to be the outcome of jealousy or greed, malice or

ambition on one or both sides. And in their prosecution the greatest sufferers have been the innocent and honest.

What a wide and noble field for a part at least of the thought and work of the minister is here presented to preach peace, reconciliation, and harmony between nations, to awaken in the minds of all classes of men the sentiments of honesty, justice, and magnanimity, so that they shall be slow to take offense, and feel that in all cases it is nobler to offer the olive branch than to throw down the gauntlet.

The man who is contentious, always alert for an opportunity to quarrel with his neighbor, is unhappy himself, and a thorn to his friends, and a conspicuous object for the ministration of the Church. So with those highly "civilized" peoples that keep their hundreds of thousands of armed guards: they are unhappy and despondent. Minister of God, do thy duty in coming to their relief.

BENEVOLENCE AND CRIME.

IN August last a man who had killed his wife under circumstances of a most revolting character was hanged. The funeral which followed the execution was of a character befitting one who had died in the midst of a career of honor and usefulness, rather than a criminal, and that one of so foul a degree as the murderer. At that funeral there was a rich display of flowers, and many people of the educated and well-to-do class were present. It was practically a demonstration of antagonism to the death penalty, but in our opinion he who was made its subject or pretext was very indiscreetly selected. The ladies and gentlemen who entered into such intimate relations with Balbo, at one time fervently pleading in

his behalf for the clemency of judges and Governor, and then exhibiting such affluence of sympathy over his coffin, might have found a case of homicide more worthy of their benevolent interest, and so have rendered themselves much less the object of journalistic criticism and popular ridicule.

In one sense those over-zealous persons put themselves on the side of the criminal and against law, to the execution of which they owe their security in person and property, and we can easily imagine the grim enjoyment felt by every desperado in the community who was made acquainted with their conduct. If they sought to make the gallows odious to the intelligent at large, their experiment failed utterly, since it brought the cruelty, ferocity, and indecency of crime into a stronger light by the endeavor to associate with it types of beauty, purity, and virtue. For the gallows, or capital punishment, we acknowledge little favor ourselves, yet can not say that in the present state of vice and crime it would be wise to suspend it. We are, however, emphatically in favor of legislation which will reduce the causes of vice and crime. "Take away the temptation and you take away the sin," said Cervantes. Then the need of extreme penalties for wrongdoing would no longer exist.

Let our excellent, humane, sympathetic people move for the suppression of that great obstacle to moral and intellectual development, the dram-shop. In number the patrons of this school of iniquity far exceeds the number of pupils in our public schools, and the amount of money worse than thrown away on alcoholic drinks, is nearly ten times that paid for the support of schools. See the statistics. Did they stop the promiscuous sale

of the exciting, passion-inflaming, disease-producing stuff, we believe that after a very few years there would be no opposition made to an act for the cancellation of hanging.

If they lack the boldness or conviction which is essential to prosecute a movement directly in the teeth of the liquor-dealers and drinkers, let them undertake a minor task like this, viz: move for a law regulating the sale of deadly weapons. We think that if dealers were required to report the sale of every pistol, with the name and residence of the purchaser, to the police authorities, the moral effect upon the community would be beneficial. There are laws touching the carrying of concealed weapons, but they are a dead letter. Perhaps some kind of an ordinance relating to the sale of pistols and guns would more easily be carried into effect, and only the knave and ruffian, whom the orderly citizen fear on account of the weapons they are known to have at hand, would object.

WHO AMONG US DO NOT READ.

IT is often asserted by people who appear to think that they ought to know about it, if anybody does, that this is a *reading age*, and that Americans are the "head" readers of the world. We had been strongly inclined to believe this, and took it for granted that the omnipresent news-vender, with his display of picture papers, Seaside, Leisure Hours, and miscellaneous joke-books, was but a natural product or expression of a common American mental quality. We travel a good deal. Almost every day finds us in the current of popular movement, and the horse-car, railway train, omnibus, or ferry-boat, sometimes this, sometimes

that, sometimes all are used in a day to facilitate changes of locality, and in each case we usually find ourselves among reading people; the business man skimming the newspaper, the working girl absorbed in the *Weekly Tale-Bearer*, the boy intensely devouring the contents of a dime novel. So we had been accustomed to regard the opinion aforesaid as one of indisputable wisdom, and he who should have ventured a doubt concerning it, would have been rated a self-confessed stupid.

We had occasion a few days since to visit a certain part of the city, and for convenience sake walked through a street at the river terminus of which an important ocean steamer line has its dock. It was shipping day, and a long line of loaded trucks and carts extended from the dock up the street for a good quarter of a mile. There was an occasional advance of the line as a cart at the front having delivered its freight, was driven away, but this movement was chiefly undertaken by the horses, which acted quite independently of their drivers, being accustomed doubtless to this sort of work.

We calculated, after observing two or three of these advances, that three-fourths of the carts would be kept waiting from half an hour to two hours for their turns.

Meanwhile, what were the drivers doing? Making excellent use of this leisure opportunity, the reader will answer, for the improvement of their minds; in other words, reading, of course. No. Sadly we utter it, no. We looked with earnest scrutiny all along the line, and saw that every driver was indulging in a posture of the utmost indifference to the passage of time and its economical possibilities. Some were bent forward on their seats with elbow on knee, gazing

vacantly forward, or ogling the passing pedestrian. Some were stretched at full length on their seats, apparently enjoying an accustomed afternoon nap. Some had descended from their wagons and were leaning in a listless way against the wheels, or sleepily lounging about on the sidewalk. Not one held in his hand the expected book or paper. Shades of John Hay and the Danbury Newsman! Can it be that the critics of the "higher

literature" have been misled in their conclusions? "A reading age," and "a reading people," and to have thrust in our face the spectacle of a hundred stalwart men lazily dreaming away the hours of a quiet summer afternoon without one of them making even an apology of an effort to vindicate the reputation of his fellows from the grave indictment of casting a stain upon the high literary character which Americans have hitherto worn!



"He that questioneth much shall learn much"—Bacon.

Go Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. But one question at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of an early consideration.

IF AN INQUIRY FAIL TO RECEIVE ATTENTION within two months, the correspondent should repeat it; if not then published, the inquirer may conclude that an answer is withheld, for good reasons, by the editor.

WE CAN NOT UNDERTAKE TO RETURN UNAVAILABLE contributions unless the necessary postage is provided by the writers. IN ALL CASES, persons who communicate with us through the post-office should, if they expect a reply, include the return postage, or what is better, a prepaid envelope, with their full address. Anonymous letters will not be considered.

VINEGAR.—*Question*: Why is it so difficult to find good cider-vinegar nowadays? My wife scolds a good deal about the rotting, poisonous stuff the grocers sell for vinegar.

Answer: The main reason is that genuine cider-vinegar can't be made in a hurry. A good article of cider will be two or three years in becoming vinegar, unless kept at a high temperature, when a few months may suffice. The larger portion of that sold as cider-vinegar is as innocent of apple-juice as possible. Better not use the sour stuff any way; but eat fruit, which will supply a form of acid more suitable for your stomach.

WATER AT MEALS.—C. L. H.—It is best to drink no water while eating, but on finishing a meal, a glass of pure water may be drunk to serve for the cleansing of the mouth as well as to moisten the food in the stomach, and thus provide such liquid as is demanded by the

process of digestion. People dyspeptically inclined should be very particular in the matter of drinking. The sense of thirst is a guide for drinking. It is not injurious to drink freely of water in warm weather; the perspiration then being rapid, much water is required for the processes of nature, particularly during severe muscular exertion, but one should not drink iced-water while perspiring freely under any circumstances. It is best to take water moderately cool, not disagreeably cold, as we think iced-water is to the natural taste.

LARGE, STRAIGHT MOUTH.—S. J. G.—A large mouth, not a deformity, is regarded by physiognomists as indicative of breadth and strength of character, especially if it be straight. Men who are noted for their decision and power, have straight mouths generally.

RUMBLING NOISE IN THE BOWELS.—You are probably afflicted with what is popularly called wind dyspepsia. Avoid eating food which has a tendency to the production of gas. Excessive drinking of liquors serves to generate gas.

PORK EATING.—*Question*: Is it right, according to health or the Bible, to eat pork?

M. D. J.

Answer: No. This subject is briefly discussed in this Number of the JOURNAL.

PRESCRIPTION.—D. ONT.—Your question being of a private nature, you should have inclosed the necessary postage-stamp for an answer.

FRECKLES.—A. C.—These troublesome patches indicate a disturbance in the functions of the skin. The capillaries are congested with effete or excrementitious matter, hence the yellow

lowish discolorations. Persons who are troubled with this are in the habit of eating food which has too much carbon in its composition. They are fond of butter, sugar, salt, gravies, rich sauces, etc. The character freckles represent is that of carelessness; in diet, perhaps in washing, too, rather than anything of a special moral type.

REPUBLICATION.—E. H. R.—We thank you for the suggestion; it is so long since the "Theories of the Organization of Mind," by Dr. Washington, was published, it would probably be new to the great majority of our readers. At the time the paper was published we were strongly impressed by its value, and have no doubt it would be acceptable to all.

MEMORY.—What is the best method by which one can improve his memory for names and quotations? I have a first-rate memory for dates, numbers, and substances of stories, etc., but it is almost impossible for me to call to mind names, or to make use of a quotation at a desired moment, when it is of the most familiar kind.

Answer: We suppose your Eventuality is moderate in size and activity, while Calculation, Time, and your reasoning faculties are fairly developed. Cultivate the habit of fixing your attention upon what you read, especially that which contains names and phrases which you would keep in memory. Attention is the one chief element in memorizing. A little book published at this office on "Memory and Self-Improvement" contains suggestions of value to you.

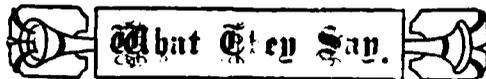
EARS AND THEIR SIGNIFICANCE.—F. M.—The ears bear a close relation to the temperament of a person. Those having a fine quality of organization, and coincidentally a marked expression of the Mental temperament, usually have symmetrically, delicately chiseled ears; while those who are coarse in organization have large, broad, heavily-wrought aural appendages. The lower or pendulous part of the ear, to which you allude, differs much in different persons; with some it is long, soft, and velvety; with others it is hard and gritty, the type which usually presents the Motive temperament in strong predominance.

ABDOMINAL TROUBLE.—J. M. P.—We infer from your description that you are afflicted with a form of inflammation of the digestive tract; that it has close relation to the disease in the feet, we are doubtful; that may have proceeded from a depraved condition of the blood or a defective circulation, but is not necessarily the resultant of a bowel trouble. We think that fomentations in the hydropathic manner would be a benefit to you. The process is described in the hydropathic or hygienic manuals.

ACTS OF CRUELTY IN THE BIBLE HISTORY.—I. W. R.—There are many things in the Scripture record which are hard to understand. We have been puzzled often enough by the statements you quote, and we have sought to "reconcile" them by attributing their apparent cruelty or barbarism to, First, The condition of mankind at the times. Wars in the ancient days were conducted in the most destructive manner. The conqueror ravaged the country of the conquered, sought to destroy it utterly; or he made it his own by enslaving or dispersing the inhabitants. To be sure, the Bible historians speak as if they were declaring the counsels of Jehovah, but their language may be somewhat inflated, and akin to the style of writing then in vogue and still common in the East. Second, We only look upon these terrible occurrences as punishments for the idolatry and corruption of the peoples upon whom they were inflicted.

With reference to the death of the swine related in the New Testament, we think one may take their destruction as an expression of the will of God with regard to their use; swine flesh being prohibited as food, therefore the keeping of swine, evidently for such a purpose, would be contrary to the express command of God. We regard as the most convincing proof of the truth of Scripture, its inherent quality, the high tone of its moral teachings, the naturalness and fullness of its narrative (by fullness we mean the lack of attempt to condone or excuse the improper conduct of nations and of men, not excusing the fault of its principal characters, while at the same time it holds up their virtues); its general comprehensiveness so far as human character is concerned, and the directness of application to every conceivable phase of conduct.

We think if you were to read Paley's "Evidences of Christianity," you might obtain many instructive suggestions.



Communications are invited on any topic of interest; the writer's personal views, and facts from his experience bearing on our subjects, being preferred.

SPIRITUAL TELEGRAMS.—Life is a web of mysteries, but "the mystery of mysteries" is the workings of the human soul. That intelligence of a state of being or a state of events is conveyed from one kindred spirit to another—sometimes direct, sometimes through the agency of a third—separate and apart from man's instrumentality—is a fact which I think has fully established itself in the mind of every intelligent and observant man and woman.

Through this mysterious and invisible agency long and wearisome journeys have been attempted, sufferings relieved, the last kiss given, the final farewell spoken, ere the soul of some dear loved one winged its way across the mystic river to the land beyond the tomb.

As space pleads brevity, we will record but a few of the many instances brought under notice.

Mr. A., a Christian gentleman of undoubted veracity, states that being engaged upon a certain time in hewing timber, he wounded his foot severely with the axe. As he was a great distance from home and among strangers, his situation caused him much anxiety and trouble of mind. That night intelligence of the event was conveyed to his brother remaining at home, who supposed that he had dreamed. So impressed was he, however, with the feeling that the accident had really occurred, that at early dawn he saddled his horse, sought out his absent brother, and found his condition to be *precisely as stated in the seeming dream*. Had this been an ordinary dream he would have banished all morbid forebodings from his mind—but—a *message* had been transmitted and the messenger ever faithful urged through the channels of brotherly affection and esteem, compliance with its demands.

A lady residing in St. Louis was deprived by death of an amiable and much-loved daughter. The night following the interment of the body, she received a *message* stating that — she was alive in her coffin. Although it was a late hour of the night she hastened to the residence of her son-in-law, and through tears and entreaties induced him to accompany her to the tomb. Upon opening the vault they found the lid of the coffin partly raised, the body turned upon its side, the grave clothes rent, and every evidence that the entombed had awakened from that death-like sleep, but life was now extinct; help came too late. The messenger was prompt—"souls chained to clay" were tardy and the grave had won.

In the case of Mr. Danskin, who was telegraphed for by his dying wife, we quote :

"I became interested in the movement; was engaged with the Business Committee, and anticipating a pleasant week among our friends, when suddenly on Wednesday afternoon I received a strong impression to return home immediately. After some efforts at resistance I reluctantly complied, feeling that I had not yet accomplished my work in Providence. When I reached Baltimore, I learned that I was probably just in time to see the last earthly moments of one who has been the central thought of my life for nearly twenty-seven years. WASH. A. DANSKIN."

We might mention the case of the German mother of Brooklyn, O., who disinterred with her own hands the body of her child which had been buried alive. Of Prof. J. H. Hertig, a

noted lecturer on Phrenology, who was apprised of his brother's illness through this mysterious telegraphy; but we will not multiply proof.

G. Albert Loomis, in his "Nature and Power of Influence," sustains me when he writes: "There are some who are so sensitive as to be able to receive intelligence from an immense distance, and to affect others at a distance; we may have experienced the fact in a minor degree." The author of "Brain Waves" strengthens my theory also. I am not a believer in Spiritualism as professed—do not believe that the souls of departed friends revisit or communicate with those on earth—but I believe that there is spiritual intercourse on earth, although a great distance may intervene between those who communicate to one another. The bond of fellowship must also be close. We find that this power exists between husband and wife, parent and child, brother and sister, and only those who hold true fellowship with one another. Heaven-ordained marriages are a union of soul and body—a husband and wife are literally one, and consequently if one suffers, the other in some way partakes of that suffering also. H.

THE PHRENOLOGY OF A SMILE. — What is a smile? All infants laugh perhaps. But what is an infant laugh? A smile, you say, and you smile as you say it, seeing you are as far from the answer as before. Let us analyze a smile. Let us remove the outer covering and inspect the mechanism which produces and controls this smile.

Outwardly, a smile is a contraction of the muscles of the face, and particularly those of the mouth. This muscular contraction is caused by the psychological action on them, through certain fixed points or poles situated particularly around the mouth, of a current of galvanism (or some similar psychological force) emanating from the organs of *Approbativeness, Amativeness, Adhesiveness, Suavity, Philoprogenitiveness, Mirth, Self-Esteem*, etc.

The diagram on the opposite page will illustrate their action, the *dashes* representing the lips, the *figures* the poles, and the *letters* the organs.

Now let us suppose the organ of *Approbativeness* (Ap) to be excited. A current immediately flows from that organ to the pole (1), from which point it attracts and draws towards it the ends of the lips in what may be termed a longitudinal smile. *Suavity* (Sy) also acts through this pole, and produces a similar smile, but with more intensity.

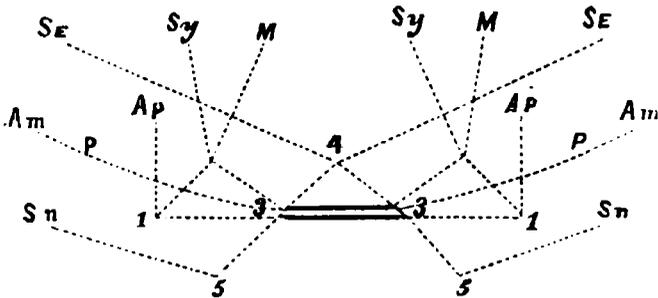
When *mirth* (M) is excited the galvanism generated flows to the pole (2), and from that point draws the corners of the mouth upward in the smile of mirthfulness.

Then when *Philoprogenitiveness* (P) is excited,

a current flows to the pole (8) situated at the end of the lips, and from thence draws the corners of the mouth in a sort of knot, as it were; and it is this spot, right over the pole (3), which the mother offers her child in the parental kiss.

Then we have the smile of Self-Esteem, which is caused by the pole (4) being acted upon by the organ (SE), thus drawing the upper lip toward it and producing the proud, self-satisfied smile. Suspicion, produced by the action of Cautiousness and Secretiveness, acts upon the pole (5), and draws the lips downward in the smile of unbelief.

Amativeness acts through the pole (3), produc-



ing in normal action much the same smile as Parental Love.

The smiles above described are the result of the action of but one or two organs; but complex smiles are often produced by the combined action of several organs. Thus a smile of social interest may be caused by the combined action of the organs of Adhesiveness, Amativeness, Philoprogenitiveness, and Suavity, or Approbativeness.

The eye is also more or less concerned in a smile, its muscles being acted upon through its own proper poles, and in concert with the lips.

JAY EDGARE.

"EASY DIVORCE."—The able article on this topic that appeared in the *North American Review* for June, and which was commented upon by the editor of the PHRENOLOGICAL, was particularly interesting to me from its importance, and yet does it not seem as if there were some exceptional cases, not one of which is mentioned? Not but that what is stated is true in two-thirds of the cases, but how many suffering hearts are bleeding in America as well as in other lands, whose owners did not marry in haste, yet were not fitted for each other. Thus one was obliged to go up to the higher, or the other come down to the lower, always creating a difference. It may be their cause of suffering is in a different form. They may be on the same level and yet their tastes are different. They can not or do not mutually agree on anything, and thus as they go on in life new causes of discord are continually springing up.

They have a certain amount of love for each other, and that, with a love for their children, prevents them from being divorced, and they live on with an utter want of harmony in all that they do.

If our young men and women were taught to seek a suitable companion, what untold suffering would be avoided.

To accomplish this ought not our young men and women to study each other's characteristics and idiosyncrasies?

The science which gives the needed information on this subject might well be taught in our public schools and colleges, and thus supply our youth with a much better idea of the essentials of fitness, and why such a one is better suited for their happiness than another; and thus in choosing a companion, they may be enabled to choose one with whom life would be happy and useful. Then might we be rid of these sorrowing mothers and fathers who are not fitted for each other.

Then we should find that there would be none of the trials of husbands and wives living together for their children's sakes, striving to keep their marriage vows, though they are not able to do it as they should, having married above their station or perhaps below it, or may be having chosen a companion who could not sympathize with their tastes and feelings.

I feel and know from what I have seen, that there are those who suffer, in the way I have mentioned, and they are as much, if not more, to be pitied, as those who marry in haste and repent at leisure. The latter are usually frivolous, capricious, and superficial, while the former are nearly all consistent Christians, who made their mistake from a want of knowledge.

I do not mean to convey the idea that this is all Phrenology and Physiognomy are good for, but if they can accomplish this and remove some of the silent sufferings of mankind, who will question their further value? OCEIL H. HOWARD.

SIGHTS IN NEW YORK.—"ALVINE."—Among the more noteworthy features of interest to the stranger are: the Metropolitan Museum of Art, Central Park, the Zoological Garden, High Bridge, the Elevated Railways, the Custom House, U. S. Treasury Building, Western Union Telegraph Building, Cooper Union, Grand Central Depot, the Bridge Towers and construction, Broadway, Fifth Avenue, and Madison Avenue, Sixth Avenue and other business centers. There are numerous pleasant and instructive excursions to suburban places, etc. By procuring a Guide-book—which will cost you 25 or 50 cents, you can make a tour through the city in a systematic and rapid manner.

THE UNKNOWN VOICE.

I SAT in the church one morning,
In the loveliest month of the year,
And the air was all laden with sweetness,
The Rose—queen of flowers—was near.
I sat by an open window,
So the songs of the birds floated in,
And they mingled with prayer and praises,
With confessions of sorrow and sin!

The trees, with their fluttering leaflets,
Seemed to wish for a part in the song,
And were helped by the delicate zephyrs
Which ever came gliding along.
But even the odorous breezes
And the songs of the bird and the bee—
As I sat by myself, nigh to fainting—
They were no evangels to me.

I scarcely could breathe responses
In the beautiful, pure Litany;
From senses all things were receding,
Afar seemed the preacher to be.
But, hark! what a voice sings near me!
'Tis a voice filled with pathos and love;
'Tis a voice of such sweetness and clearness,
It surely the coldest must move.

'Twas *not* just the voice of the singers,
Those, I mean, who sit up in the choir;
Not a voice that was used for attraction—
Such voices you often can hire.
But, oh, it was pure in utterance,
Every note filled with trust and with love!
And I know well that soul's fervent offerings
Were wafted in song up above.

It waked up my slumbering senses
To the truths that were precious and dear,
As I sat in the church on that morning
In June, fairest month of the year.
I looked, when the service ended,
To find out who the singer had been,
And I saw—just a plain, simple woman,
As anywhere you may have seen.

And who could have thought such power
Or such music lay hid in her throat,
Or have dreamed of the delicate sweetness
That ever to heaven should float!
And so, I exclaimed, the Poet,
Pure his life, or distorted by wrong,
The sweetest and best that's within him
He pours it all forth in his song!

GRACE H. HORN.

PERSONAL.

VICTORIEN SARDOU, the eminent French author, has bought the door which Charlotte Corday opened when she entered Marat's bath-room in order to kill him.

MRS. HAUSSMAN, of Texas, sent to Galveston the first bale of cotton in the crop for five sea-

sons, receiving the usual premiums for it. This summer she received four hundred and thirty dollars for two bales sent to Houston.

KING LUDWIG II. of Bavaria recently celebrated his birthday anniversary and the seven hundredth anniversary of his dynasty, the Wittelsbachian. The King did not show himself in his capital, but caused a letter to be written, thanking his people for their congratulations and asking them not to go to any great expense on his account. They say he's *eccentric*—for a king.

PROF. ALEXANDER GRAHAM BELL has received the Volta prize of the French Academy of \$10,000 for the telephone, as "the best application of electricity." Edison doubtless expected it too.

WISDOM.

"Think truly, and thy thought
Shall be a fruitful seed."

DOST thou love life? Then do not squander time, for that is the stuff life is made of.—FRANKLIN.

A SMILE is a light in the window of the face by which the heart signifies to a friend that it is at home and waiting.

TIME is the ally of truth, and wise men believe nothing but what is certain and what has been verified by time.—DRAPER.

THE final result of human inquiry is the discovery that man is incapable of absolute knowledge; even if the truth is in his possession he can not be certain of it.—DEMOCRITUS.

LIFE must be measured by action, not by time; for a man may die old at thirty, and young at eighty; nay, the one lives after death, and the other perished before he died.

THE mind always influences physical health. To be perfectly healthy one must be morally pure and good. Consciousness of sin always depreciates the strength of bodily functions.

REJOICE, oh, grieving heart,
The hours fly past;
With each some sorrow dies,
With each some shadow flies,
Until at last,
The red dawn in the east
Bids weary night depart,
And pain is past.

—Proctor.

LIFE is a book of which we have but one edition. Let each day's actions, as they add their pages to the indestructible volume, be such as we shall be willing to have an assembled world to read.

OUR motives are never quite so good as we think, and never quite so bad as our enemies suppose. Our best is inwoven with evil, and our worst, let us hope, has some strands of good. Only God can unravel the complexity.—EDWARD EGLESTON.

WHAT IS THE WORLD?—A dream within a dream; as we grow older, each step is an inward wakening. The youth awakes, as he thinks, from childhood; the full-grown man despises the pursuits of youth as visionary; the old man looks on manhood as a feverish dream. Is death the last sleep? No; it is the last and final awakening.—WALTER SCOTT.

MIRTH.

"A little nonsense now and then
Is relished by the wisest men."

NEXT to a clear conscience, for solid comfort, give us an easy boot.

MEN who live in glass-houses should be conservatory in their opinions.

NOTHING embarrasses a man more than to see a quarter on the floor of a crowded street car, and not know who dropped it.

WE wonder how many of our ministers this fall will drop an occasional aside into their sermons, beginning: "When I was in —."

AUGUSTA DABILA (artist), "Don't you think it is about time I exhibited something?" Severe critic: "Yes, a little talent, for instance."

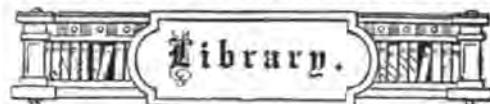
TOMMY went fishing the other day without permission of his mother. Next morning a neighbor's son met him, and asked: "Did you catch anything yesterday, Tommy?" "Not till I got home," he answered sadly.

LADY—"A pretty sight, isn't it, doctor? I don't see any of your little ones here? I hope you don't disapprove of juvenile parties?" Dr. Littlelums (famous for his diagnosis of infantile diseases)—"I, my dear madam? On the contrary, I live by such parties!"

A TRAMP woke up suddenly with cold sweat standing in great beads upon his forehead. "What's the matter," asks his companion. "A frightful dream! I dreamt I was at work!" "I told you that last mince pie would give you a horrid nightmare."

A DROLL fellow fished a rich old gentleman out of a mill-pond, and refused the offer of twenty-five cents from the rescued miser. "Oh, that's too much!" exclaimed he; "tain't worth it!" and he handed back twenty-one cents, saying calmly, as he pocketed four cents, "That's about right."

MEN are a good deal like hymns. There are short-metre men, sharp, blunt, and hasty; there are long-metre men, slow, weighty, and dignified; hallelujah-metre men, mercurial, fervent, and inspiring; and there are eights-and-sevens men, gentle, genial, and delightful. There are many too who are peculiar-metres.



In this department we give short reviews of such New Books as publishers see fit to send us. In these reviews we seek to treat author and publisher satisfactorily and justly, and also to furnish our readers with such information as shall enable them to form an opinion of the desirability of any particular volume for personal use. It is our wish to notice the better class of books issuing from the press, and we invite publishers to favor us with their recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

CHRISTIAN SOCIOLOGY. By J. H. W. Stuckenberg, D.D., Professor in the Theological Department of Wittenberg College. 12mo, Cloth. Price, \$1.50. New York: I. K. Funk and Company.

It is apparently strange enough that the author claims for his treatise, the opening practically of a new department of thought. Yet as a German writing for Germans, he is in the main right, while for Americans who are acquainted with the works of Osgood, Bushnell, Aikman, and Weaver, he is partly wrong. We say partly, because it is fair to admit that Dr. Stuckenberg has taken the lead in outlining a system or method for the study of Christian sociology, and thus as it were given a scientific or practical turn to the subject.

We have for many years thought that society needs nothing for its elevation in all that relates to the useful and pure and happy, so much as a strong infusion of Christian principle, and cordially welcome every suggestion that will help toward making the doctrine of Christ thoroughly understood.

The author finds the essential elements of his system in the New Testament, and compares the teachings of that book with those of German, French, and English rationalists. The life of Christ is an exemplification of the sociology he taught to the farthest degree that a teacher and missionary could go. The truth he taught "is not abstract or speculative, but it is practical, adapted and applied directly to human needs." Being instinct with life it commends itself to the living spirit and thus must be the fundamental constituent in the society of which he is the author.

The development of the new life communicated by Christ would regenerate men, and free them from the dominion of appetite and passion—saving them not only for the next world,

but also for this. Inferentially, then, the spirit of man is the controlling agent in this system, the higher nature subordinating and controlling the lower, ennobles man and purifies all his relations.

REPORT ON EDUCATION. By E. Seguin, United States Commissioner on Education at the Vienna Universal Exhibition. Second Edition. (Authorized and Revised by the Author). Milwaukee, Wis.: Doerflinger Book and Publishing Company.

Dr. Seguin's first published report proved the wisdom of his selection for the peculiar and difficult duties of a Commissioner on Education at the Vienna Exhibition. It was a review in detail of the different school systems represented on that occasion, and contained many suggestions of great value to educators everywhere. This new edition is much more elaborate, bearing on every page the marks of careful preparation. As the author has made the study of feeble-minded children a specialty for many years, the book has the character of a scientific manual in which the learning and experience of one of our best known observers are embodied. We have found it exceedingly interesting, and commend it heartily to the intelligent parent and teacher. In statements like these, Dr. Seguin touches the heart of the subject of education, we think: "Youth has a horror of the vacuum; and if their emotional capacity is not educated in and for their horizon, they are carried away from a home empty of ideas, into the vortex of competition where the weak soon perish. For this individual evil and social danger, a vague culture and non-physiological education are responsible."

"What we make children love and desire is more important than what we make them learn; at any rate make them learn what they can reach, and make them love what they learn."

PUBLICATIONS RECEIVED.

THE HERMITS. By Charles Kingsley, Canon of Chster. Complete. Price, 15 cents.

TWO OF THE NAME, in "The Philadelphia Library." By Col. June Lewis. Quarto, paper. Price, 15 cents.

THOMAS BROTHERS' MUSICAL JOURNAL contains musical news and comments with three or more compositions, vocal and instrumental. Published at Catskill, N. Y.

THE WIDE-AWAKE for October is full of life and fun, and contains also here and there golden grains of useful admonition for young people. The biographical sketches on popular artists which have been running through recent numbers, are interesting and useful. Published in Boston, Mass., at \$3.00 a year.

LIPPINCOTT'S MAGAZINE for October is an admirable example of this high class publication.

The literary contributions are not exceeded in quality by those of any other contemporary, while its engravings will compare favorably with the best specimens of wood-cuts in other magazines. Published in Philadelphia. \$4.00 a year.

REPORT OF THE BUREAU OF GENERAL SANITARY SCIENCE, Climatology, and Hygiene, to the American Institute of Homœopathy, Session of 1880. Compliments of Bushrod W. James, M.D., Chairman.

A neat document containing many facts which set forth strongly the relation of filth and uncleanness to epidemic diseases. Good reading matter to all sanitarians whatever their color.

THE CURFEW SHALL NOT RING TO-NIGHT. Words by Grace H. Holt, music by Alberto Himan. Price, 35 cents. Himan & Woodward, New York.

A neat little lyric on a most appropriate theme, by a poetical contributor to the PHRENOLOGICAL. The music is simple yet sweet, and in harmony with the pathetic verse.

PROCEEDINGS OF THE FOURTH NATIONAL CONVENTION of the Prohibition-Reform Party, held at Cleveland, Ohio, June 17, 1880.

An interesting document adding some powerful items to the already full list of evidences against liquor. Published by the National Reform Committee of the Prohibition-Reform Party of New York.

MR. HORN AND HIS FRIENDS; or, Givers and Giving. By Mark Guy Pearse, author of "Daniel Quorn," etc. Illustrated. Price, 15 cents.

THOUGHTS OF THE EMPEROR M. AURELIUS ANTONINUS. Translated by George Long, revised and corrected. Price, 15 cents.

JOHN FLOWMAN'S PICTURE; or, Mr. Pitt's Plain Talk for Plain People. By Charles H. Spurgeon. Illustrated. Price, 15 cents.

THE SALON OF MADAME NECKAR. Taken from documents among the archives of Coppet, collected and edited by her great-grandson, Athenin D'Hausonville. Volume II. Translated from the French by Mary Stuart Mill. Price, 15 cents.

The four above-named reprints of well known European authors, are new issues in the "Standard Series," published by I. K. Funk & Co., of New York City.

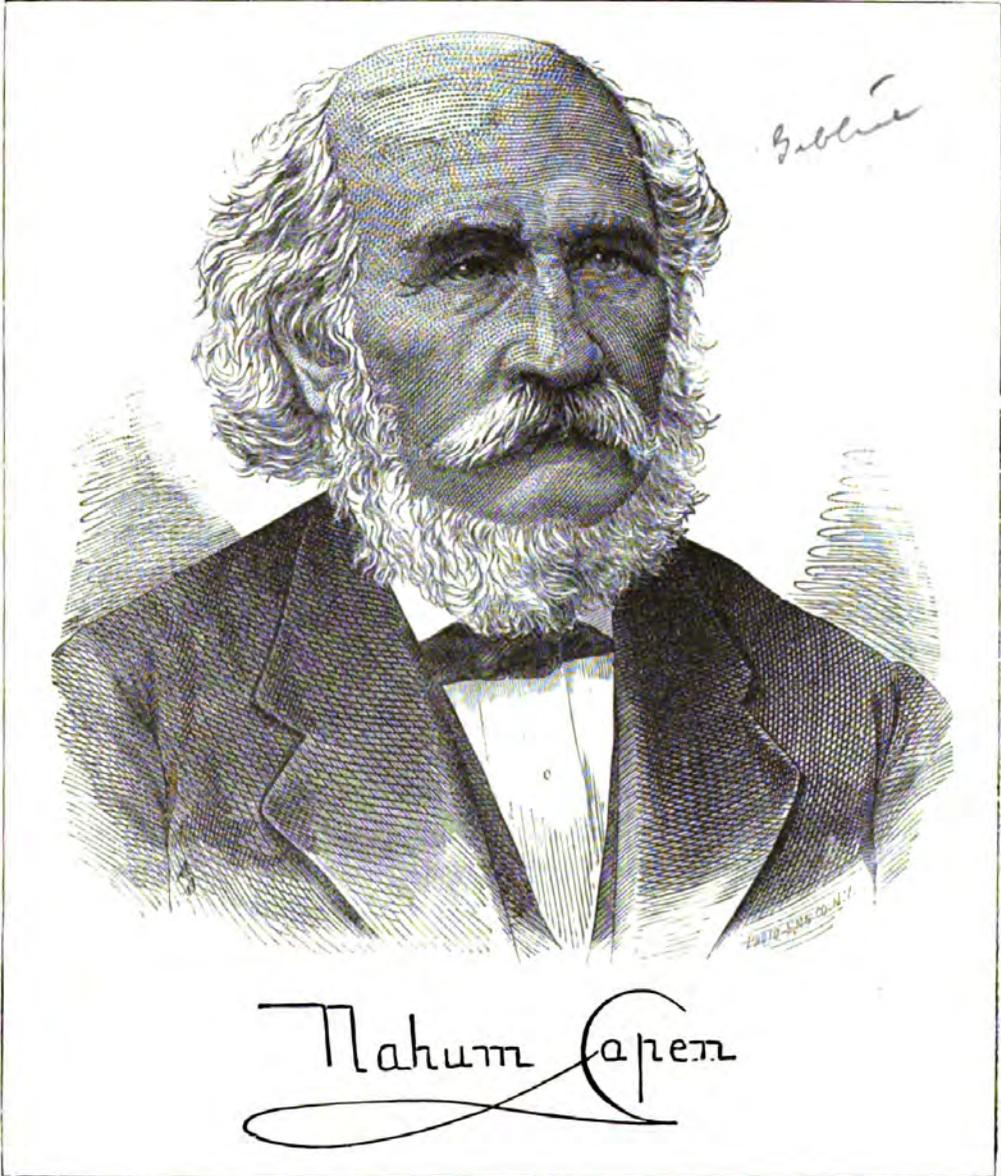
WESTERN FARMS OF AMERICA. By Augustus Mongredien. This tract, from an English observer, contains a deal of practical admonition, both for American farmers and for foreigners, as he looks to America as the field in which to operate agriculturally. He, of course, is on the free trade side. Published at threepence, or six cents. By Cassel, Petter, Galpin & Co., New York, London, and Paris.

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[WHOLE No. 505.



NAHUM CAPEN, LL.D.

THE organization of Dr. Capen is remarkable in several important particulars. Physiologically, he is fine-grained and compact. He has a pre-

dominance of the Mental temperament, the brain and nervous system being large and exceedingly fine in quality. This constitutes him at once sensitive and susceptible, and gives him a hunger for knowing, appreciating, enjoying, realizing whatever belongs to scholarship, investigation, and mental acquisition.

He has also a good share of the Motive or bilious temperament, which imparts a love of action, a spirit of working, a tenacity of endurance for continued effort, and toughness under trials and hardships. Thus he has, through the Mental or nervous temperament, a studious, thoughtful, investigating, and philosophical spirit; and this being sustained by the enduring temperament, renders him a persistent thinker and worker, and although he has sometimes over-worked, his quality of constitution has been such as to sustain him in more effort than most men of stronger appearance would have been able to endure. Men may desire to study, to write, to speak, but may lack the temperamental quality to sustain them, and they thus lose the spirit of effort because they lack the power to sustain them in it. Our subject would show enduring power as a marked quality. His hair is firm and strong, though not coarse, and being originally dark, is in harmony with the temperament most often found with dark hair.

He is naturally very sprightly and active bodily; quick in movement, prompt in action, and remarkable for accuracy in every motion.

He has a thinker's breadth and scope of mind; the forehead is massive and amply developed in the lower part as well as in the upper part, the one configuration giving perception of facts and details, the other imparting the philosophi-

cal power to co-ordinate facts and particulars, and refer them to their ultimate result. As a fact-gatherer he has few equals, and he remembers the knowledge that he thus acquires, so that it is clear and fresh in his mind after a score of years.

The organs which are devoted to analysis and logic, to the criticism and comprehensive philosophy of subjects have evidently grown within the last twenty years. We have before us a fine steel engraving made of him when he was about fifty, which shows more development of perception than of reflection, whereas his head to-day shows that the reasoning organs, and those along the upper side-head which tend to combine, invent, co-ordinate, and study the relation of facts and principles, have been more developed of late years.

His large Constructiveness and Ideality, working together, have enabled him to do much of the work which he has performed in reference to an improved system of education, and other subjects which require one to walk in untrodden paths and develop new subjects.

His large Benevolence gives him a spirit which is comprehensive, generous, and liberal. He is specially well developed in those mental faculties which appreciate and enjoy the study of human nature; and these give one a relish for biography, in which department of literature he has become distinguished. These elements led him to study and appreciate the new mental philosophy as taught by his friend Dr. Spurzheim, whose biographer he became, and who was the publisher of the earlier works in this country on the new philosophy of mind.

The entire top-head shows ample development, indicating strong Firmness,

which is one of the most distinguishing traits of his character; it reveals also **Conscientiousness**, which gives life the savor of justice and integrity. His **Hope**, **Reverence**, and **Spirituality** are all amply developed, which render him youthful in old age, and impart freshness to his plans and his workings; and though he has the ripeness of age and large experience, his mind acts with a vigor and hopefulness, as if there were to be no termination to its work.

He is very orderly, systematical, practical, and a critic of facts, qualities, and things. He has artistic taste, and might have succeeded well in drawing and modeling. His **Constructiveness** would have helped him as an engineer or inventor, had the channel of his thought been in that direction.

He has **Caution** enough to render him prudent, guarded, and safe in his counsels and conduct, but he will show a confidence in the value of a cause that will laugh at loss or danger; what ought to succeed, he is willing to work for, whether he attains triumph, or simply leaves a record of good effort in the right direction for the encouragement of others.

He has a social nature which wins for him friends, renders him loyal to those he loves, and enables him to keep their memory fresh long after their career is closed; he thus possesses the spirit and talent which a good biographer requires, combining strong affection and an excellent memory, with a keen appreciation of the qualities of character and the literary ability to set forth his thoughts. His power as a biographer is rarely equaled.

He has the talent for science, a kind of mathematical sense which leads him to desire demonstration in everything he attempts; he wants to put the argument

beyond the reach of cavil, and he has a wonderful method of making himself clearly understood on topics in the treatment of which most people are involved and wanting in definiteness.

He has the power to be a vigorous thinker and a forcible writer. His **Language** is large enough to make him scholarly in that direction, and has an admirable facility for making his thoughts shine forth distinctly and clearly.

He has not enough **Self-esteem**, which has given him a hesitancy about assuming as prominent a place as his talents and worth would warrant; consequently his character and talent have been manifested in channels more quiet and less conspicuous, and with results more confined to the knowledge of thinkers than known to the general public; hence, while he has aimed to work for humanity at large, he has done it in a noiseless way, like those who frame laws and plan schemes for education which may be indicated and enforced by others who win the recognition rightfully belonging to the originator, and to the worthy few who have been his coadjutors. He has done the work of a thousand men in the direction of education, while others, following his thought and guided by his sagacity, have won the recognition that rings around the world.

NAHUM CAPEN was born in Canton, Norfolk Co., Mass., April 1, 1804. His ancestors were among the earliest settlers of Dorchester, and among the largest land-holders in the counties of Norfolk, Plymouth, and Bristol, and are supposed to be the progenitors of all bearing the name of Capen in New England, if not in the United States. His father Andrew Capen was "a quiet citizen, an independent thinker, and a true gentleman," dying June 1, 1846, and at the age of eighty-

nine. His mother died three years before, at the age of seventy-three.

When comparatively young Mr. Capen undertook matters of study and thought which required much research and intellectual maturity. As a student he was a leader among his fellows. At the age of nineteen he wrote out "Plutarch's Lives," with notes upon each according as his reading suggested. He had chosen the medical profession as a pursuit while a mere boy, and before attaining his majority had commenced its study with Dr. Robert Capen, his eldest brother. But he was compelled to give it up on account of ill health, and engage in a more active pursuit.

At the age of twenty-one he commenced business as publisher and bookseller in Boston, with a branch in Concord. N. H. His firm, Marsh, Capen & Lyon, and its successor, Marsh, Capen, Lyon & Webb, were well known forty years ago for enterprise and connection with distinguished authors. In business relations Mr. Capen was an independent critic, not hesitating to advise authors according to his best judgment. He was selected by Hawthorne to read his first manuscript, which was published anonymously. When Washington Irving submitted to him his "Life and Times of Mahomet," he reluctantly told him that he had not redeemed his title, and advised him to re-write the volume, being unwilling to take profit in publishing a book that would lessen the standing of so well-known an author.

Irving pleasantly replied that he was too old and too lazy to do that. When the work was published some years later, the title was altered so as to conform to the contents. Other distinguished writers prepared works which were published by Mr. Capen's firm, among them Edward Everett, Dr. Bigelow, Judge Story, Prof. Silliman, Miss Sedgewick, Mrs. Stowe, Prof. Dunglison, Dr. Andrew Combe, George Combe, Professor Elliotson, and Bulwer. Mr. Capen himself early began the study of science, politics, and literature. At the age of eighteen he had arranged a

course in which he adopted the example of Franklin both in study and in experiment, feeling that whatever Franklin investigated was matter worthy of special consideration. So he looked into electricity, microscopy, and other departments of physics. He also became deeply interested in metaphysics and theology. The fruits of his studies appeared from time to time in treatises, most of which were published anonymously. One book in particular, entitled the "Mental Guide, a Compend of the first principles of metaphysics and a System of attaining an easy and correct method of thought and style in composition based upon the analysis of the human mind," was complimented by William Wirt and others who were not aware of its authorship.

In 1836 he delivered the last of a course of lectures, it being on the different systems of metaphysics, and explaining that of Phrenology. For several years he had been interested in the study of anthropology, and devoted a good deal of time to its investigation, and it was while thus engaged that Dr. Spurzheim visited America and drew his attention to the science of Phrenology. Soon after the arrival of Spurzheim in Boston, in 1832, Mr. Capen made himself known to the distinguished philosopher and so favorably impressed him that Dr. Spurzheim made Mr. Capen a confidential friend, committing to him the keeping of his funds. When Spurzheim died, after his short but brilliant career in Boston, Mr. Capen had in his hands several thousand dollars belonging to him, as well as valuable papers and other personal effects. At Mr. Capen's request a committee was appointed by the friends and admirers of the deceased savant to take charge of this property. Hon. John Pickering, Dr. Nathaniel Bowditch, and Mr. T. W. Ward, with other gentlemen, were constituted such committee, and through them the money and property of Spurzheim were transmitted to his heirs in Germany.

A biography of this great phrenologist was prepared by Mr. Capen and published as an Introduction to a new edition

of Spurzheim's "Phrenology in Connection with the Study of Physiognomy." This biography was very highly approved by foreign Quarterlies. He also wrote the "Life of Dr. Gall," and edited his works translated from the French, in six volumes. He edited likewise Spurzheim's works on "Education," "Phrenology," "Insanity," and Dr. Combe's treatise on the same subject, and also "Annals of Phrenology," in two volumes. It is proper to state here that Dr. Samuel G. Howe, well known for his philanthropical work in New England, was influenced by Mr. Capen in taking up the study of man, especially as treated from the phrenological point of view.

In 1832 a phrenological society was organized in Boston, mainly through the efforts of Dr. Howe and Mr. Capen, the Rev. John Pierpont being the first president, Dr. Howe the corresponding secretary, and Mr. Capen the recording secretary. In 1835 he visited Europe for the purpose of making contracts with leading authors for advance copies of their works for re-publication in America. He was very successful, although the equitable rights of his firm were not respected by American publishers generally.

While in Europe he visited many institutions, educational, penal, charitable, and otherwise, and became acquainted with many of the most eminent representatives of science and literature, like Sir Charles Bell, Sir Astley Cooper, Dr. Arnot, Prof. Eliotson, Cobden, Dr. Chalmers, George Combe, Prof. Wilson, Dr. Combe, Arago, Broussais, Fossati, and Vimont. On his return he prepared an extended essay on education with plans for a model school. His views were received with approbation by some of the most distinguished men of the country; and although sufficient interest was taken in his system to secure articles of incorporation, it proceeded no further. He did not, however, lose his interest in the cause of education, as it occupied a good deal of his time from 1838 to 1846, and he aided the movement which resulted in the formation of the Board of Education and the system of

Normal schools which have given Massachusetts so high a position.

He strongly favored at an early time (1835), the passage of an international copyright law, as a publisher, being almost alone in the matter; sending in 1844 a memorial to Congress, and letters to Daniel Webster and Henry Clay on the subject. He was true to his convictions as set forth in this memorial, and was the first publisher in the United States to propose to pay a premium to foreign living authors.

The science of Government has been a branch of study to which he has devoted a great part of his time since 1846; and since 1850 his literary efforts have been given almost exclusively to the preparation of a history of democracy, so that his pen has been, for thirty years, contributory in one sense or another to that purpose. He edited the *Massachusetts State Record* for five years, viz: from 1847 to 1851; made up the "Record of Inventive Genius" of the country from the statistics of the Patent Office, from 1790 to 1849. This was printed by the Government. He also prepared "Outlines of U. S. Census Board," 1849.

In 1848 he wrote and published the "Republic of the United States," in which he discussed the affairs of Mexico and the justice of the war against that country. In politics and in political conviction he has been a Democrat from the first, and closely associated with prominent statesmen and others of that type. In the last-named volume he set forth very earnestly his views upon the nature of the American Union, in one place saying: "Its duration can not be measured by man; the combined action of enemies without and the assaults of party spirits within, can have no tendency but to develop new energies and to add new strength. It may rise in its grandeur and might for centuries to come; have its periods of growth and decay, its blessings and its troubles, but its changes can be only those of progress. Dissolution may be discussed, threatened, and possibly even attempted, but every discussion will increase the knowledge of the indispensa-

ble necessity of union; every threat will add to the zeal of its friends, and every effort to subvert it will create new safeguards for its protection and perpetuity. The physical world in its variety, and the mental world in its unity, encircle its boundaries and centralize its interests. The dissolution of such a Union is a moral impossibility."

In regard to the subject of slavery he agreed with the expressed views of Washington, Jefferson, and Franklin. He was in favor of its burial whenever it could be accomplished, and not violate the Constitution or endanger the Union. At an early period he advised Mr. Calhoun and others of the South to lead the anti-slavery cause.

In 1861 he wrote an extended letter to the Hon. Peter Cooper who asked his opinion in respect to the Union. This letter was published in a pamphlet and extensively circulated. Its title was "The Indissoluble Nature of the American Union."

Soon after Mr. Buchanan's elevation to the Presidency, Mr. Capen was appointed Postmaster at the city of Boston and entered upon the discharge of his official duties October, 1857. He at once set about the making of such reforms and improvements as appeared to him to be demanded by the times; taking his cue from the wants of the public as made known to him, in answer to a circular letter inviting all to make such suggestions as might be deemed important. He communicated with the Postmaster-General, by request, suggesting certain reforms and improvements, and out of that communication many very advantageous changes in the postal service have grown: such, for instance, as the now familiar and indispensable street boxes; the return letter system, the reduction of the postage from two cents to one, and the free delivery system. He was the first to recommend the experiment of paying letter-carriers a salary, instead of compensation depending upon their collections. Mr. Capen's management of the Boston post-office was pronounced by Mr. Choate

as "beautiful," while the department at Washington attached great weight to his views and influence, and approved his official conduct as the most important of the age.

In 1850 Mr. Capen began his "History of Democracy," to which allusion has already been made; and although compelled from time to time to interrupt the current of study and thought essential to its prosecution, he has kept it steadily in view. One large volume has been issued from the press. On this he has received the encomiums of critics in Europe and America. Each chapter is abundantly illustrated by notes, which in themselves constitute a work of great value, as they contain in a digested form a vast amount of reading and study.

In 1874 the degree of Doctor of Laws was conferred upon him by Washington and Lee University, Va.

He has had four children, three of whom are living. Though well along in years, owing to a good constitution and a quiet, cheerful, philosophic frame of mind, he retains a high degree of health, with a mind as clear and vigorous apparently as it ever was. The reader has elsewhere seen a notice of the forthcoming work, "Reminiscences of Spurzheim," now in the press of Fowler & Wells. This book was recently prepared by Mr. Capen at the request of the publishers, and it is a most interesting narrative of the life and times of that eminent teacher. It possesses value especially on account of being in great part, if not entirely, a recital of personal experiences; Mr. Capen himself was probably more closely associated with Dr. Spurzheim during his visit in this country than any other American, and being the only surviving representative of a class of citizens who were conspicuous in the commercial and professional life of Boston forty-eight years ago.

It is fitting to close this sketch with an extract from a letter by George Combe, dated Edinburgh, Nov. 26, 1833, in which he says of Mr. Capen: "He is securing for himself an honorable place in the annals of his country's philosophy by his own exertions. I am convinced that he is at this moment doing more substantial and permanent good to America than any individual engaged out of the pale of Phrenology, however brilliant his reputation may be."

WHAT FOR?

"IT is very unhappy, but too late to be helped, the discovery we have made that we exist," says Emerson, and again: "Life invests itself with inevitable conditions which the unwise seek to dodge, which one and another brags that he does not know. But the brag is on his lips, the conditions are in his soul."

Human suffering is the universal condition of human life. It is a truth which needs no demonstration, but the reason for it has always been the subject of speculation. "Why do we live?" is the greatest question humanity has ever asked, and one which all the ages have failed to answer. "If we live, why need we suffer?" is the next greatest, and one which many have attempted to answer in various ways.

The desire for happiness is the strongest element of life; its denial, the greatest tragedy. All art, literature, and religion are saturated with the expression of this truth. "I asked myself," says Carlyle, "what is this that ever since earliest years thou hast been fretting and fuming and lamenting and tormenting thyself on account of? Is it not because thou art not happy? Foolish soul! What act of Legislature was there that thou shouldst be happy? A little while ago, thou hadst no right to be at all. What if thou wert born and predestined not to be Happy but Unhappy? Man can do without Happiness, and instead thereof find Blessedness. Was it not to preach forth this same higher law that sages and martyrs, the poet and the priest in all times have suffered and spoken?" It is this same great thinker who makes the statement: "It is only with renunciation that life, properly speaking, can be said to begin," the same idea as that expressed by Faust: "*Entbehren sollst du.*"

It is Shelley who wrote:

"We look before and after
And pine for what is not;
Our sincerest laughter
With some pain is fraught;
Our sweetest songs are those which
Tell of saddest thought."

Thomas Gray, looking sadly upon the towers of Eton College, which suggest the human life growing and developing within its walls, moralizes upon the inevitable suffering awaiting each young soul:

"All are men, condemned alike to groan."

Elizabeth Barrett Browning, writing her strongest poems from the weakness of sickness and in the darkness of the valley of the shadow of death, declares that

"God the Creator, with pulseless hand
Of unoriginated power, hath weighed
The dust of earth and tears of man
In one measure and by one weight;
So saith His holy book."—

And yet she also counsels:

"Thank God, bless God all ye who suffer not
More than ye weep for."

Swinburne asks and answers his own question:

"Where, when the gods would be cruel,
Do they go for a torture? where
Plant thorns, set pain like a jewel?
Ah, not in the flesh—not there!
Mere pangs corrode and consume,
Dead when life dies in the brain;
In the infinite spirit is room
For the pulse of an infinite pain."

"Even by means of our sorrows we belong to the Eternal Plan," says the great and good Humboldt.

So all our poets and philosophers find in each other a community of thought and belief concerning the sorrow of life, admitting that,

"The mark of rank in nature is capacity for pain,
And the anguish of the singer makes the sweetness
of the strain."

The Christian religion teaches us that "whom the Lord loveth, he chasteneth, and scourgeth every son whom he receiveth;" that we are to be "tried in the furnace of affliction," that we may come out like the fine gold developed by the same torturing process; that "if we endure chastening, God dealeth with us as with sons; we are chastened, not as by earthly fathers, after their own pleasure,

but for our profit, that we may be partakers of His holiness ;" that although this discipline seemeth not joyous, but grievous ; " afterwards it yieldeth the peaceable fruits of righteousness to them which are exercised thereby."

The natural world indorses the Scriptural teaching. The seed in the ground, the grain in the mill, the bread in the oven, the ore in the crusher, the marble under the chisel, the wood under the plane—out of these materials, and by these agencies are produced, and can be produced in no other way, the useful and beautiful elements of our daily life. Higher up the same principle obtains. The horse is broken and trained only by the lash of the whip and the prick of the spur.

It needs no Bible to manufacture a human conscience, and conscience without a Bible enables us to distinguish between right and wrong. We know that truth is better than falsehood ; generosity than selfishness ; serenity than anger ; honesty than fraud ; yet the lie is preferred for its shelter or convenience ; selfishness distinguishes our earliest infant intelligence, as well as our maturest development ; self-control is one of the hardest requirements of our nature, and we are never free from the temptation to dishonesty in a thousand forms. True, it is not only that " man is born to trouble as the sparks fly upward," but that " the natural heart is at enmity with God," or with Good. Sorrow and Sin—the two inevitable conditions of human life—is it possible that human life was created only to furnish opportunity for these two malignant forces to destroy it ?

" There is purpose in pain, otherwise it were devilish," says another of our poets. It is to learn this purpose that we struggle, and having learned it, surely it is the part of wisdom " therewith to be content."

" Man's unhappiness," we are told, " comes of his greatness." It is because there is an infinite in him which with all his cunning he can not quite bury under the finite. Will the whole finance ministers, upholsterers, and confectioners of

Europe undertake in joint-stock company to make one shoe-black happy ? They can not accomplish it above an hour or two. For the shoe-black also has a soul quite other than his stomach. It is the *dictum* of John Stuart Mill, skeptic though he was called, that " a highly endowed being will always feel that any happiness which he can look for, is imperfect," certainly an indirect admission at least that the only perfect happiness lies beyond this mortal life—life, as we call it, being defined by the poet Holmes as " but the edge of the boundless ocean of existence where it comes upon soundings."

Says the English philosopher, Whewell : " A man really and practically looking forward to an immortal life, on whatever grounds, exhibits to us the human soul in an ennobled attitude."

If we accept the theory that all mortal life is but a preparation for an immortal : then every man, whether a skeptic or Christian, can gather hope and comfort from the contemplation of human suffering, believing it to be the great and essential condition of eternal growth and development.

There are some who appear " to find the cross without the Christ," to whom " analysis comes late ;" who can truly say, " so much pain has made me base ;" but these are temporary conditions, the painful steps of transition from a lower to a higher state ; from the physical to the intellectual ; from the human to the divine ; from the mortal to the immortal. It is not in human nature to welcome pain even for the fruits of righteousness or happiness promised as its result. It is sufficient if it can patiently endure. The patience and endurance are also the fruits of time, of slow growth and gradual unfolding. Perhaps the highest state of development possible to humanity on this side the grave, is expressed in the words of Marcus Antoninus : " He lives with the gods who constantly shows to them that his soul is satisfied with whatever is assigned to him."

To be satisfied is well. Contentment is one of the best things that life has to

offer us. But faith and hope and courage must be added thereto; courage to bear all trials; faith to believe them blessings in disguise; hope for that eternal existence in which we can rejoice that we were afflicted. Welcome fire and sword, if nothing less than these can destroy in us that inherent tendency to evil which makes life and pain synonymous.

"That the world is for man's education, is the only sane solution of the enigma," says one of our wisest men. Once admitting that all pain is for development, and all development for an immortality of goodness and consequent happiness, then indeed, as says Rousseau: "If this were true, who could be unhappy?" CAROLINE B. LE ROW.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER IV.

DEVELOPMENT OF THE SKULL IN MAN AND THE VERTEBRATE ANIMALS—CHANGES WHICH IT UNDERGOES WITH AGE FROM THE EMBRYONIC STAGE.

THE head of man and of the vertebrate animals appears at first as a small oval sac composed of very fine membrane, and without any trace of ossification. Compared with the body, it shows considerable volume at an early stage in embryonic life. In the development of the skull osseous points are seen first at the base, particularly at the centers of the bones which constitute it. This ossification extends in such a way that at the time when the infant comes into the world, the brain is completely covered, with the exception, however, of

certain points, known by the name of fontanels (see Figs. 180, 181).

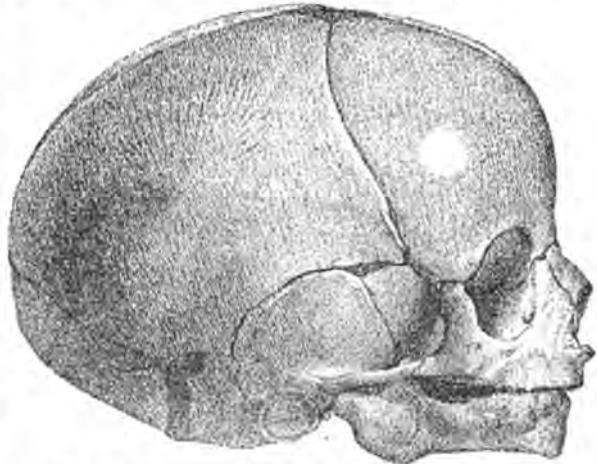


Fig. 180.—SKULL OF FŒTUS OF SIX AND A HALF MONTHS.

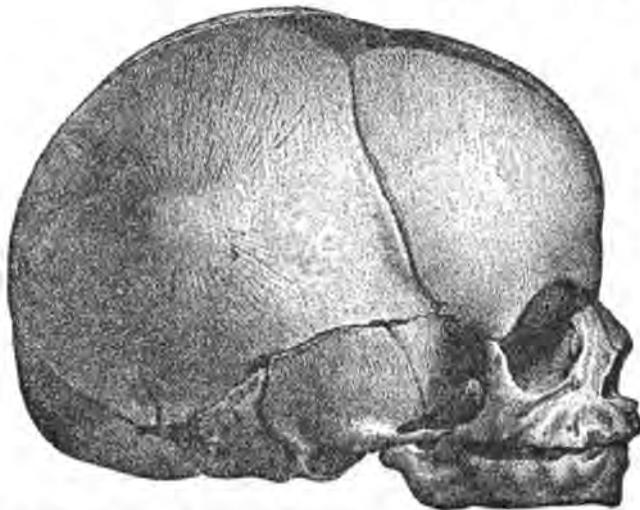


Fig. 181.—SKULL OF INFANT AT BIRTH, SHOWING FONTANELS.—REDUCED.

It should be remarked here, that there exists at birth no traces of the interlocking of these bones, or *sutures*. This does not take place until an advanced period, ordinarily the age of eleven or twelve months, and then it begins almost always by the articulation of the occipital bone with the parietals at what is called the lambdoidal suture. Fig. 182 represents the head of a five months fœtus, and Fig. 183 that of a child eleven months old. Those parts or openings of the skull which

are observed at the time of birth are formed of membrane. The largest of all lies at the place of union of the parietals

sification are an admirable provision of nature; on the one hand, they facilitate the process of birth; on the other, they prevent serious results from accident in the way of falls, or pressure upon the infant's head. They disappear with age, and are replaced by sutures.

In infancy and in early youth different parts of the skull do not possess the same thickness as in adult age, and especially during the period of virility. As long as the brain has not yet acquired its full development, the processes of growth continue in the cranial parts, and progress in harmony with the organ they inclose. We have sometimes seen heads which will show a very sensible increase in size, between eight-

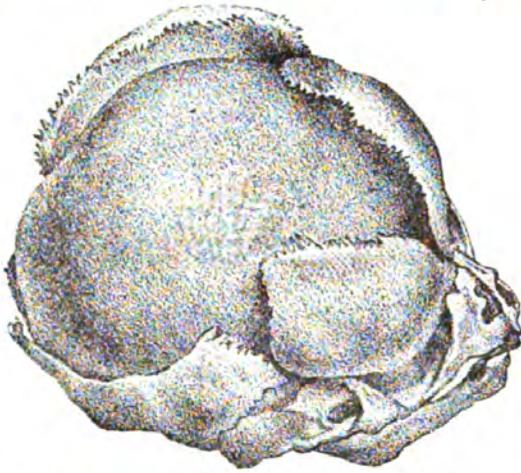


Fig. 182.—SKULL OF FŒTUS, FIVE MONTHS, DURA MATER EXPOSED.

with the coronal or frontal bone; the others at the union of the superior angle of the occipital with the superior angles

Napoleon's head, according to what a great many have said who knew him, during his stay at the Military School had increased considerably in volume.

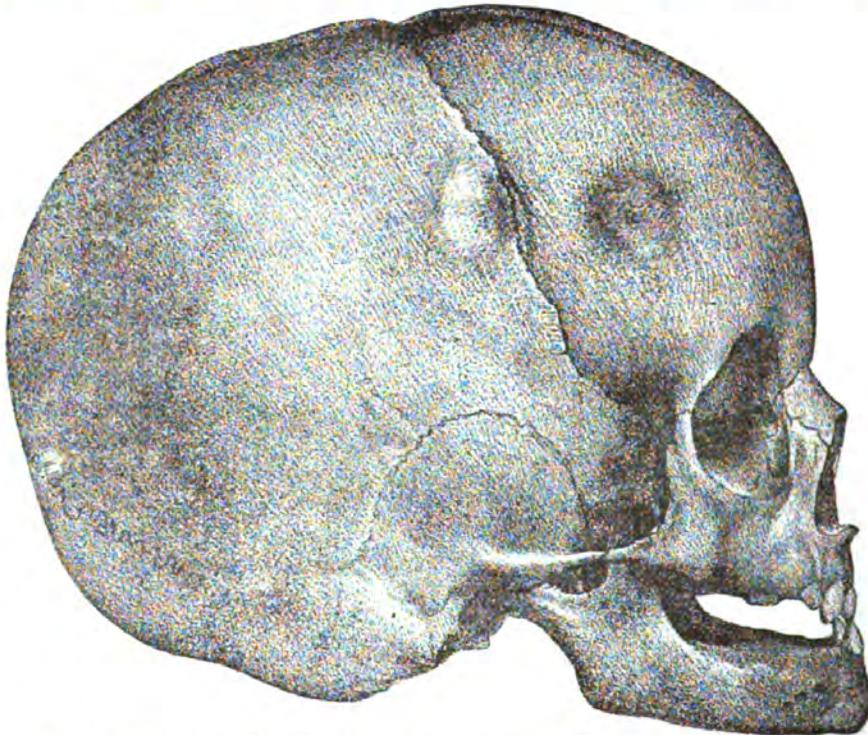


Fig. 183.—SKULL OF AN INFANT ELEVEN MONTHS AFTER BIRTH. (TWO-THIRDS LIFE SIZE.)

of the parietals, below the mastoid processes, and in the temporal fossæ. (See Fig. 181). These apparent defects of os-

and continued to grow up to the time when he commenced to play his part in the world.

Like all the rest of the osseous system, the skull increases in thickness and density with maturity. From full manhood to the epoch of old age, hardness of the plates and thickness of the substance

Eleven heads, examined after death, showed this characteristic. Sometimes one finds in old men very thick and hard bones; but he may feel warranted in believing that condition to be due to patho-

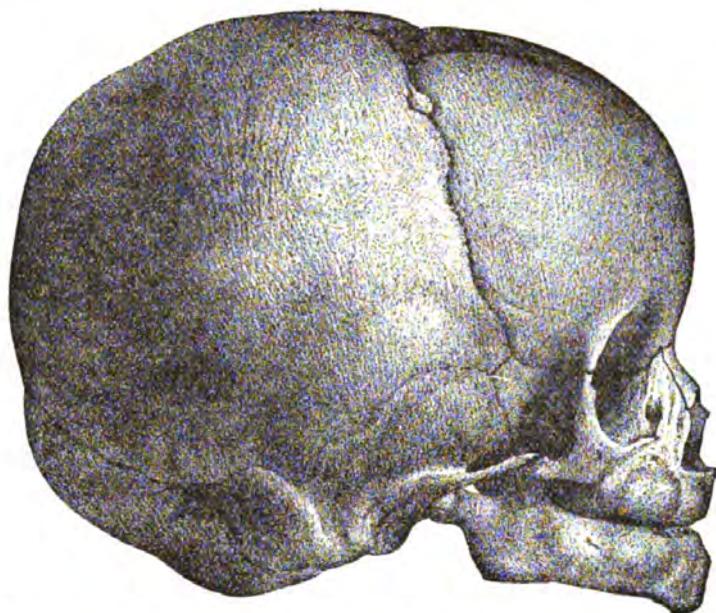


Fig. 184.—SKULL OF CHILD FOUR AND A HALF MONTHS AFTER BIRTH. (TWO-THIRDS LIFE SIZE.)

known as *diploe* are noteworthy. It is almost impossible to establish a general rule with regard to tissue changes in old age; the examination of a large number of heads belonging to persons from sixty to eighty-four years of age, has impressed us with this opinion, although it seems probable that with advanced life the bones of the skull increase some-

logical conditions, as it is very common to find it in persons who have died in consequence of long-existing insanity. Many skulls of insane persons dying at an advanced age, do not show in their diploe the venous channels of M. Dupuytren, channels which we find constantly in the crania of old and young, that indicate no kind of abnormality. The



Fig. 185.—SKULL OF CAT ONE DAY OLD.

times in thinness, and become lighter and more spongy, the diploe being destroyed—absorbed in part or entirely. This thinning, general or partial, one meets frequently in the heads of decrepit persons.



Fig. 186.—SKULL OF CAT FIVE DAYS OLD

depressions which are frequently observed on the skull of the old, are not the results of a weakening of the internal table, which Dr. Gall thinks due to decomposition in the brain; it is more

likely that these depressions are due to absorption of the diploic tissue. Many specimens which have been examined, support this opinion.

There are other special conditions of



Fig. 187.—SKULL OF CORSICAN DOG AT BIRTH.

the cranial bones worthy of consideration, but as they have special reference to disease, they will be treated in a separate chapter.

The process of nutrition in the early stage, following birth in man and animals, goes forward with so much rapidity, as to surprise the observer; that especially which accompanies the development of the cerebral nervous system and its osseous envelope is very remarkable. Let one compare, for example, the volume of the four heads represented by Figs. 180, 181, 182, 183, and he must be surprised to find that a change so striking can occur in a period so inconsiderable. The head, Fig. 182, is that of a fœtus of four months and a half; that of Fig. 181 represents an infant at birth, but two-thirds of the actual size; that of Fig. 184 an infant at four months and one-half; while Fig. 183 shows but two-thirds the volume of an infant's head at eleven months after birth. The nearer we approach the time of birth, the more striking is the increase in size; a few days even sufficing in the lower animals to make a very marked difference. Figs. 185, 186, represent the heads of two young cats born only five days apart. It is seen at once, that the one five days old has greatly increased in volume. The two heads, Fig. 187 and Fig. 188, are those of two young Corsican dogs belonging to the same litter. Of five exam-

ined carefully, two only showed heads of equal volume. Fig. 187 was killed at the time of its birth, the other at the end of fifteen days. The difference in size is enormous. This rapid progression in the development of the skull, and consequently of the brain of the cat and dog, is applicable to all quadrupeds belonging to the numerous family of the carnivora.

A very considerable development takes place also in the skull of the rodent. For instance, Guinea-pigs show a very rapid development of the skull, greater than that of any of the carnivora. The teeth in the head of a young Guinea-pig (Fig. 189) only two days old, are already apparent. These animals can then make use of them to a degree to nourish themselves with tender leaves. That of a hare two days old (Fig. 190) is also in a state of well-advanced ossification.

The increase in volume of the skull is less rapid, apparently, in the female of the plantigrades, notably the hedge-hog. Fig. 191 is a skull of a young animal of this species, twelve days old. In birds, the development is surprisingly rapid; the head which is represented by Fig. 192 is that of a jay at fifteen days. It shows, then, nearly the same volume as the bird will have when arriving at its full growth, excepting only that the bones of the



Fig. 188.—SKULL OF CORSICAN DOG FIFTEEN DAYS OLD.

skull are not yet united at the lines indicating their points of contact. These lines are analogous to sutures in the quadruped; but they disappear much more rapidly than in the latter.

Some species, like the crow, the jay, shrike, and magpie, show often after a year's growth, whitened lines on the surface of their skulls, which indicate the spaces where the bones have become



Fig. 189.—SKULL OF GUINEA-PIG TWO DAYS OLD.

united, and these points of union show differences more remarkable in the various classes of animals than in man; in the latter, they disappear at a very advanced age, and several bones at the base of his cranium become so solidified, it is impossible to separate them without fracture. Sometimes, but very rarely, there is a complete disappearance of the sutures in the human skull; but this is only on the exterior, the interior showing them always in a way more or less pronounced.

In certain families of the carnivora, the disappearance of the sutures takes place early: for instance, the badger, the marten, the beech-marten, the pole-cat, which are over two years old have no traces of them. But in dogs and cats we find traces of them at an age quite advanced. With the numerous family of the rodents it is the same.

From what has been shown of the



Fig. 191.—SKULL OF HEDGE-HOG TWELVE DAYS OLD.

anatomical construction of the skull in animals and in man, the reader can get an idea of the pains Nature has taken toward the protection of its contents against injury; the distribution of its

different pieces, and their adaptation for mutual support, being fortified by their numerous sutures and the cartilages which cover them against blows and shocks to which the skull is naturally ex-



Fig. 190.—SKULL OF HARE TWO DAYS OLD.

posed. Independently of this solid envelope, the brain itself is surrounded by fine membranes, which, in their turn, are covered by another, the tough and resisting dura-mater, which, forming as it were a fold, separates the two hemispheres in such a way that they do not touch when the head is bent to the right or to the left, and contains, also, in its folds vessels carrying the blood which serves for the nutrition of the brain.

Strictly speaking there are three membranes, the Pia Mater, Arachnoid, and Dura Mater, the first being specially related to the brain, as it covers it entirely, and dips down between the convolutions and laminae, while the two latter are associated. The dura mater itself lines the interior of the skull, its outer



Fig. 192.—SKULL OF A JAY FIFTEEN DAYS OLD.

surface forming the internal periosteum of the cranial bones. It sends numerous processes into the cavity of the skull, as we have already seen, for the support and protection of different parts of the brain.

OUR WOMEN.

WHEN the question of the "Rights of Woman" took form and substance, as it were, thirty odd years ago, the limitations of the sex were far greater than we find them to-day. It was not a sudden outbreak and protest of a few, but the expression of a general discontent at a state of things that left woman, her person, property, and children, so dependent upon the will of the husband and father, that she felt herself more a bond-woman than wife. At that time a divorce between the parties was comparatively rare, and was always regarded as a reproach. The sense of duty inherent in the people made the relations of the marriage contract pre-eminently sacred, and anything likely to weaken this sense of consecration was looked upon with special disfavor; hence the bitter antagonism and cruel abuse at first heaped upon the advocates of this reform, who were accused of favoring many and grievous immoralities utterly foreign to their character. A generation or more has passed away, or, rather, has arisen, and the public better understands the nature of the movement.

At that time, I, like others, jumped at the conclusion that the ballot-box was our only remedy. I gave from Maine to Kentucky, with purely literary lectures, one on this subject, entitled "The Dignity of Labor," in which I showed up the prevailing disabilities of the sex, and argued that suffrage alone seemed the true remedy. I still think so, though the progress of events has so far modified these disabilities that women may now do pretty much as they please, whether married or single. There is now little talk about sphere, and the definition I then gave, so long ago, *The measure of capacity is the measure of sphere to either man or woman*, is generally accepted.

We are now doctors and lawyers and merchants and artistes of every kind, and our doings attract little or no attention, unless they become enormously wicked, and the world has grown so tolerant that

scarcely can a woman find a jury to condemn her, even when she resorts to pistol, dirk, or poison. This is a great change wrought in the last thirty-five years, a part of which must be referred to the woman movement, and a part to the onwardness of thought and action in accordance with an influx of foreign thinkers and theorizers, our own ever-questioning activity as a people, and the greater latitude of the sex in matters of opinion. I think as a people we are morally worse than we were thirty-five years ago. Whether we women are at the bottom of this retrograde phase may be a subject of question.

At any rate, a multitude of women have reached that stage of development that they will no longer be subordinated. They insist upon the rights of citizenship in the masculine sense of franchise. Wives, widows, and spinsters of every shade and condition claim the privileges pertaining to the republic, and it is useless to gainsay them. I had hoped that the sex would infuse a nobler and purer element into politics, but our women politicians are about the same as our brothers, plotting and planning for success, leaving to time to make things straight or otherwise.

This question of suffrage does not by any means stand alone. Once all the women went to church of a Sunday, bringing out their pretty brood with maternal pride: now they fearlessly question the dogmas of the Church, send the children to the Sunday-school or not, and lounge out the day at home. This church-going in the past certainly was a great element in the orderly methods of a family. All classes looked forward to it with interest—washed for it, dressed for it, and behaved for it. It was a day of cleanliness and decorum not entirely expended during the following week. It is true we women were and are very much under the sway of the priest, but gradually the black coat and white cravat have disappeared, and with them the awe

they inspired. Women now preach and expound the Scriptures, and in casting themselves adrift from old dogmas, have let family responsibilities drift away with them.

This is not altogether their fault, for the pulpit has ceased to be the guide it once was, and is somewhat dazed at the doings and demands of the sex. Ministers are so much less coddled and petted by the full-fleeced lambs of their flock that they are hardly able to take in the situation; they see the difference, but what are they to do? The women will not abide St. Paul's injunction that they should hold their tongue, and in all doubtful points "if they will learn anything, ask of their husbands at home," for he, poor man, may know less than themselves, and may not be willing to honestly utter "I do not know." It is certain that a wide-spread skepticism pervades the minds of women, and the pastor must not presume too much upon the ignorance or tolerance of his hearers.

Yet women are frequently told from the pulpit that they owe all that pertains to their present happiness and culture to the Christian religion, as if up to the advent of the Christ the woman was in the very bitterness of thralldom, under a hard master not yet emerged from savageness, all labor and all burdens consigned to her back, while man stretched his lordly limbs in the chase, or in the panoply of the battle-field. Whereas a very high degree of culture prevailed among some pagan nations before the inception of Christianity, and they had their prophets and founders of religion based upon pure morals and abstract ideas, and though the tendency of Oriental civilization was to isolate and seclude woman, she had a high degree of freedom, and women of superior capacity had availed themselves of it, and were eminent in many ways. The women of Homer are graceful, versatile, and possess a full share of the freedom of the age.

Indeed, the women of antiquity by no means filled subordinate positions. They ruled empires, they listened to philosoph-

ic teachings, held offices in the temples of the gods, and the vestals were treated with more than royal honors. Semiramis, Aspasia, Cleopatra, Hypatia, Zenobia, women of marked individualism, were all pagans, and overcame any disabilities that may be inherent in sex. Woman, like man, owes to the teachings of Christ a higher standard of morals, binding alike upon both, and this higher basis for action which the Christian woman has over her pagan sister is the leaven which is the hope of the world.

The Jewish woman from the first had been an accepted power in the nation. She was prophet, judge, and a burning patriot, using all the resources of a subtle mind and remorseless heart to promote the glory of her people. I do not perceive that Christianity did more for the pagan or Jewish woman than for the pagan or Jewish man. It was a feature of the age, which, in a singular manner, held its way, distinct, unbroken, down to our own day.

The advent of Christianity was in the midst of a vast number of intelligent women, Jewish, Persian, Greek, Egyptian, forming a part of great nationalities, congregated in cities and studying in seats of learning, who doubtless accepted the new teaching because of the immaculate purity, the inspired manliness, the infinite tenderness of the Divine Teacher. Women embraced the doctrines as with a heavenly insight, and found them to impart a sublime self-abnegation, a hope, a faith unshakable, by which they encountered persecution and death with heroic constancy. They were no more exempt from suffering than the other sex. *The equality of woman was acknowledged by her equality of persecution.*

Externally, her situation would seem to be worse than under pagan supremacy. She was torn to pieces by wild beasts in the Colosseum; she was broken upon the wheel, and stretched upon the rack. The Catacombs of Rome still bear testimony to her steadfastness. Her status was not in the eyes of the world in advance. She had awakened from Epi-

curean luxury to an everlasting hope, realized through a pathway of torture. The pagan priestess now became the Christian saint; the pagan vestal became the Christian nun. Then came the irruption of the barbarians from the north, bringing with them their grim equality of sex, and faith in, and reverence for, their Aruna, or inspired women, mixing the races with a new but majestic paganism, and infusing great elements of aspiration and power.

In all this woman's head was not anointed with a more benign chrism than that poured upon the head of her brother. She was part and parcel of the sublime ministration of pain which is the perpetual baptism of great ideas. She was an equal factor in the development of the race: sharing in the suffering, and benighted by the errors and superstitions of the age. Chivalry placed her queen of grace and beauty, to which we owe much of the respect which should never be lost to the sex. In the slow rise of commerce and literature we find the saints Elizabeth, Theresa, and other women of sanctity and intelligence, but much, very much, under the sway of the priest. Man is mostly a soldier, and the woman of capacity takes the field with him, or holds the feudal castle against aggressive barons. She is a Joan of Arc, a Countess of Mountfort, or a Queen Philippi. In all she is level with the times.

The Reformation under Martin Luther threw the sex rather in the background, and the Protestant woman binds her brow anew with the crown of thorns. The new ideas make their way through streams of human blood poured forth by men and women alike. The latter sinks into the background. She can no longer be nun or abbess. She might die a martyr, but she will not be a canonized saint. The Roman Catholic Church utilized her best sensibilities, and turned her natural ambition into sacred channels. Not so with Protestantism. The Church afforded her no field as an appendage to man. She witnessed and shared in the sacrifices of the sect to which she be-

longed, and was driven perforce to study the dogmas to which she subscribed. Hence in a polemical community it was natural that a woman like Anna Hutchinson should become the first in this country to lead her sex into the intricate field of independent thinking, and the right of a woman to sit in judgment upon pulpit as well as other oracles. From that time to this the sex has been slowly but surely asserting themselves. They have broken out here and there, as in the case of Ann Lee, the founder of Shakerism. Rather apt to lend themselves to masculine leaders, greatly to their own detriment, they have been—the majorities of them—conservative in all their actualities. Margaret Fuller, never entirely clear in her views, had an extensive following because of what she suggested. The large numbers of women who have been for a century or more engaged in literary pursuits have contributed largely to the wave that has in our time rolled onward and borne upon its surface this turbulence culminating in the claim to suffrage by the sex.

Now, whether women will at length secure this manly privilege is a matter of little comparative moment. As half of our common humanity, half of the national odium, because of our moral obliquities, must rest upon her, and she must either reject marriage altogether, or, better, redeem the obligations of wife and mother.

That both sexes are growing disinclined to marriage is beyond question. That the woman of the past, subordinate, and looking to marriage as the primary resource, is obliterated, has ceased to be, is also beyond question. At present, her attitude to the other sex is aggressive and defiant. The priest is losing his power over her. She is not ashamed of her age; she is not at all troubled at being called an old maid; she does not shrink from hard work; she may seem to be a little grim, for she eschews all vanity—that vice which has almost the grace of a virtue in the make-up of an agreeable woman.

What kind of a woman the future may evolve is hard to determine; but that man will be compelled to divide actualities with her is certain. She will compete with him, and he will be compelled to accept her in fields hitherto uninhabited by her. It may be that our Portias for a while may have too much of subtile craft for the broader philosophy of jurisprudence, but when their numbers shall increase, I apprehend the poor lawyers will strike an average with the other sex.

In our competitions it is certain that the prestige of femininity will disappear; many a grace, many a sweetness and charm will evaporate; but if these will be superseded by nobler traits, by justice, integrity, and a conscientious sense of the duties that pertain to life in all its manifestations, I apprehend the man, still developing into higher and better views, will not find himself deserted by the differentiated woman hereafter to arise.

ELIZABETH OAKES SMITH.

TRANSFIGURED.

ALMOST afraid they led her in
(A dwarf more piteous none could find),
Withered as some weird leaf, and thin—
The woman was—and wan and blind.

Into his mirror with a smile—
Not vain to be so fair, but glad
The south-born painter looked the while,
With eyes than Christ's alone less sad.

"Mother of God," in pale surprise,
He whispered, "what am I to paint?"
A voice, that sounded from the skies,
Said to him: "Raphael, a saint."

She sat before him in the sun.
He scarce could look at her, and she
Was still and silent . . . "It is done,"
He said. "Oh, call the world to see!"

Ah, this was she in veriest truth—
Transcendent face and haloed hair:
The beauty of divinest youth,
Divinely beautiful, was there.

Herself into her picture passed—
Herself, and not her poor disguise,
Made up of time and dust. . . . At last
One saw her with the Master's eyes.

MRS. S. M. B. PIATT.

ONE MOTHER'S MEDITATIONS.

THE ways and customs of the young of to-day are so different from what they were twenty years ago, that involuntarily we sigh for the good old days when maidenly modesty was a greater recommendation for a young lady than banded hair and panner skirts, and when the highest ambition of the masculine mind was to prove himself worthy of the good mother who bore him, instead of indulging in all the fashionable vices so common with the young men of to-day. To-night, as I sit by my fireside, and rock my little one to sleep, I wonder what future years will bring to him. Will my boy develop into an intellectual and noble man? Will every good thought and pure desire and noble aspiration that animated my own youthful bosom, and made me ambitious to carve out for myself a happy and use-

ful future, be transmitted from mother to son, and bring forth an hundredfold of fruit? May I live with the blessed hope that *my* boy will not forget his mother's early training, but that I may see fulfilled in him my highest conceptions of a perfect man! I want to make him a man of principle and honor, one who will never stoop to do a mean act because the world would never know it. I want him to be so much above the common herd of humanity that he will fear no greater punishment for a misdeed than his own reproving conscience, and expect no higher commendation for well-doing than a consciousness of having done his duty.

But will it be *possible* for him to live and move in a world so corrupted and polluted with sin and vice, and not be-

come tainted with it himself? As he grows older and goes out into the world to mingle with its people, will my boy return to me in the evening as pure as when he left me in the morning? Oh, God! I know that it can not be. When I think that in a few years the baby lips that I kiss so often, and deem so pure, will perhaps learn to profane the name of the God I have tried to teach him to worship, and the little hands that now know nothing but playful innocence may learn to shuffle the cards at the gaming-table, or wield the cue in the billiard saloon, and the little feet that I have covered with kisses, and that have never gone astray, may wander away into dangerous and forbidden paths, and perhaps keep time to low and sensual music! when I think of the thousand temptations to which my child will be exposed—the tempting wine-cup, that has drawn so many down to ruin; the thirst for riches, which may lead him into dishonest

speculations; the fascinations of the many houses of ill-repute—when I think of all these things, and remember that he is but human, is it strange I would rather almost my child were to-night in his death-shroud, and his soul among the angels above, where no harm could ever come to him?

But perhaps some one will say, You must teach him while young to shun all forms of sin, and by living a strictly upright and virtuous life yourself, instill into his young mind a love for the true and good; and so I must, and my daily prayer is for *divine* assistance to help me make my own life as pure and good as I would have my child's. Yet I know there is many a good mother's son who has ended his career in the felon's cell, or on the gallows, or in the drunkard's grave. A true mother's life is one of care and responsibility and trouble, that shall only end when the Angel of Death severs the slender thread of life.

W. M.

THE ALEXANDRIAN OBELISK.

EGYPT'S GIFT TO AMERICA.

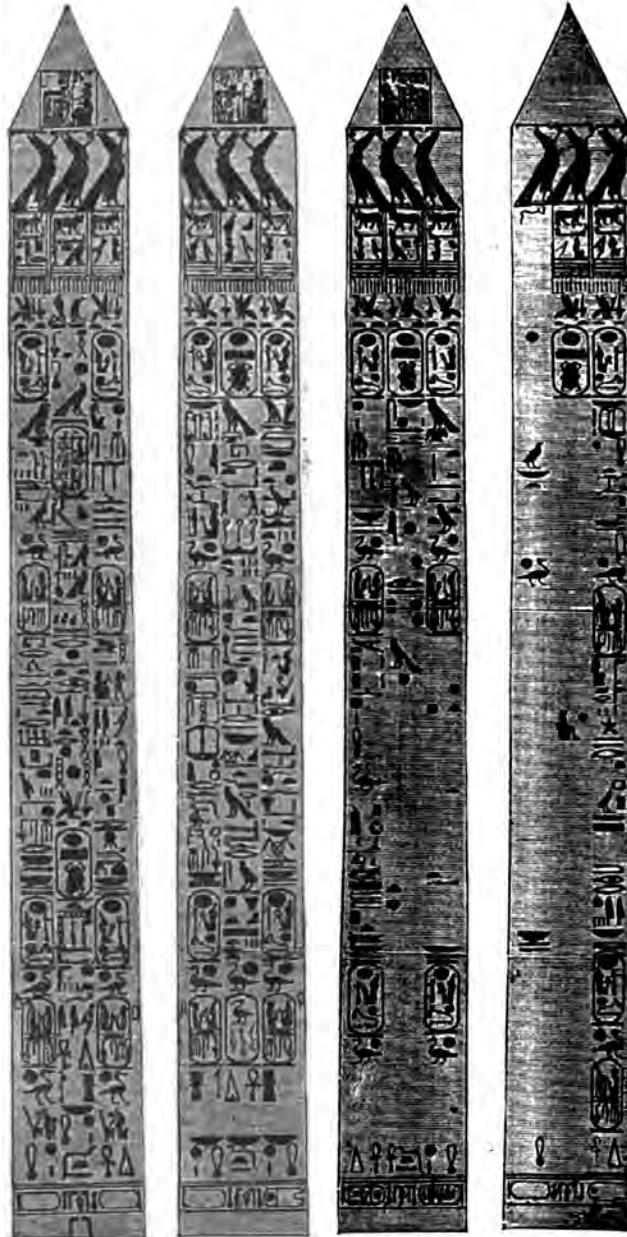
THE obelisk presented by the Egyptian Government to the United States has been safely landed at New York from the steamer *Dessoug*, by which it was transported from the land of the Nile and the pyramids, and before the year is out will stand upon its pedestal in our Central Park. Although commonly known as "Cleopatra's Needle," this historic monument much antedates the period of the beautiful queen who fascinated Antony and Cæsar, as its inscriptions show that it was erected originally by Thotmes III., of the eighteenth dynasty, who lived nearly sixteen hundred years before the advent of Christ. When the rubbish that covered the base of the obelisk was removed it was found to be supported at opposite corners by two copper crabs, about 12 inches long, 16 inches broad and 8 inches thick, weighing three hundred pounds each. These crabs were attached to the obelisk above, and to the pedestal below,

by bars of the same metal, cemented firmly with lead, into mortices cut into the stone. A third corner rested upon stone, and the fourth had no support at all; but it appeared that both these corners had at one time been sustained by crabs like the others. The crabs were found badly mutilated, all the claws and legs of one were broken, and the other had only a leg and a claw remaining, which were broken in turning the obelisk to a horizontal position. The method of supporting the column by these crabs seems to have been adopted to avoid shortening the obelisk, which may have been broken in its first removal, though more probably during the ravages of Cambyses in his conquest of Egypt, when, as a translation from Strabo tells us, he "ravaged the holy buildings, defacing them by iron and fire."

Inscriptions in Greek and Latin on one of the crabs disclose when and by whom

the column was placed on the Alexandrian site from which it has just been removed. From them we learn that "In the eighth year of the reign of Augustus

ably placed before the Cæsareum, or Temple of Cæsar, at Alexandria. This discovery corrects previously held opinions concerning the erection of the two



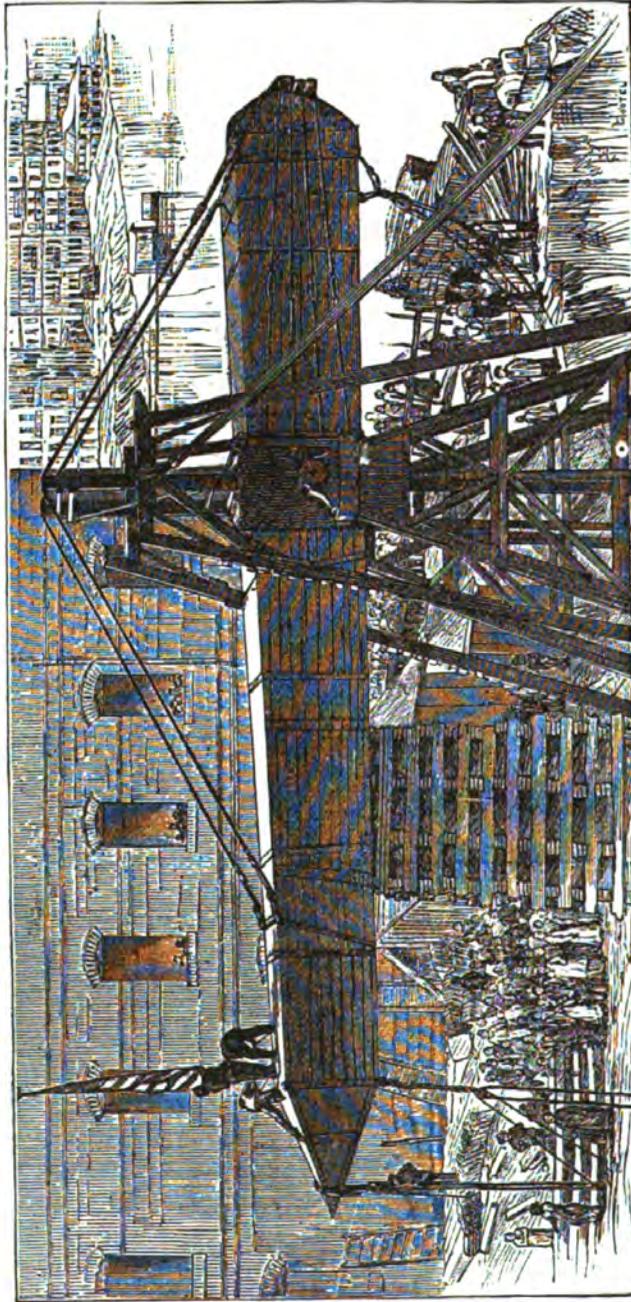
THE EGYPTIAN OBELISK.—ITS FOUR FACES.

Cæsar, Barbarus, Prefect of Egypt, erected this monument by the architect Pontius." This would make the time about 22 B.C., when also the companion column, now on the Thames Embankment, was prob-

ably placed before the Cæsareum, or Temple of Cæsar, at Alexandria. This discovery corrects previously held opinions concerning the erection of the two obelisks, and shows that they were not actually put where they were found until eight years after the death of Cleopatra. The temple was probably completed and dedicated by Tiberius,

but it is not improbable that it was commenced by Cleopatra in honor of her son Cæsareum, and that the columns were transported from Heliopolis during her

nearly 70 feet in height, 7 feet square at the base, 5 feet 3 inches at the top, and weighs 205 tons. All four sides are covered with deeply-cut hieroglyphics, which



HOW THE NEEDLE WAS LOWERED.

life. In this way the designation Cleopatra's needle may have originated.

The material of which the obelisk is constituted is red syenite granite. It is

at one time were filled with gold, and the small pyramidal apex was even encased by a metal hood.

The appearance of the column with

the hieroglyphical inscriptions on its four sides is shown in the engraving, which is a reduction of a very accurate one published in *Harper's Weekly* for July 3d of this year.

The removal and transfer of the relic were entrusted to Lieutenant Commander Gorrige, of the U. S. Navy, who set about his undertaking in October, last year, and successfully accomplished it, although many serious difficulties presented themselves in the course of the work.

It should be said that the large expenses incident to securing the obelisk for New York have been borne by Mr. W. H. Vanderbilt, who, when requested to join other gentlemen of the city in making up a fund to defray the cost of Egypt's gift to this country, at once

offered to pay the whole, a sum not far from \$100,000.

How the massive stone was lowered safely from its resting place of nearly twenty centuries is readily perceived by an examination of the adjoining illustration. Two stone buttresses were built on opposite sides of the pedestal, and upon these towers of iron and timber, reaching to the center of gravity of the shaft. Upon these towers two great steel trunnions played, being fastened to a yoke encircling the obelisk. When all this had been completed the old foundation was removed, leaving the shaft suspended upon the trunnions. It was then comparatively easy to swing it to a horizontal position, after which it was lowered to the ground.

TYPES OF MENTALITY.

A SURVEY of the world's workers will enable one conversant with mental organization to divide them into three grand classes or types:

First, the Basilar, in which the organs at the base of the brain exercise the paramount influence in the every-day life. The man so actuated is known for his selfishness, for the spirit of personal appropriations and gratification in whatever he has to do. He thinks only of his own profit. "Number one" is to be taken care of without regard to the rights of "number two." He appears to be incapable of reasoning clearly, for reason implies an understanding of the needs and privileges of others. In business such a man is known for his physical energy, for his endurance of labor, in the narrow enterprises which contribute to his pecuniary profit. If there be an opportunity to show itself for acquiring or adding a penny to his substance, he pounces down upon it with tremendous alacrity. He has little regard to the opinions of others, does not ask advice, is not given even to subterfuges or excuses. He will "make" when he can; believing it his right to make money by

whatever process he can, so long as that process may be included under the general term of "Business." He is by no means respected, but rather the object of dread on the part of those who are his debtors, while aversion and contempt keep high-minded men from having any more to do with him than they are compelled to. He, however, in his pride of pecuniary independence, derisively laughs at the opinions of the better world, grasps his money-bags, and chuckles with the thought that in them he has strength to sustain him against all enemies. What a mistake! He lives slavishly—he dies miserably.

The second type is that of the man whose organization embraces the basilar and intellectual developments in the main. Of such men society possesses very many; the business walks of life are filled with them. They are usually well-educated; possess a keen discernment; are good reasoners, although their intellection relates chiefly to physical matters. They appreciate utility; what a thing is good for is the first thought suggested on its presentation. They have force, energy, enterprise; they buy or

sell; they deal in stocks and bonds; they are the fiscal agents to a great extent of society; and through all their operations runs the spirit of gain. They crave elevation in society, but they count their elevation so much stronger as it is based upon a large bank-account, or blocks of brick and stone. They are sensible men in the world's eye; their counsel is shrewd and to the point, but it relates almost exclusively to things material. Sentiment, affection, the yearning of the soul, do not enter into their calculations.

The third type is that which embraces, in addition to the two stages of mental development already considered, the moral and religious qualities of organization. Numerically men of this class are few as compared with those in the first and second class we have described; but however few, they exercise great power among men. Their redeeming influence is ever felt; they tend to keep society "up to the mark." In all enterprises for reform and higher education, men and women of this type are the stimulants and organizers. They look upon life from a totally different point of view from that entertained by the worldly and selfish. They feel that this is not merely a sphere in which we are to eat

and drink and get gain, make show of costly trappings and equipage, and indulge in glitter and pageantry. They feel that the usefulness of a life depends upon the amount of good accomplished among others; so they seek to educate the ignorant and refine the vulgar. They appreciate the true application of money; they feel that while it is needful, that the wants of the body be supplied, and that the intellect be developed to its fullest extent, there is a higher nature which must be supplied too with food convenient—the food of truth, sympathy, charity, religion.

The real progress of the world is due to men of this type: they are ever looking forward. Appreciative of the influences of the Divine Will, they seek a higher illumination, and are more guided by the light from above than by the mere intellectual revelations of the schools. The men of the second type may look upon many of the men of the third type as visionary, soft-hearted, optimistic, enthusiastic, and given to enterprises of an impracticable character, yet the history of the past shows that these are they who have given the real impetus in all departments of the world's advancement. *

WILLIAM A. HALLOCK, D.D.,

FOUNDER OF THE AMERICAN TRACT SOCIETY.

AT the first view we are struck with the high quality of the temperamental organization shown in the portrait. The Motive is evident in the strength of the features and the prominence of the outline, but the influence of the Mental is manifest in the "softened lights" of the face, as an artist might call the elevated, dignified, refined expression of the features, and the simple yet impressive poise of the head. There are marks of unmistakable force in that face, yet it is not indicated as that kind

of force which rushes along with impetuous sweep, which breaks its way through obstacles. It appears rather as a quiet, persistent energy that moves like the deep stream in the meadow, gently but surely toward its goal.

The observer notes at once the large perceptive organs, so surely indicative of a practical, matter-of-fact intellect. The central organs are particularly large: hence Dr. Hallock must have been a man well informed with regard to the details of his profession, and able to bring them to

bear in great fullness when considering a subject which rendered the application of data necessary. He was a good reasoner because he reasoned from facts, saw with

faculties were for the most part strongly developed--Benevolence especially, which inclined him to regard the world of humanity with kindness and sympathy. In



WILLIAM A. HALLOCK, D.D.

great clearness their interrelationships and bearings, and was not inclined to venture into the path of mere hypothesis or theory.

It is also noticeable that his moral

association with his great power of observation, this predominant moral quality impressed his mind with liberal and charitable views of human nature, and enabled him to see many elements of

good in it. He was not a croaker, not inclined to pick out the weaknesses, follies, and wickednesses of men, and set them up as so many tokens of their fallen and depraved condition, and bewail them as signs of a general decadence. He, on the other hand, had good hopes for the present and the future of men, and was ready to do his part in promoting their welfare. His will was strong. It was not, as we gather from the portrait, the mere energy proceeding from large Firmness, but the steadfast impulse of moral conviction which gave thoroughness and persistency to his action and thought.

He was ambitious for the good opinion of others, but pride and conscientiousness were such that he did not value reputation unless it were the reward of merit, a just recompense for sterling worth and honorable deeds. We think that he was inclined to be stern and severe in criticism of those who secure fame through the labor of others or by false pretences.

With these prominent features in his organization, he must have been a clear-sighted, generous, scrupulous, energetic, earnest man, one commanding respect by his qualities of intellect and the cheerful dignity and elevation of his character.

The following brief outline of his useful life is taken mainly from the *Illustrated Christian Weekly* of New York.

WILLIAM ALLEN HALLOCK, the eldest son of Moses Hallock, of Plainfield, Mass., was born June 2, 1794, and died October 2, 1880, in the 87th year of his age.

His father was a minister, and in addition to pastoral duties, prepared youth for college, about fifty of whom became ministers, some of them missionaries, among whom were James Richards, one of the young men who had much to do with the establishment of the American

Board of Foreign Missions. William Allen studied at Williams College, and was graduated in 1819 with the honors of his class. He immediately entered Andover Theological Seminary, and completed the course in September, 1822. Rev. Dr. Justin Edwards, then secretary of the New England Tract Society, existing at that time at Andover, had suggested to young Hallock that he devote his energies to its interests for a time at least. This proved the decisive moment of his life. The day after his graduation he commenced to prepare a sermon on the value of printed truth as a means of saving souls.

In a few weeks he was traveling from church to church, on foot to save expense, urging the importance of this instrumentality, and collecting means for the preparation and circulation of tracts. His success was unexpected, and the interest awakened wide-spread and effective. Within two years and three months New England was aroused, the name of the Society was changed to the American Tract Society, and it was removed to Boston, and Mr. Hallock had become its general agent.

In February, 1825, he came to New York, and in connection with Arthur Tappan, Moses Allen, R. T. Haines, W. W. Chester, and other noble men, all of whom are dead, formed the National American Tract Society, to which he gave fifty years of his life—gave himself indeed till the hour of his death.

He was first chosen Corresponding Secretary, and for several years performed the duties of the position alone. When the work had much increased others were associated with him, but he retained the Publishing and Foreign Departments under his control during the whole of his long service. It was his work "to examine with care every manuscript tract and book offered for publication, and select the best. To submit them for perusal to the Publishing Committee, and revise for the press, with the authors' aid, such as were adopted, and then see them through all the processes of publication." In 1845,

for example, he selected and prepared for the press and issued two hundred publications, large and small, besides reading one hundred that were declined, and arranging for one hundred new ones published by the aid of the Society at missionary stations.

Besides, he conducted the correspondence relating to these publications at home and abroad, including in his letters to missionaries all grants in aid of their work.

When the *American Messenger* was commenced he was the principal editor, and put both it and the *Child's Paper* to press, reading all the proofs of book, tract, or paper with care. Very few men could have accomplished the amount of work he performed, and that from year to year, with few and short intervals of rest, even toward the last. His industry was prodigious—the wonder of those around him, their stimulus and their despair.

The briefest portraiture of Dr. Hallock's character must note three marked

traits: singleness of purpose, force of will, persistency in work.

Of no name preserved in history, described in biography, or embalmed in poetry—of no living statesman, civilian, or divine—can it be said with more truth or firmer emphasis, "This one thing I do," than of Dr. Hallock in the work to which he gave himself—the preparation and circulation of the essential truths of the Gospel of Christ. To this *one* thing he devoted all his energies and from it never swerved. No calls to other forms of Christian labor pressed upon him in the earlier years of his public life, no less laborious or more lucrative department in the Master's vineyard had for him the least fascination, or turned his thoughts for a moment from his chosen task. The claims of social life, the calls of civil society, the sacred duties of home and family were all discharged with fidelity, but without forgetting for one hour the single aim of his being. With the fixedness of the needle to the pole, his eye, his mind, were ever upon this one thing.

MERRY CHRISTMAS.

HOW joyfully the sound floats out upon the frosty air; almost at every turn this merry greeting falls upon our ears, from the man upon whose head the sorrows of many Christmas morns sparkle, to the toddling infant whose tongue can scarcely lisp the happy words. In thousands of homes the Christmas morn is ushered in with all the paraphernalia of luxury and display that they possess. Friends gather from far and near around the well-spread board, while every heart is swelling with joy; no, not every heart, for to some the gladsome Christmas morn brings a keener pang to the sorrow that rends their hearts, and makes the cruel gnawings of hunger more painful, in contrast with the luxury that is so lavishly displayed on every hand; but to the majority of people, Christmas is the happiest, gladdest day of all the year; the day upon which the good old year receives and entertains his friends, and

bestows upon them his parting benediction, ere he resigns his scepter to the New Year, and gives up his life that has been woven of so many varied threads. But no matter though his deeds may have been more dark than light, the grand festivities and hearty good-will of his closing days wipes out the dark record and he goes to his grave in white. Why should we not be glad and rejoiced? Why should not the earth tremble with the sound of joy and gladness? for down through the vaulted ages of the past there comes to us an echo of angel voices, and golden harps, as the glad anthem of "PEACE ON EARTH, GOOD-WILL TO MAN," rings out upon the morning air. Then again as we listen, we catch the welcome tidings: "Rejoice, oh earth, for to-day a child is born, and to us a Son is given, yea, a Son, a King, who shall bring redemption to His people." Ah! fit messengers were they whose spotless purity

had ne'er been sullied by contact with the earth, to proclaim the coming of our glorious King and Saviour. No wonder that awe stole over the hearts of those good wise men, as they sat watching their flocks, and there came to them the soft rustle of angel wings, and looking up, they beheld the cloud of dazzling brightness, and the lovely forms of seraphs, and their listening ears caught the strains of music, even the glad anthems of praise and victory. Methinks no gladder, happier chorus ever reverberated through the courts of heaven, or the kingdoms of earth, than that which rang out that first glorious Christmas morn. No doubt seemed to obscure the minds of those good shepherds, as they listened to the proclamations from those visitants of light; but rising, they fixed their gaze upon the star that was to guide them, and following the track of light that marked its course, they came to the place where the Christ-child lay. But what was it that greeted their astonished gaze? Where was the King whose coming had been heralded in such a glorious manner? Where the pomp and grandeur that should grace the occasion? Where the silken couch upon which the soft fair limbs should repose? Where the gilded canopy to protect from the light and heat? Where the liveried servants gliding in and out upon their royal missions? Ah, no glittering pageant marked the advent of Him, beneath whose tread the earth should tremble, and whose brow should be encircled with a halo of purer light than ever gleamed from monarch's diadem before. But in an humble stall, surrounded by beasts of burden, was His resting-place, no couch but the fragrant hay and such accessories of comfort as poverty could provide; and no attendants save the parents who felt that no common honor was bestowed upon them in thus being allowed to cherish and protect the One who should become the world's Redeemer. The wise ones bowed low their heads before that lowly manger, and opening their treasures, presented beautiful and costly gifts of gold, frank-

incense, and myrrh. Ah, ye wise men, well may you deposit those treasures there, for the richest gems that ever sparkled in the bosom of the earth would be but poor tributes to lay at the feet of Him who spake them into existence. And thus through all the cycles of years that have passed in their solemn march to eternity, nations have commemorated the advent of Christ, by joyful gatherings and gifts of love. And as we bestow upon our loved ones gifts according to our means, let us remember the glorious Gift that came to us over eighteen hundred years ago, and by our deeds of love and kindness to those into whose homes the Christmas morn brings little warmth or gladness, show that not in vain did earth's greatest bow His head and die upon the Cross, not in vain was that precious blood spilled, for even as we receive it into our hearts, so will it cleanse us from all selfishness, and open our hearts to follow in the footsteps of our Lord and Master, "who went about doing good," and from whom no poor, heart-broken one ever turned unnoticed and unblest.

And now again, *A Merry Christmas* to the many readers of the dear JOURNAL and especially to our Editor, who seeks through the columns of his paper to incite us to lives of greater nobility and usefulness. And may God grant him a long and happy succession of "Merry Christmas" greetings in this earth-life, and at last a glorious reward in the golden beauty of Heaven's Forever, where all who have labored faithfully for their Master will find, that not in vain has a single good act been performed, or a kind word spoken, for no mistake occurs in the Record up there, and a "Crown of life" awaits the triumphant ones.

MRS. ETTIE H. DAVIS.

WILLIAM BLAKE, the poet-painter, regarded by his critics as half insane, was deeply imbued with mysticism. He cared little for wealth, and lived scarcely in the world, working and singing "till death came to him in the midst of his ghosts and visions."

EXEMPTION FROM PHYSICAL DEATH A POSSIBILITY.

MY attention was directed to the above subject by the perusal of an article from the pen of Francois Lenormant, a French writer of some note, published in the September Number of the *Contemporary Review*. Subsequently, an article appeared in the *Nation*, on the same subject; the thoughts expressed in it having been suggested by the article by Lenormant, who stated that in all of the art-products of the Oriental nations of antiquity, one of three trees appeared with the serpent in embrace. These trees were the Haonia or Soma, which affords a sweet fluid by macerating the boughs and steeping them in water; the palm, from which a sweet fluid is derived by arresting the flow of sap, and the vine, from the fruit of which a sweet fluid also is obtained by expressing it. All these juices afford an alcoholic liquid by fermentation; and the writer in the *Nation* concludes that the first sin consisted in the use of these intoxicants, and that the "serpent" represented the principle of evil long before its connection with the narrative in Genesis, and probably was the *sea*, which was "*chaos*," and from which all things were originally made, and which swallowed up the sun, moon, and stars, and produced the storm-clouds at which the gods hurled their darts—the lightnings. These views give the narrative the appearance of an allegory or fable, designed to convey an idea by way of illustration rather than by the expression of a fact.

In perusing the narrative in Genesis, the idea was impressed upon my mind, that the statement that "God made man of the dust of the ground," was the statement of an *abstract truth*, and that the details consisted in a knowledge of the way in which the inorganic elements are elevated into the fruits and grains under the laws that govern vegetable growth, and thence into our own bodies under the laws that govern digestion and assimilation. The reference to man's food,

as prepared for him when placed in the garden, is very positive, and is evidently corroborated by the experience of mankind, as being the best to sustain the system in a high state of purity and health. The conviction that these two statements were abstract truths, led me to conclude that the "tree of life," and "tree of knowledge of good and evil," had a basis and could be understood, provided we knew how to interpret correctly that portion of the narrative that has reference to them, and the same of the "serpent."

In reading the account of the trees of the garden, I detected an intimation that they did not grow out of the ground, as did those that were "pleasant to the sight and good for food." It also occurred to my mind, that man was the only one of all the *vertebrate* that maintains an erect posture when making their best efforts, physically, which would give his cerebro-spinal system the upright position of a tree—while the cerebro-spinal axis would represent the trunk, the nerves of sensation and motion bearing a most striking resemblance to the pendant branches of a tree. These intimations, with the admitted fact that the brain is the organ of the mind, and that the nerves of sensation, constituting the "five senses," are the instruments for taking cognizance of our external surroundings, and conveying the same to the brain, forced the conviction that this structure was the "tree of knowledge of good and evil."

Several years ago I decided, to my own satisfaction at least, that the function of the *great sympathetic* was to preside over the entire processes of nutrition and depuration; that it was independent of, and preceded, as well as presided over, the growth of the cerebro-spinal system, and was the organ of the involuntary functions. This is not a discovery of my own, as several hygienic authors have stated the same views; though the

general profession is still undecided as to the function of this system of nerves, many of them claiming that it is an offshoot or portion of the cerebro-spinal system. The conclusions to which I had arrived in reference to this matter, enabled me to predicate a course of treatment for cancers in their incipiency, that has proved very effective in preventing their further progress, and also in removing them after they have made considerable progress, without resorting to the knife, or sloughing, as is generally done, when the constitutional vigor is not too much impaired. The organs of digestion, absorption, circulation, aeration, assimilation, and depuration, are the instruments or servants of this set of nerves; their center of intelligence being probably in the *solar plexus*, while the outlying ganglia represent a series of "military outposts" of nervous intelligence and energy, stored up for future use by the various organs under their immediate control. This system of nerves well represents the "tree of life," with its branches, like the "tree of knowledge of good and evil," distributed into innumerable minute twigs. The similitude of a tree is found in the distribution of the arteries and veins distributed into twigs, with the lungs for its leaves; but these are the instruments of this set of nerves, depending on it for their energy, which, if withheld for the shortest period would result in death. This system of nerves is the home of the "soul," while the "mind" constitutes man a free-agent. This view presents the human being as a kind of partnership property, God supplying the vital principle or energy and material, and building the structure, and giving man the privilege of supervising or directing the details, and thus controlling the structure. What a privilege! What powers for good or evil, and what consequences must necessarily attach to his every act.

Having settled these points to my own satisfaction, I next proceeded to search for the "serpent" referred to in the narrative, and discovered that it was the

base of the brain: Alimentiveness, Combativeness, Destructiveness, and Secretiveness, and the special organs, when perverted, that afford a representation of the "serpent" traits in the temptation to which the first pair were subjected. I infer this to be the case, as they were not likely to disobey in the direction of Vitativeness or Amativeness, since they were commanded by implication to eat freely of the "tree of life"; and were positively commanded to "multiply and replenish" and "subdue" the earth. However, while it is very doubtful that our first parents were troubled with a perverted Amativeness, it is now one of the organs of the base of the brain, with which we moderns have to deal very seriously. In the subduing process the organs to which I have ascribed the *temptation*, had a legitimate duty to perform. Man, unlike the serpent, has a superstructure of cerebral development that is ample to govern the base, provided it is kept in activity by a systematic and sufficiently frequent exercise. If we are to believe the narrative—and I find conclusive evidence of this portion at least—that God made man in his own image, they were established with a properly balanced cerebral development, and all that was necessary was for them to keep it so by a proper exercise of each organ; and, though they had all of their instincts—the *soul-intelligence* emanating from the *great sympathetic*—unperverted, this was impossible to them, owing to the fact that they were continuously compelled, from necessity, to make choice, and without any practical knowledge of the evil they were to shun. It is also questionable if they had any intimation of the commandment given in reference to the fruit of the "tree of knowledge of good and evil," excepting what may be termed *instinctive*, and that the "subduing" was, with other things, the educating of the intellect in reference to the general laws that had been established to govern the universe, including, of course, those that were instituted to govern themselves.

It is also probable that Moses, who

wrote the narrative, knew nothing of its import any more than the many thousands who have read it since, as there is not the slightest intimation that he ever attempted to avail himself of the advantages that an application of the knowledge of its details would confer, either for himself, or those with whom he was associated; and it is extremely probable that it has been reserved for the present scientific age to inaugurate the *Millennium* by an application of the necessary means to secure the inestimable boon of enjoying a life so free from corroding cares as to exempt us from a physical deterioration. This is not a chimerical idea, but quite within the range of possibilities. It will be seen that the sin which they committed was against their own person, or the "tree of life," which sin is purely a physiological one.

They were possessed with the power to "return" and "eat" of the "tree of life," although they had partaken of the forbidden fruit. This thought is a most encouraging one, and conveys the idea to my mind that they went out on their mission of *subduing the earth*, and gradually lost the power to discriminate by their minds being diverted from this subject; and as they gradually lost the knowledge with which they had been blessed, we have the power to regain it by the means of our knowledge of instituted laws and experience which they did not enjoy. The printing-press has afforded a means of recording the facts developed by research; and it has done more. It has disseminated these facts among the masses, so that to-day we can announce a new discovery without the fear that we shall lose our head, or more properly our lives, by making such announcement. I feel absolutely certain that if it had not been for the superstitious ignorance of the people who ruled the various countries of the world, the rational interpretation of this most interesting narrative would have been made long ago. I expect adverse criticism from many persons, and possibly from some who are highly educated, but

whose "vested" interests will suffer if the people should learn to take care of themselves by returning to the allegiance of Him who established *all things* for their good.

It may be asked why it is, if God made our first parents in his own image, and established them in all the rectitude of a balanced cerebral organization, and they failed to maintain that balance, that we expect mankind, who are admittedly now unbalanced in their cerebral developments, to do what our first parents failed to accomplish? This is a pertinent question, which can be answered by simply remembering that the unbalancing of the organs of the brain did not constitute the *sin* which they committed, but eventually led to its habitual commission, and finally culminated in their death. Imagine that any one could start out and for many years lead a life of purity and uprightness, as many a Christian person has done for many years, and that gradually he becomes careless, and goes on from year to year committing such a crime against his own person, as drinking alcoholic liquors, or smoking tobacco. At first there is no dreadfully bad result apparent, and in his simplicity he imagines he is not injured by the habit; but in the course of time, like Poe with his "raven," he finds the unwelcome guest staying when he does not want him. He has established a habit that is already his master, and it will not away when he bids it, and in a short time he is overpowered and destroyed by what he at first supposed to be a harmless enjoyment.

If, instead of cultivating this habit of self-enjoyment, he had been looking after the welfare of his neighbors, which is morality, and worshiping God, which is religion, his mind would have been led upward by a contemplation of Him who made him, and has provided the means to sustain him for a prolonged usefulness. As we proceed in the task of *subduing the earth* by making ourselves acquainted with the wonderful products of God's creative skill, every nerve thrills with the most rapturous en-

joyment, and we see how God has made provision to guard us against all future harm. This enables us to understand how it is that a reclaimed man who becomes a Christian is much more likely to remain so than one who makes no profession of Christianity; and it should also teach us the impropriety of expecting to derive any benefit from the least use of what God has so distinctly set his mark of disapprobation upon; as for example: alcohol, which disturbs the vital forces by arousing them to a most vigorous action, for the purpose of expelling it; or tobacco, which depresses them by narcotism, or anything that causes the "serpent" which by these acts we establish within us, to "eat 'dust' all the days of

'his life,'" which "life" is as long as our disobedience continues. Such habits, by debasing the functions that constitute our manhood, cause *us*, by listening to the tempter, to "go upon" our *bellies*. God's instituted laws do not respect even medical prescriptions, as instanced in the recent death of one of our most respected and valued citizens, the Hon. George Brown, whose energies were wasted by such impositions till death relieved him of his sufferings. Thus, all ages have beheld the results of disobedience. Let us learn to obey, and *live*; and so establish the fact that we can become sufficiently wise, or intelligent, to stay here indefinitely.

ISAIAH RYDER, M.D., CANADA.

LITERARY GHOULS.

WITHIN the last few years the practice of grave-robbing has been carried on to such an extent in this country, that it seems expedient for local authorities to put forth very stringent laws for the punishment of this revolting crime. The degraded, hardened human beings who follow the horrible business for a livelihood are stigmatized "ghouls." They are lawless outcasts of society, whose shameful deeds compel them to choose darkness instead of light, in which to perpetrate them. To them, a dead body is but a bit of merchandise, and deaths and funerals are their opportunities for prosperity. Yet, in this pernicious calling the 'ghouls' do no harm to the corpse; nor can they, for it is only clay, which must fall to dust. Neither do they in any way affect the condition of the departed soul; it is beyond the reach of earthly harm. The name or reputation a person has gained in the world is left unmolested by these midnight robbers. It is only the living friends that are really sinned against, who are pained and grieved in the extreme when the bodies of their cherished dead are ruthlessly disturbed.

But there is a class of individuals—of the literary type, too, I am ashamed to admit—who deserve the appellation of "ghouls" fully as much as the most depraved of the first-mentioned class. These, of the latter class, are not outcasts nor law-breakers, nor is their work hidden in darkness; on the contrary, they are very respectable people, often leaders in society, elevated and brilliant, stars in the literary world, not only law-abiding, but sometimes law-making, citizens, and their work, the special work that I am about to point out, is, as Hamlet says, "too much i' the sun."

Their business permits them to make merchandise of people's character and reputation. They go down into the graves of the most noted dead, and bring up and expose to public view their shortcomings and dark sins, if they had any. The hideous skeletons which are exhumed are sold for a price to those who furnish the world with sensational literature. "The evil that men do lives after them; the good is oft interred with their bones."

It is a curious fact that these "ghouls" never bring to light again some forgotten

good trait or deed that a man or woman has possessed or done while living. But no; wickedness is more marketable than goodness. Some before unknown or forgotten good deed of Lord Byron's would not have been read at all by thousands and thousands who perused with interest that famous exposure by Mrs. Stowe. Charles Dickens is another victim. His domestic troubles must all be explained again since the death of his wife. Diligent search has been made for something of a dark and disgraceful character, but as yet the searchers have been disappointed. If there is one living in possession of a secret of his, let us hope that he or she will not be induced to divulge it.

But recently a writer has raked up and

garnered the decaying "wild oats" crop of that jolly, rollicking Scottish poet, "Bobbie" Burns. Such writings do no one any real good, and surely many are harmed by them. The majority of great men are not any too good, morally. Whatever they have done in life for the benefit of the world at large should have full sway, and not be impeded by a display of their faults and failings after death. Charity alone should keep hidden that which has been buried by the ones most near to them. "Sufficient unto the day is the evil thereof." It is cowardly in the extreme to renew scandals when the victims can not appear in self-defense. Yet these literary "ghouls" are brave men and women!

DELPHINE RAYMER.

THE PEOPLE WE MEET.

IN the very mixed society of a considerable town we are quite certain to meet the gentleman in black who is numbered 1 in the trio of our illustrations. At first sight we put him down as "learned" in some way. "A college professor" is suggested by the quiet, even-toned bearing. A savant, whose inquisitiveness stops not because of imputations of materialism or of infidelity. We survey the well-shaped head, the high forehead, the generally benevolent expression, and infer that such a mind can be little affected by such narrow and invidious reflections, that in its breadth of intelligence, its consideration for people who are jealous of scientific progress, is pervaded with charity, always ready to make an allowance for their ignorance or their prejudice.

If a teacher, we know that he is warmly esteemed by his pupils, and is a learner himself. The nose is not strong enough to impress us with the notion that he is arrogant and overbearing, but there is in its outline a tone of inquiry, and just enough of curvature to intimate that he can follow up a clue with earnestness. He is courteous and gentle, and thus

reaches his object when a rude persistency would fail. As a savant he is usually found in the laboratory of the chemist, patiently investigating abstruse or complicated questions and substances, and if successful in an important field, he is not the first among his brethren to proclaim it.

The rank and file of people think him cold and unsympathetic, because he is quiet and even-toned; but in his home, among his familiars, he is known to be cordial and generous in feeling, and when the strain of thought is off, he will enter into the amusements of the home-circle with great warmth and spirit.

The character of No. 2 is apparent at the first glance to the "traveled" reader; his nose and turban proclaim the man of acquisitiveness and self-indulgence. He is usually a "professional," and practices certain indefinite arts without reference to schools and diplomas. He hails from across the ocean, and boasts of ancestry and learning, and wonderful powers, usually of healing; for he takes to "doctoring" as the best method to wheedle people out of their money. If No. 1 is modest and retiring, seldom al-

cluding to his talents or accomplishments, No. 2 is not to be blamed for such traits, for he is garrulous, and most of his gar-



No. 1.

rulity concerns himself. He not only talks much of himself, but he advertises also concerning his unsurpassable skill in curing the sick, and diseases which eminent physicians consider irremediable, he proclaims of easy treatment with his "wonderful compound," or "new discovery."

We are inclined to suspect that Mr. Quack's antecedents, if inquired into, would bring us into some obscure city neighborhood, and disclose him as the aforetime keeper of a wine-cellar or dram-shop. The outlines of his nose, mouth, and chin do not suggest a re-



No. 2.

fin'd birth or associations of an estimable type, and his specifics have so much of the odor of whisky about them that we

somehow can not help inferring that alcohol is their chief property, despite the condemnation of Richardson, and other scientists of world-eminence.

Best known of the three is our No. 3, with her practical, intelligent, executive face. She meets us in the home-circle, not as a superannuated grandmamma, however, but as the director or head counselor of the household. She may have passed three-score years and ten, but her industry, will, and administrative ability are not to be subordinated; and they who think her too old soon find to their confusion that age has but ripened her powers. She rejoices in management and responsibility, and is best suited at



No. 3.

the head of a large establishment. We meet with her now and then directing the affairs of a hotel or boarding-house. She was originally cut out for business, and her husband, early in his married career, learned her value as an adviser and assistant; and in the course of time she came to be the leader and he the follower in affairs of mutual interest.

Weak, irresolute women do not like her, on the score of her being "masculine," too arbitrary and too officious; but practical people like her, and those in intimate association regard her with admiring esteem as indispensable to their comfort. Dear old lady, may she live always.

SELF-CONTROL.

THERE is in the human mind an intense love of the strong. Power is the principal source of the sublime. It more than delights—it awes and fills with admiration. The mighty engine, the swift lightning, and the thundering cataract are sublime, because they exhibit power. Man looks at them and feels his own insignificance in their presence. And yet to inspire awe, power must be controlled, otherwise it terrifies and fills with dire dismay. The sight of the steam-engine, moving speedily over the track, drawing after it the whole train of cars freighted with human life and valuable merchandise, never becomes old or common. The workman will cease his work every day to watch it, and when it has passed he resumes his task with the thought, power is grand when it is controlled. But suppose the engineer falls asleep or neglects his duty, the power of the engine is robbed of its grandeur, and it becomes a thing to be feared, and almost to be hated. The workman looks at the frightful wreck of life and property, and then he knows that the charm of power lies in its being strong, yet controlled. Who is to blame for the wreck? The engine? No, you say, the one who ought to have guided its power.

There is a wonderfully good cheer in an open fire. As the business man comes home at night, he loves the hearth that glows for him. But when he comes near and finds his dwelling all ablaze, no longer does he love the power of flame, for it is fast spreading beyond the power of control. Yet the flame is not to blame. Man is reverent to the power of electricity, and he gladly makes it his messenger while he can control it, but when it slips from his guidance, and becomes the forked lightning, and shivers the hardy oak of his field, or makes ruin of his habitation, O how he bows with fear before the power he can not control.

You may sometimes see a man who bears all the elements of a noble manhood, yet whose character is a wreck. He commands no respect from his fellows; he deserves none. He does not even respect himself. What is the matter? Is he to be blamed? Why more than the engine, the fire, or the lightning? Evidently, because each man has the ability to control his own power, and if he does not, he himself must suffer. He can do what he wills to do. His will is an engine, moving with it all his appetites, passions, personal habits, and everything about the man. He is an engineer.

He must be constantly on duty, for if he falls asleep, there is danger of a wreck that is almost sure to follow. There is no sight more terrible than an individual who has lost control of this power; he goes headlong on until he rushes over a great precipice into utter destruction.

A man who does not control his temper is despised by all who come in contact with him. His words are foolish and wicked, his actions silly and base. He receives no respect. Some one has said that an angry man turns himself wrong side out for other people to laugh at; and the Word often mentions "The wrath of fools." Some people fancy that it is an exhibition of power to become angry. So it is, but it is that dangerous kind that is a bitter curse. Men often give us as an excuse for wrong doing, "I was mad and could not help it." A poor excuse. Shame on the man who does not control his temper. However, to be self-possessed implies more than simple control of temper. It implies a perfect mastery of all one's emotions. The person who laughs when it is inappropriate, who sneers at the mistakes and misfortunes of others, who disturbs in places of worship, the one who whispers, who pays no attention during a recitation, who uses two legs of his chair instead of four, who pushes or crowds in the hall, in fact, who does anything that a person of refined taste and manners should not do, says by his actions, "I have no power of self-control—pity me. I need a master. I am like the horse, I have great strength, but some other man must put the bridle upon me to guide me aright, or I shall use my strength for ruin." He needs pity. He must be helped and controlled, but self-help is the best help, and self-control is the best control. There is no nobler sight on earth than an individual who is master of himself. He carries with him an air of dignified, controlled power that fascinates you from the first. He is happy, for his habits are well fixed, and he inspires all who meet him to try to lift themselves above themselves. These self-poised people have strong and violent passions, but have them in subjection. It is not that we want people without passions, but that we want them controlled. You can not help loving the black-eyed, mischievous little boy, full of tricks, better than the one who is always a sober, staid, little man, and when they become men, the one who has the strongest feelings under the best control, will make the best neighbor, friend, and statesman.—*The Campus.*



HYGIENE AND ECONOMY IN THE HOME.

A PRACTICAL SKETCH.

ONE who is an observer of human nature and conversant with the practice of hygiene, writes the following suggestive sketch :

One evening in the early part of the winter, the door-bell rang with energy, and the servant announced a man who wished to see me. A "man" is one thing with a servant; a "gentleman" another; a "person" something different from either. The man stood in the hall, but I wondered why he had not been called a gentleman. I was puzzled where to place him myself. His dress was plain, but rather coarse. His linen, that badge of refinement, was white, in perfect order and almost elegant. Everything about him seemed substantial, but nothing gave a clue to his position in life. In all outward seeming he was a gentleman. When he spoke to me, his address was simple, direct, clear, and with a certain air of self-reliance, the farthest possible from vulgar bluster.

"Doctor," he said, "I wish you would go and see my child. We fear he is threatened with croup."

This case, which he described as we went along, was a pretty clear one, and I hurried my walk still more, and in a few moments we were at the door. We went up, up, up to the fourth story. The last flight of stairs was carpeted, and a small lamp at the top lighted us. An excellent

and very durable kind of mat lay at the door. You will see in time why I give these little particulars.

I entered the opened door, and was welcomed by a rather pretty and remarkably tidy woman, who could have been nobody in the world but the wife of the man who had summoned me.

"I am glad you have come so soon," she said, in a soft, pure accent. "Little William seems so distressed that he can hardly breathe;" and the next moment, as we passed through a narrow passage to where he lay, I heard the unmistakable croupy sound that justly carries such terror to the parent's heart.

"Is it the croup, doctor?" asked the father, with a voice of emotion, as I bent over the child, a fine boy, three years of age.

"It is certainly the croup," I said, "and a pretty violent attack. How long is it since you thought him sick?"

"Not above an hour," was the calm reply. It was made calm by a firm self-control. I looked at the mother. She was very pale, but did not trust herself to speak.

"Then there is probably but little danger," I said; "but we have something to do. Have you water here?"

The husband went to what seemed a closet, opened two doors, and disclosed a neat pine bathing-tub, supplied with Cro-

ton. This was beyond my hopes; but I had no time to wonder. The little fellow was in a high fever, and laboring for breath. Taking him from his little crib, where he lay upon a nice hair mattress fit for a prince to sleep on, I took off his clean night-clothes, stood him in the bath-tub, and made his father pour full upon his neck and chest three pails of cool water, while I rubbed them briskly with my hand. He was then wiped dry, and rubbed until his whole body was glowing like a flame. Then I wrung a large towel out of cold water and put it around his throat, and then wrapped him up in blankets.

The brave little fellow had borne it all without a complaint, as if he understood that under his father's eye no harm could come to him. In fifteen minutes after he was wrapped in blankets he was in a profuse perspiration, in a sound slumber and breathing freely. The danger was over—so rapid is this disease, and so easily cured. Happiness had shed a serene ray of light upon the countenance of the father, and thrown over the mother's face a glow of beauty. I looked upon them, and was more than ever puzzled where to place them. There were no marks of high birth or superior breeding—not a shadow of decayed gentility about them. It was rather the reverse, as if they were working up from a low rank of life to a higher.

I looked around the room. It was the bed-room. Everything in it was perfectly neat and orderly. The bed, like the crib, was excellent, but not costly. The white counterpane did not cost more than ten shillings—yet how beautiful it looked! The white window curtains were shilling muslin; but their folds hung as richly as if they were damask—and how very appropriate they seemed. The bath, with its snug folding doors, I knew had not cost, plumber's bill and all, more than ten dollars. The toilet table, of an elegant form, I had no doubt was of pine, and cost half a dollar. The pictures on the wall were beautifully tinted lithographs—better, far better than oil paintings I have seen in the houses of million-

aires; yet they can be bought for fifty or seventy-five cents, and a dollar apiece had framed them. The floor had a carpet that matched everything with its small, neat figures, and a light chamber color. It was a jewel of a room, in as perfect keeping in all its parts as if an artist had designed it.

Leaving the little boy to his untroubled sleep, and giving directions for a bath on his waking, we went into another room, which was differently but just as neatly arranged. It might have answered for a parlor (only it had a cooking-stove), for an artist's studio, or a dining-room. It was hung with pictures—heads, historical pieces, and landscapes, all such as a man of taste could select and buy cheap; but which, like good books, are invaluable. And speaking of books, there was a hanging library on one side of the chimney which contained some of the very choicest treasures of the English tongue.

The man went to a bureau, opened a drawer, and took out some money.

"What is your fee, doctor?" he asked, holding the bills so as to select one to pay me.

Now I had made up my mind before I had got half way up the stairs, that I might have to wait for my pay—perhaps never get it; but all this had changed. I could not, as I often do, inquire into the circumstances of the man, and graduate my price accordingly. There he stood, ready to pay me, with money enough; yet it was evident that he was a working-man, and far from wealthy; I had nothing left but to name the lowest fee.

"One dollar does not seem enough," said he; "you have saved my child's life, and have been at more trouble than merely to write a prescription."

"Do you work for a living?" I asked, hoping to solve the mystery.

He smiled and held out his hand, which showed the unquestionable marks of honest toil.

"You are a mechanic?" I said, willing to know more of him.

"Take that," he said, placing a two-dollar note in my hand with a not-to-be-

refused air, "and I will gratify your curiosity; for there is no use in pretending that you are not a little curious!"

There was a hearty, respectful freedom about this that was irresistible. I put the note in my pocket, and the man going to a door, opened it into a closet of moderate size, and displayed the bench and tools of a shoemaker.

"You must be an extraordinary workman," said I, looking around the room which seemed almost luxurious; but when I looked at each item I found that it cost very little.

"No, nothing extra. I barely manage to earn over a dollar and a half a day. Mary helps me some. With the housework to do, and our boy to look after, she earns enough to make our wages average ten dollars a week. We began with nothing—we live as you see."

All this comfort, this respectability, this almost luxury, for ten dollars a week! I expressed my surprise.

"I should be very sorry if we spent so much," said he. "We have not only managed to live on that, but we have something laid up in a savings bank."

"Will you have the goodness," said I, "just to explain to me how you do it?"

"With pleasure," he replied, "for you may persuade others no better off than I am to make the best of their situation. My name is William Carter. My father died when I was young, and I was bound out as apprentice to a shoemaker, with the usual provisions of schooling. I did as boys do generally at school, but I was very fond of reading; I made the most of my spare time and the advantage of an Apprentice's Library. Probably the books that helped me most were the sensible writings of William Cobbett. Following the example, I determined to give myself a useful education, and I have to some extent succeeded. But a man's education is a life-long process; and the more I learn, the more I see before me.

"I was hardly out of my time when I fell in love with my Mary there, whom some people think very pretty, but whom I know to be very good."

Mary looked up with such a bright, loving smile, as to fully justify some people in their notion.

"When I had been one year a journeyman, and laid up a few dollars (for I had a strong motive to be saving), we were married. I boarded at her father's, and she bound shoes for the shop where I worked. We lived a few weeks at home; but it was not our home; so we determined to set up housekeeping. It was a rather small set-up, but we made it answer. I spent a week in house hunting. At last I found this place. It was new and clean, high and airy, and I thought it would do. I got it for fifty dollars a year—and though the rents all around advanced, our landlord is satisfied with that, or takes it in preference to risking a worse tenant. The place was naked enough, and we had little to put in it save ourselves; but we went cheerfully to work, earned all we could, saved all we could—and you see the results."

"I see; but I confess, I do not understand," said I, willing to hear him explain the economies of this modest and beautiful home.

"Well, it is simple enough. When Mary and I moved ourselves here and took possession, with a table, two chairs, a cook-stove, a sauce-pan or two, and a cot-bed with a straw mattress, the first thing we did was to hold a council of war. 'Now, Mary, my love,' said I, 'here we are. We have next to nothing, and we have everything to get, and nobody but ourselves to help ourselves.'

"We found that we could earn then an average of eight dollars a week. We determined to live as cheaply as possible, save all we could, and make us a home. Our rent was a dollar a week—our fuel, light, and water-rent and some little matters a dollar more. We have allowed the same amount for clothing, and by buying the best things, and keeping them carefully, dress well enough for that. Even my wife is satisfied with her wardrobe, and finds that raw silk at seventy-five cents a yard is cheaper in the long run, than calico at ten. That makes three dollars a

week, and we had still our living to pay for. That costs us, with three in our family, just two dollars more."

"Two dollars apiece!"

"No—two dollars for all. You seem surprised; but we have reckoned it over and over. It costs more at present, but we have learned to live better and cheaper—so that we have a clear surplus of four dollars a week, after paying all expenses of rent, fire, light, water, clothing, and food. I do not count our luxuries, such as an evening at a lecture or a concert, or a little treat to our friends when we give a party."

I know a smile came over my face, for he continued:

"Yes, give a party; and we have some pleasant ones, I assure you. Sometimes we have a dozen guests, which is quite enough for comfort, and our treat of chocolate, cakes, blanc-mange, etc., costs two dollars; but this is not very often. Out of our surplus—which comes, you see, to two hundred dollars a year—we have bought all you see, and have money in the bank."

"I see all," said I, "all but the living. Many a mechanic spends more than that for cigars, to say nothing of liquor. Pray tell me precisely how you live."

"With pleasure. First of all, then, I smoke no cigars, and chew no tobacco, and Mary takes no snuff."

Here a pleasant smile came in; but there was no interruption; for Mary seemed to think her husband knew what he was about, and could talk well without her aid.

"I have not drank a glass of liquor since the day I was married. I had read enough physiology to make up my mind that tea and coffee contained no nutriment, and were poisons besides; and I tried a vegetable diet long enough to like it better than a mixed one; and I find that it agrees with me better; and as we have read and experimented together, of course Mary thinks as I do."

"But what do you eat and drink?" I asked, curious to see how far this self-taught philosopher had progressed in the laws of health.

"Come this way and I will show you," he said, taking the light, and leading the way into an ample store-room. "Here, first of all, is a mill, which cost me two shillings; it grinds my grain; gives me the freshest and most beautiful meal, saves tolls, and the profits. This is a barrel of wheat. I buy the best, and am sure that it is clean and good. It costs less than three cents a pound; and a pound of wheat a day, you know, is food enough for any man. We make it into bread, mush, pies, and cakes. Here is a barrel of potatoes. This is hominy. Here are some beans; a box of tapioca, and macaroni. Here is a barrel of apples, the best I can find in Fulton Market. Here is a box of sugar, and this is our butter-jar. We take a quart of country milk a day. I buy the rest down town, by box or barrel, where I can get the best and cheapest. Making wheat—eaten as mush or bread, and made coarse without bolting—and potatoes, hominy or rice, the staple; you can easily see that a dollar a week for provisions is not only ample, but allows of an even luxurious variety. For the rest, we eat greens, vegetables, fruit, and berries in their season. In the summer we have strawberries and peaches, as soon as they are ripe and good. Mary will get up a dinner from these materials at the cost of a shilling better than the whole bill of fare at the Astor House."

I was satisfied. Here was comfort, intelligence, taste, moderate luxury, all enjoyed by an humble mechanic, who knew how to live at the cost I have mentioned. How much useless complaining might be saved—how much more genuine happiness might be enjoyed—how much evil and suffering might be prevented, if all the working men and women were as prudent as William and Mary Carter.

TEN million barrels of beer were sold in 1879, enough to fill a canal twenty-one feet wide and five feet deep, extending from New York to Philadelphia; and it would take a pump, throwing thirty gallons a minute, running constantly over twenty-one years to pump it out.

ESSENCES OF BEEF, BEEF-TEA, ETC.

THERE are several preparations sold by druggists which are highly commended by many physicians as possessing great value, from a nutritive point of view, to the sick and feeble, whereas, in point of fact, these preparations have little or no value whatever. We have been told that the celebrated German chemist, Liebig, whose name is associated with several brands of "beef-extract," stated, a little before his death, that he had committed an error in commending such a preparation to the world, as later investigation had convinced him of its inutility. Dr. Adolph Scheppe, an eminent physiologist, says that Liebig's extract, and the extracts from Montevideo and San Antonio, Texas, and Fraybentos, Uruguay, are made by extraction with cold water, and subsequently heated to the boiling point, by which process all the albumen coagulable by heat, gelatine, and fat, are left behind. They therefore are not nutriments at all, but must be considered as nervous stimulants, like tea, coffee, chocolate, brandy, and similar articles.

An article in a late number of the *Cincinnati Medical News*, states very emphatically that the numerous extracts and essences of beef now flooding the market, are not substitutes for the beef itself, but preparations totally unsuited to the use of the sick-chamber, as the impaired stomach of the invalid is not able to assimilate them, any more than it can assimilate fresh beef.

Dr. Scheppe has made an analysis of several of the beef preparations extensively advertised, among them Johnson's,

Valentine's, the "London Essence of Beef," and "Peptonized Beef." The last mentioned has received the sanction of so many eminent physicians, that it is in point to add here the deduction of Dr. Scheppe from his investigations, that "The presence of coaguable albumen and blood which this preparation contains is incompatible with the process of peptonization, since both of these substances are the first to be changed in their nature by the action of the acid necessary for the successful completion of the process." He deems the article not only misnamed, but as wanting in other important respects.

"Beef-tea," one of the old standard preparations for the sick-room, should have long ago lost its prestige as a dietetic, because it contains scarcely any nutritive material, its albumen especially, the constituent mainly desired, because it contains the nitrogen, being quite lost in the boiling necessary to its preparation. Albumen coagulates at 160° F. Boiling beef in water at 212° will therefore not extract the albumen, only serving to lock it up the tighter, hence no nutritive material of service to the patient can be imparted to the water in which beef is boiled. If those who are in favor of beef-tea would secure all the nutriment which beef contains, why do not they resort at once to that which makes flesh—blood. Every ounce of that contains as much solid matter as an ounce of the meat. No allusion, of course, is here intended to the disgusting and unnatural character of blood-drinking.

HOW TO SELECT HEALTHY FLESH MEAT.

IT is not the custom in this department to advise the regular or frequent use of flesh food, because, as has been shown by analysis, argument, and illustration, it is not essential for the health and strength of either mind or body, and besides it so easily and quickly takes on abnormal con-

ditions and undergoes chemical changes in the stall of the butcher and in the housekeeper's pantry, that a great amount of unwholesome, disease-producing beef, mutton, and veal are eaten by people without suspicion. But the majority of people eat these things, and insist upon

their being necessary; and that those of our readers who eat flesh may be put on their guard when purchasing it, we borrow some hints from a contemporary on the selection of that which may be considered wholesome:

Good meat should possess the following easily-observed characters: 1. It ought to be of a full, slightly brownish, red color; neither of a pale pink tint on the one hand, nor of a deep purple hue on the other. If pink, disease is indicated; and if purple, the animal has probably not been slaughtered, but has died with the blood in it, or has suffered from acute fever. 2. It should have a marbled appearance, from the ramifications of little veins of fat among the muscles. 3. It should be firm and elastic to the touch, and should scarcely moisten the fingers. Bad meat is usually wet, sodden, and flabby, with the fat looking like jelly or wet parchment. 4. It should have little or no odor, and that not disagreeable, for diseased meat has a sickly, cadaverous smell. Any disagreeable odor is most easily detected when the meat is chopped up and drenched with warm water. 5. It should not shrink or waste much in cooking. 6. It should not become very soft and wet on standing for a day or so, but should be, on the contrary, dry at the sur-

face. Pork, if unsalted, should present the characters above stated; but the color of the meat, if sound, is of a very pale red tint. When infested by the dangerous parasite, *Trichina Spiralis*, the meat is usually of a dark color. Unfortunately, the animal itself can scarcely be detected by the unaided eye; not so the *cysticercus*, or measles, whose little sac is often as large as a hemp-seed, and can be easily seen. Sausages are liable to partial decomposition, and then become poisonous, from whatever kind of meat they may have been prepared. Good sausage-meat should be firm, not moist, gelatinous, and vesicular. It should be free from disagreeable smell and taste, and from acidity. As regards fish, it should, of course, be free from offensive smell, and the flesh not soft or gelatinous. Salmon or trout should not only have the well-known pink-colored flesh, but when the finger is drawn quickly and firmly across the fish, the depression so caused ought to fill up quickly, and a corresponding elevation or ridge soon appear. Sea-fish is not tested in this way; but the rigidity of the fish is sufficient to indicate its fresh condition. The bright red color of the fish-gills is a sign of very little importance, as the gills are often artificially tinted.

THE NAILS.

THAT the possession of a beautiful hand is a great joy to a woman is undoubted; but what hand would be lovely if each finger terminated in a flat, unsightly, colorless nail? In Paris, where "manicures" are plenty, and their fees reasonable, one seldom sees such a sight on the hands of a lady; but here, where the business of a manicure is not properly appreciated, their customers few, and, of necessity, their prices high, an unsightly nail is frequently seen on hands that, like the lilies of the field, "toil not, neither do they spin." Lately, however, a fashion has arisen for rubbing and polishing the nails, and now quite often a gentleman,

in shaking hands with a lady, will notice that this fair friend offers her hand palm outward, so that he may have an opportunity to notice and admire the bright polish and rosy tinge of her well-shaped nails.

How is this done? Why, by patience, perseverance, chamois-skin, and a little paste composed of rotten-stone and rouge. A small quantity of the mixture is put on the rubber—a tiny brush covered with chamois—and constant friction does the work. The oil and rotten-stone smooth and polish the nail in the same way that the workman does ivory, and the rouge imparts a pinkish glow. So much of this

rubbing is done, and such ardor is displayed, that a well-known editor fears some of the ladies will have an unhappy fate—by constant rubbing the nail will break. An old story tells of an Irish-woman who scrubbed her kitchen-floor so much, in an over-laudable desire to be clean, that she fell through to the cellar,

and this is what is feared will happen to some of the fair rubbers. After a severe course of constant friction, the center of the nail will give way; but this will not happen if the method be practiced for only a few moments each day; then the result will be attractive and beautiful.

NOTES IN SCIENCE AND AGRICULTURE.

Electricity as a Motive Power.—A writer in the *American Machinist* considers the practicability of applying electricity to working machinery in the following perspicuous style:

"The employment of electricity as a motive power on as large a scale as propelling tramway cars for passengers has been proved feasible both in Europe and America, but whether it can be done economically enough to make it a commercial success is a question open to serious doubts. Where it is undesirable to use steam motors for a tramway, and horses are excluded (as upon elevated roads), compressed air has been found to work admirably and with fair economy. The apparatus need not be cumbersome even if one charging of air is required to run ten or twelve miles. With a well designed and constructed engine, the loss of power is very small, as air is perfectly elastic. The most successful trials thus far show that with electricity a much higher percentage of power is lost, besides which, it would doubtless be more difficult and expensive to keep the electrical machinery in working order, than that running by compressed air. In transmitting power to a distance by electricity, there would necessarily be involved a large outlay for good conductors and a considerable loss of power before reaching the point for applying it to useful work. Some experiments in France have demonstrated that plowing can be done by electricity, but the possibility of its doing this work as economically as steam seems very remote. As electricity is not a prime motor, it must depend upon steam, water, wind, gas, or some other force for its generation. It is evident that there would be greater economy in applying power directly to work, than in converting it from one form into another before its useful application. It is believed by those who have given the most diligent study to the subject, that the possibilities in the way of electricity are far beyond anything heretofore attempted by its aid, but for purposes of ordinary motive power it does not appear to be well adapted."

Absinthe.—A word of warning on this beverage, the use of which has now become quite common in England and various other parts of Europe and even in some parts of

the United States. Absinthe, as made in France, whence it is exported, is a mixture of the essence of wormwood (absinthium), sweet flag, anise seed, angelica root, and alcohol. It is colored green, with the leaves or juice of the smallage, spinach, or nettles, and sometimes with blue vitriol, to give it as well a certain required taste. It is said that chloride of antimony (commonly called butter of antimony) is another adulterant; but this is denied by some doctors.

The bitterness of essence of wormwood increases the craving or desire for it, and the habitue is soon unable to take food, unless he is primed for it by the deadly provocative. On the nervous system the influence is different from that of alcohol. The absinthium acts rather after the manner of nicotine, but it is slower in taking effect than the alcohol which accompanies it; consequently there is felt by the drinker, first, the exciting, relaxing influence of the alcohol, and afterward the constringing, suppressing influence of the wormwood. The drinker is left cold, tremulous, unsteady of movement and nauseated. If the dose be large, these phenomena are exaggerated, and the voluntary muscles, bereft of the control of the will, are thrown into epileptic convulsions, attended with unconsciousness, and eventually the epilepsy becomes confirmed with confirmed indulgence. The effect which the absinthe exerts in a direct way on the stomach alone, is highly pernicious. It suppresses the natural power of the stomach to secrete digestive fluid; it interferes with the solvent power of that fluid itself, so that, taken in what is considered to be a moderate quantity—a wine-glass or two, in the course of the day—it soon establishes permanent dyspepsia.

A Remarkable Plow.—A Chicago agricultural journal gives an account of the largest plow ever known to be made, which has been recently turned out by an Illinois firm of agricultural machinery makers for use on the St. Louis, Iron Mountain, and Southern Railway. It is attached to a platform bar of a construction chain in such a way as to cut its ditch a sufficient distance from the railway line. It will make one mile of ditch, two feet deep and three feet wide, every four hours, thus doing the work of

about 1,000 men. The beam is made of swamp oak, and is eight inches by four inches, the land side being made of bar-iron eight inches wide and one and a half inches thick, which had to be forged expressly for the purpose. Its total weight is 1,700 pounds.

Drying Fruits.—In regard to cherries, our experience is not so extensive as with other kinds of fruit, but we dry them pitted and think that the preferable way. In the fall of 1878 we got our first dryer, late in the fall, so we had to use the refuse of winter apples; bought 100 bushels for \$10, picked and hauled them, and left twice as many on the ground that were so far gone in decay they were not fit to store away. These we evaporated during winter and sold at 10 cents per pound, wholesale, mostly; kept some over, and the citizens of our town got to thinking so highly of them that they would pay 10 cents for them; while they could get green apples at 10 cents per peck, claimed the dry were better. A few sacks we carried over summer, and sold at 12 to 15 cents per pound, wholesale, and retailed in Wheeling at 20 cents per pound, while common dried apples were plenty and offered at 5 cents per pound. This much for apples.

Of raspberries, we shipped from last season's drying nearly 500 pounds, which sold for 27 to 30 cents per pound, and three quarts of fruit made a pound. Thus all can see they brought 9 cents per quart, or over, and the item of freight and commission is small compared with some items of fresh fruit, and the cost of drying was very small. One of our neighbors for whom we dried some berries says one pound of these were worth just five pounds of the common fruit, as dried in the common way. Pumpkins also can be preserved, in order to have pumpkin pie all the year, and of the best quality. Tomatoes also are very nice; also sweet corn, rhubarb, Lima beans, sweet potatoes, etc., etc. This process is certainly destined, at no distant day, to drive canned fruit out of use, for that process is at once expensive, cumbersome, and unsatisfactory.—*Ohio Farmer.*

Cauliflower.—Who does not like this delicate and nutritious vegetable? Yet its cultivation is much neglected by those who have large gardens and abundance of help in the raising of roots and esculents for their tables. This is probably due to the fact that most people think the cauliflower hard to produce. A writer in the *Rural New-Yorker* thus advises:

"About the 1st of February, seed should be sown in hot-beds, and, as soon as the plants are large enough, they should be transplanted to a cold-frame, where they may remain until the latter part of March, when, in this climate, it is generally safe to plant them in the open ground. If given air freely before transplanting, and protected during cold snaps at night, and thus gradually hardened, they will stand as much frost as cabbage, without injury. It is, we believe,

very important that the plants should get established in the field or permanent beds as soon in the spring as possible, since the droughts and heat of early summer are fatal to the formation of fine heads or curds, unless they have had time to form a sufficiency of roots and leaves. Treated in this way, the plants should be ready for market in mid-June, leaving plenty of time to clear and prepare the ground for second crops.

"The land for cauliflowers can not be too well prepared; and manure liberally applied is indispensable. Lime is freely used on Long Island, where splendid crops of this delicious vegetable are raised from year to year, though not on the same fields. Superphosphate and guano, at the rate of 300 pounds per acre, more or less, according to the home-made manure used, are also applied as a top dressing and harrowed in. Early Dwarf Erfurt, Early Paris, and Lenormand's are as good as any of the dozen varieties offered in catalogues."

How to See the Blood Circulate.

—The observation of the circulation of the blood in living creatures has always been regarded as the most interesting and instructive sight that the microscope could afford. The delicate membrane of the foot of the frog has hitherto afforded the microscopist the most convenient subject for this beautiful demonstration of Harvey's discovery. Perkinje's experiment, by which an observer is enabled to observe the circulation in his own retinal blood-vessels, has hitherto been the only method known of actually showing the circulation of the blood in the human subject. Dr. Huber, of Greifswald, it may interest our readers to know, has lately described a simple experiment by which it is possible for an observer to see the circulation of the blood in the blood-vessels of another person. Dr. Huber fixes the head of the subject to be examined in a frame not unlike that used by photographers, on which is fixed a holder for the microscope and lamp. He then draws down the lower lip of the subject upon the stage of the instrument with its delicate inner surface upward for inspection, throws a strong light on the same with a condenser, and focuses the microscope, provided with a low-power objective, down upon the delicate network of blood-vessels, which can be seen there even with the naked eye. By this simple means the circulation can be observed with the greatest ease and perfection. The value of this novel and beautiful experiment in the study of the abnormal conditions of the blood, presented in various diseases, it is anticipated, will be very great, and important results are expected to flow from it. Huber distinguishes his new process by the terrific name of "cheiloangioscopy."

For Home Amusement.—Many very pretty little chemical experiments may be made by the young people, which will amuse and astonish those around them. As, for instance, with so simple an article as red-

cabbage, a very beautiful effect can be rendered in the following manner: Cut three leaves of cabbage into small pieces, and, after placing them in a basin, pour a pint of boiling water over them, letting them stand an hour; then pour off the liquid into a decanter. It will be of a fine blue color. Then take four wine-glasses: into one, put six drops of strong vinegar; into another, six drops of solution of soda; into a third the same quantity of a strong solution of alum; and let the fourth glass remain empty. Fill up the glasses from the decanter, and the liquid poured into the glass containing the acid will quickly become a beautiful red; that in the glass containing the soda will be a fine green; that poured into the empty one will remain unchanged. By adding a little vinegar to the green, it will immediately change to red; and on adding a little of solution of soda to the red it will assume a fine green—thus showing the action of acids and alkalies on vegetable blues.

A Powerful Testing Machine.—

E. and T. Fairbanks & Co. have completed two or three testing machines lately ordered by the Government, to be used in testing the strength of iron and steel. These machines are very compactly built, occupying but about five feet square on the floor, and about ten feet high—all of iron and steel, and weighing four tons each. The metal to be tested is clamped securely between two heavy iron collars, which are drawn apart by two heavy screws turned gradually by hand with a combination of gear wheels. The testers are really weighing-machines also, having levers, beams, poise, etc., and as fast as the power is applied to the metal to be tested, the poise on the scale beam is moved automatically, indicating the number of pounds of strain applied. At a trial, a bar of steel an inch and an eighth wide and five-sixteenths thick, stood a strain of over 41,000 pounds before it was pulled apart, and before it broke it was reduced in width an eighth of an inch, and in thickness nearly a sixteenth. So heavy and powerful are these machines that there was no perceptible recoil when the steel parted. The one tested as above is going to Cincinnati; and just to test its strength, a heavy bar of steel was placed in its jaws, and 100,000 pounds strain put upon it without any visible effect.

Removal of Fruit Stains.—As handkerchiefs, napkins, and table-cloths are most liable to be stained by fruit, it will be useful to remember that nearly or quite all fruit stains yield to the action of free chlorine. This may be readily attained by housekeepers, in the chloride of lime commonly sold by druggists for disinfecting purposes. It should be made into a thin paste, and placed upon the stained part of the fabric. After an hour or so, the goods should be thoroughly rinsed in

clean water, and if the stain be not wholly removed, the operation may be repeated. A more convenient means for removing such stains from fine textures is Labarraque's Disinfecting Fluid, which may be obtained at almost any drug-store. This also contains or yields free chlorine. Wet the stained part with the liquid, and rinse in clean water. The burning of a sulphur match held under the stained spot previously moistened will often wholly remove the stain.

Meteoric Iron in Snow.—Observations of snow collected on mountain tops, and within the Arctic circle, far beyond the influence of factories and smoke, confirm the supposition that minute particles of iron float in the atmosphere, and in time fall to the earth. By some men of science, these floating particles of iron are believed to bear some relation to the phenomena of the aurora, Gronemann, of Gottingen, for instance, holds that streams of the particles revolve around the sun, and that, when passing the earth, they are attracted to the poles, thence stretching forth as long filaments into space; but, as they travel with planetary velocity, they become ignited in the earth's atmosphere, and in this way produce the well-known luminous appearance characterizing auroral phenomena. Prof. Nordenskjold, who examined snow in the far north beyond Spitzbergen, says that he found in it exceedingly minute particles of metallic iron, phosphorus, and cobalt.

Gum-elastic from Animals.—It is said that an insect, which produces a species of India-rubber, has been recently discovered in the district of Yucatan, Central America, by an American explorer. It is called *neem*, and belongs to the *Coccus* family; feeds on the mango-tree, and swarms in these regions. It is of considerable size, yellowish brown in color, and emits a peculiar oily odor. The body of the insect contains a large proportion of grease, which is highly prized by the natives for applying to the skin on account of its medicinal properties. When exposed to great heat the lighter oils of the grease volatilize, leaving a tough wax, which resembles shellac, and may be used for making varnish or lacquer. When burnt, this wax, it is said, produces a thick semi-fluid mass, like a solution of India-rubber.

Hydropathy in Milk-fever.—Mr. J. Crawford White writes to the *Tribune* that in a neighborhood where milk-fever was exceptionally prevalent and fatal, the only cow that survived, was one treated by hydropathy; sheets wrung out of warm water were folded and placed across her back; the wetting was repeated quite often; outside wraps were laid over to retain the moisture, a physic was given, and though very bad she soon recovered.



FOWLER & WELLS, *Proprietors.*
H. S. DRAYTON, A.M., *Editor.* N. SIZER, *Associate.*

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"CAN NOT BE SPARED."

SEVERAL years ago we read an incident like this: The proprietor or manager of a large business wished to obtain an assistant, and sought for a suitable person among his business acquaintances. At length he met one who told him that he knew a young man who would just suit.

"Where is he?" asked the merchant.

"In my office," was the reply; "but you can not have him, because we can not spare him."

"He is just the man I want," insisted the merchant; "because he can't be spared."

In recalling this story we are naturally led to contemplate the world of business, and to divide the vast number of men and women employed in its multifarious pursuits into two classes—those who can be spared, and those who can not. The great preponderance of the former forces itself upon the attention.

Let a man advertise for a bookkeeper or a salesman or a porter, and the next day his store will be thronged with applicants for the place. On our way to this office in the morning, we have often passed a large crowd of men and boys

stationed at the doorway of a store, all waiting for their turns to interview the proprietor with respect to the vacancy which had been announced to the public. We have stopped and glanced at their faces, clothing, and demeanor, and found that nearly every one had the characteristics of him who can be spared.

Here and there was one smoking; here and there one unmistakably chewing a quid of tobacco; some dawdling lazily about, with hands in their pockets; some exchanging weak jokes or views on the hard times and the scarcity of good situations. We have seen a throng of over a hundred applicants for a clerkship, not one of whom seemed to possess the qualities of intelligence, industry, and activity which were requisite to perform its duties well.

Now, we claim that this should not be the case, in spite of what may be said about the tendency of the age, the effects of our peculiar civilization, and, according to Mr. R. G. White, the training of our public schools. If our young men were instructed about themselves, their mental and physical organizations, they would be enabled to measure their capabilities with a degree of exactness, and thus obtain some light upon their adaptation as workers in the great vineyard of life. It is the lack of self-knowledge which lies at the bottom of the existence of the vast multitude of incapables, shirks, barnacles, and good-for-nothings encumbering society.

We say that this should not be, because it is the *right* of every one to have that most important part of instruction—self-knowledge—early in life, and society is but reaping the sad results of not affording it. Sacrifices are made that our boys and girls shall be taught physical sci-

ence — botany, chemistry, geology, etc.— and music, art, and languages, all very well in their way, but found after all to be of small moment when the youth goes into the world to make his way for himself. Being in the dark concerning himself, knowing little or nothing about the needs of personal character, the relations of temperament and faculty to vocation; what else can he do but flounder around, as it were; and his chances are few that he will flounder into a place which will be congenial, suited to his natural powers, and from which he can not be spared.

MEASURING MIND MECHANICALLY.

THE reader has probably read some account of the new instrument for measuring the amount of blood appropriated by the brain in different mental processes. In brief, it consists of an upright cylinder of metal, in which water is placed; a rubber cap, with an opening sufficiently large to admit the human arm, fits closely over the top of the cylinder, and an index is arranged to mark the pressure upon the water. When an arm is thrust into the water and the rubber cap adjusted so that no air can enter the cylinder the index will move in accordance with the amount of blood in the arm. Now as the mind exercises the brain in the degree of its activity, and cerebral activity is sustained by the blood, therefore the greater the mental energy the larger the draft made by the brain upon the circulatory system. Hence the application of the plethysmograph, this new instrument. In his experiment with it the inventor has found that he can determine by the movement of the index the comparative extent of a person's

knowledge of different languages, his interest in different branches of religious faith, in the different political schools, the comparative energy of his sympathies and affections, etc.

Professor Barker, in his very learned and somewhat elaborate address before the American Association of Science last summer, described the plethysmograph in terms of high commendation as an aid to the student of psychology, and we may expect some important results from its application in this department of anthropology. The results of anesthesia, vivisection, and galvanism are doubtful at the best, in their expression of mental qualities. Nevertheless, many of our most eminent physiologists hold tenaciously to the necessarily abnormal method of vivisection, as one which will lead them to the truth. As phrenologists we can not ignore the important bearing which some of the deductive outcomes of that method have upon our theories, and its general tendency confirms the doctrine of localized functions. Yet we claim that observation of mental phenomena in life and the use of instruments which in no way disturb the cerebral integrity lead to results which may be relied upon. Benedikt's and DeLau-nay's critical measurements of the volume of the head and the relative dimensions of different parts of it, Dr. Seguin's process for determining its varying temperature, according to locality, and the new plethysmograph require no anesthetic, no battery, no scalpel, and the phrenologist may employ them as adjuvants in his study of the cerebral organism. We welcome most heartily every instrument or appliance which helps us toward a higher exactitude in the reading of temperament and brain.

"MALARIAL" DISEASE.

THE recent outcropping of congestive and biliary disease in this city has given the newspaper men an opportunity to talk a good deal about malaria. Most of them appear to have taken the ground that as the development was more striking among those of our residents who had spent the summer out of town, they had contracted the disorders in miasmatic regions, and had brought home the germs in their systems. Physicians belonging to our upper class have taken this view. One would naturally infer, therefore, that the upper quarters of New York city, or where the well-to-do reside, are more healthful than the country—a complete reversal of the old opinion; for we were wont to hear it said that the country was the place for health, and people who were sick, especially with maladies of a bilious type, would find more favorable conditions for recovery there.

When we were a boy of some fifteen summers we had a visitation of the old-fashioned chills and fever. It was said that we had caught them while visiting some country relatives, yet when we had run down considerably in strength our physician, one of the old-fashioned sort indeed, advised us to go off into the country if we wanted to get well. We did so, and soon recovered from the grip of the monster which has stricken down his hundred thousands. We can not but think that out-of-door activity, plain food, and the other incidentals to average country life are favorable for health, and when we hear a physician say that Mr. Jones has contracted disease in the country, and has returned home to be prostrated upon his bed, we suspect that

the matter has not been fairly investigated, and that the breezy open country is in some way unjustly treated. To be sure, with the growth of population in some rural neighborhoods there has been an almost entire disregard of hygienic conditions. We know a certain mountain slope which appears to possess all the conditions for health a reasonable man can ask, yet the occupants of certain elegant villas thereon frequently require the attendance of the physician on account of "malarial" disorders; and the cause of their illness is largely due to imperfect drainage, the refuse fluids from sinks and even stables being permitted to run out upon the surface of the ground. Besides, the cesspools now and then overflow, so that the air is polluted with mephitic exhalations. We have seen in the vicinity of two or three of these villas putrid heaps of garden and kitchen waste, while the gardens themselves were models of order.

The old-fashioned farmer is not over-particular with regard to the sanitary condition of his cellar, garden, and barnyard, and here and there one lets the drainage of the kitchen run out into an open trench or gutter. Hence it is not wonderful that, in spite of his open-air privileges, the necessary concomitants of extensive acreage, the old-fashioned farmer's family has not been notorious for its health, he himself being generally depressed with the lingering weakness of intermittent fever; his boys and his girls being languid and dull, and taking their "chills" periodically, while the poor wife drags her weary rounds from day to day, pallid and almost hopeless.

Considering the matter from this point of view, to be sure, there is no reason for saying that city people may not contract miasmatic diseases during their summer stay in the country; but are there no conditions on the other hand contributory to sickness? Let one traverse the streets of a town having fifty thousand inhabitants, or a hundred thousand, or

more, and he will find causes enough in almost every quarter. Our physicians complain of the tenement neighborhood, where from five to fifty families are crowded into a building occupying less than a city lot; a community which in itself may be said to manufacture elements of disease. A single tenement, occupied by dirty, negligent people, will become a neighborhood pest. Need one allude to the deathful sewer gases, from which no building, however excellent the plumbing, is entirely exempt? Aside from these exterior physical causes of disease we may allude to those which belong to personal habits. Many people who go into the country to spend the summer and "have a good time," as some say, relieved from the duties of work and home, are indiscreet in many ways. They are careless in eating, careless in dressing, exposing themselves to the morning dew and the night damps, thus inviting sickness, and being themselves for the most part responsible for it.

We are tired of hearing so much talk about "malaria," and are inclined to think that many physicians use it as a stock term, possibly to cover their incompetency, and probably in most cases to make their patients believe that they are affected with a trouble which may be of long standing and difficult to treat. We think that most of the so-called malarial disorders are avoidable, even with all the unhealthful conditions which prevail around us. People who are prudent in their habits, avoiding all excesses, and especially avoiding all artificial stimulation, may laugh at malaria. Nature has endowed man with peculiar ability to resist disease. Physicians, as a class, are long-lived; more so than many other classes in society, and they are more exposed to the influence of disease than other men by reason of their profession. Men have been known to spend weeks and months and years in notoriously unhealthful places without contracting disease, the use of natural preventive means and a carefully regulated life fortifying them against all attack.

GREAT ONES GONE.

RELIGION, Literature, and Science have sustained important losses in the deaths of the Rev. Drs. Adams and Cox, Chancellor Benedict, Mrs. Lydia Maria Child, and Dr. Edward Seguin. Dr. Adams was, to be sure, nearly eighty years of age, but still exerted a powerful influence upon religious affairs, both by the breadth of his scholarship and the elevation of his character.

Dr. Samuel Hanson Cox was also an aged man, bordering on ninety years, and retired from active ministrations, but his very living presence reflected something of that vigor and enthusiasm which distinguished his pulpit career, and for the Presbyterians to think of him was to recall the eminent parts he had played before the world as a representative of the American Church.

Mrs. Child was well on toward eighty years, but as she was occasionally heard from her retirement at Wayland, Mass., giving testimony on great questions of moral and social reform, we could not realize that she was old, and likely to pass from us.

When we last saw the venerable Chancellor Benedict it was in a small company of gentlemen who had met together to spend an evening in social chat upon topics of interest to educators. It was not many months ago, and we were struck by his physical activity and mental alertness, despite his eighty years. When we heard of his death, therefore, we were startled and pained.

In Dr. Edward Seguin we felt that we had a friend, high-cultured and sincere. His special relation to physiology drew him near us, and there were occasions when he made us feel a sense of obligation by his readiness to give Phrenology its due, as one of the world's chief elements of progress. What he met with or discovered of value to us he promptly communicated, and he seemed to enjoy our interchange of opinion. Neurological medicine has lost a devoted and learned worker in him, and Education, too, could hardly spare him.



"He that questioneth much shall learn much"—Bacon.

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY will be answered in this department. But one question at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of an early consideration.

IF AN INQUIRY FAIL TO RECEIVE ATTENTION within two months, the correspondent should repeat it; if not then published, the inquirer may conclude that an answer is withheld, for good reasons, by the editor.

WE CAN NOT UNDERTAKE TO RETURN UNAVAILABLE contributions unless the necessary postage is provided by the writers. IN ALL CASES, persons who communicate with us through the post-office should, if they expect a reply, inclose the return postage, or what is better, a prepaid envelope, with their full address. Anonymous letters will not be considered.

BEAN SOUP.—G. H.—Beans contain a very large amount of nutritious matter. As compared with other vegetable productions they stand high in the list of foods. Beans contain a large amount of starch, so it is not necessary to add to their carbon in preparing them for table, as people do who cook pork or fat beef with them. People employed in sedentary occupations usually find a hearty meal of beans conducive to dullness and heaviness. They are not so readily digestible as the farinaceous grains, and so are not deemed best for a weak or dyspeptic stomach.

CUTTING THE HAIR.—*Question:* Does cutting one's hair do any injury to health? I have heard some physicians claim that it does. I have had more headache after having my hair cut than before.

Answer: We would infer from the general prevalence of the fashion of short hair that people do not suffer much on that score, although some will endure a great deal for fashion's sake without complaining. We think that the hair should be worn moderately long, because it is designed by nature as a protection to the head. Those who are bald usually show a high degree of cerebral sensitiveness. We know many old people who are bald, yet as a general thing those who border on a hundred years have a good stock of hair. If you find that you have more headache when your hair is short than when it is long, we advise you by all means to keep it long.

INTOXICANTS AND THE PASSIONS.—G. A.—Alcohol has a strong affinity for the brain. Post-mortem examinations of those who have

taken alcohol shortly before death have revealed the presence of alcohol in most parts of the cerebral substance. Its exciting effects, however, seem related to the lower or basilar organs. Those who have strong propensities are, as a rule, highly excited by moderate drinking.

TEACHING INFIDELITY.—S. V. Need have no fears with regard to the religious views of the PHRENOLOGICAL JOURNAL; it does not teach infidel opinions. This were impossible in true Phrenology. Could we show S. V. our subscription list he would be surprised by the large proportion of clergymen, representing all denominations, who read the PHRENOLOGICAL. Besides, we reckon among our contributors several estimable divines; and if the reader will turn to another page he will find some excellent testimony in our behalf from a pretty well known New England pulpitan.

WEAK BOY.—R. S.—Your son has probably some derangement of the kidneys—a congestive condition. We think soft water freely drunk between meals would help to clear away obstructions existing in them. Let his diet be almost farinaceous. Give him Graham bread, oatmeal, barley, hominy, etc., with a little milk; also give him plenty of fruit; let him have a good big dish of stewed apples at breakfast and at dinner. Besides the internal use of soft water its external application in the region of the kidneys will help. A few minutes' rubbing will serve to tone up these organs.

EATING BETWEEN MEALS.—*Question.* "Don't eat between meals." Is this good doctrine?

Answer: Yea. Nature in herself is systematic; she works according to rule in everything. So one should be regular, methodical in his living. The organs of the body require seasons of rest. One should not keep the stomach at work all the time no more than he should work a horse night and day and expect him to continue strong and healthy. The best time to eat fruit is in the morning. The adage alluded to about its being "golden in the morning, silver at noon, and lead at night," is an old Spanish one, and as Spanish people eat a good deal of fruit they ought to know something in regard to its physiological effects at different parts of the day.

PILLS AND CONSTIPATION.—Mrs. J. C.—People who are in the habit of taking pills for disturbances of the digestive system find

that soon after stopping such medication the disturbances reappear, and usually with increased energy. We know persons who keep a box of this or that famous doctor's pills constantly on hand, and find it necessary to have them constantly on hand, and in spite of having them constantly on hand they now and then lapse into a serious attack of bilious difficulty, occasionally winding up with a regular typhoidal attack, and the doctors and nurses have a tough time in bringing them through. It is better to eat food which digests readily, and at the same time furnishes a competent degree of nutrition.

Read "Digestion and Dyspepsia," or "How to be Well."

LIGHT OVER THE LEFT SHOULDER.—

W. F. M. wishes to know why we are always directed to let the light shine over the left shoulder when reading by lamp-light. For our own part it seems to be more convenient to have it so placed. Somebody has hinted that this disposition of the light has reference to the left hemisphere of the brain, that being the more active of the two, and being stimulated by the light. Will somebody give us the true reason?

LIGHTNING-RODS.—W. I.—In our department entitled "Notes in Science and Agriculture," the subject of lightning-rods has been considered, and the opinions of leading electricians quoted. You will find an article on the subject in the JOURNAL for 1880. A rod of the proper size and properly attached will protect a house. There seems to be no doubt on this score. But most of the lightning-rod work has been done in this country by men who have gone into the business from motives of gain, and who do not possess a competent knowledge of the scientific character of electricity. Did we live in a house on open ground we should take the precaution to stock it with lightning-rods, but should want better material than is usually found on houses.

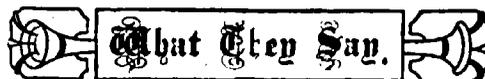
DESPONDENT.—Our Iowa friend, J. J. E., should have learned enough of self-control in his reading of human nature to rise above his disappointment. A young man, only twenty-three, well-informed and industrious, has a world full of high possibilities before him, and should look upward and forward hopefully and cheerfully. Careful self-examination may teach him the reason of past failures, and the lesson well learned will help him toward future success.

MOTIVE TEMPERAMENT.—J. S.—By consulting almost any of the late works on Phrenology, and particularly the new volume devoted to "The Temperaments," you will acquire a good knowledge of the part played in human

life by the Motive temperament. Generally speaking, persons in whom it predominates, are fond of physical exercise, and want employment of a rather strong character, disliking the petty and trivial.

BATHING.—A. B.—We can not specify the time you should remain in the water, for constitutions differ so much that it would be impossible to prescribe a standard. We think that people who go to the sea-side, generally remain too long in the water for their good. Bathing is very beneficial to those who lack active exercise, and especially needed by those who are not in the habit of thoroughly washing themselves. As a caution it would be well to remember, that one should not remain so long in the water that after leaving it he feels a persistent chilliness, the reaction which consists in a pleasant glow over the body not taking place. One so chilled should endeavor to get warm in some way as speedily as possible; otherwise a severe cold may be the result.

Persons predisposed to pulmonary consumption should be especially careful not to take cold in this way, as it may be productive of great harm. There is such sympathetic action between lungs and skin, that a cough producing irritation of the lungs is usually relieved by remaining in bed and producing a copious perspiration; and a cooling of the skin, and consequent deficiency of perspiration, caused by insufficient covering in bed during cool nights, may result in a severe cough.



Communications are invited on any topic of interest; the writer's personal views, and facts from his experience bearing on our subjects, being preferred.

CONGRATULATORY.—When in the October Number I began to read "Our New Departure" my heart seemed to enlarge. It must be an interesting article to every lover of Phrenology, and especially to those who have for a long time taken a lively concern in this central science of the human mind.

In 1840 I was teaching school in what is now Putnam, Conn. I had never read or heard much of Phrenology. Into the region there came a German who wished to lecture on Phrenology and Astronomy. It seemed a novel topic, but I was interested that he should have the use of the school-room, and it was secured to him. Only a few attended, yet he went through his lecture with much animation, giving about one-half of the time to one topic and the other half

to the other, closing with public examinations. I engaged him to come up the next morning to my school-room before the session opened and give me a private examination. He did so, and instantly, almost, I became conscious that he was doing more than to guess; that he had, at least, the germs of a science. Years after, when my mind became painfully entangled with disputed and difficult questions, it occurred to me that if Phrenology were really and minutely true it would help me out of some of my entanglements. I was fitting for college, and near a city to whose libraries I had free access. I immediately took out the works of Gall and Spurzheim, and so eager was I that I soon had their system in memory. Then I began to observe the heads of teachers, fellow-students, relations and others in the vicinity, including animal races, and ere long I felt warranted, from observation and outward proof, to rely upon the new aid as something demonstrable. It did me service, and has been through the years a guide, a comfort, and a diversion also. When my mind has become weary and sore on other subjects this has soothed and strengthened me.

While a young man I subscribed for the PHRENOLOGICAL JOURNAL, and have preserved most of the Numbers. Not unfrequently I have secured club-lists. It has been a matter of self-congratulation that I have been personally acquainted with most of the prominent workers for Phrenology in America. It was matter of pain to myself that O. S. Fowler ever separated from the JOURNAL at all. Now he is back, and how much he has to promise. What a very valuable article that is, "The Intellect as a means of obviating our Faults!" No one can calculate the good it will do. Mr. O. S. F. and some of his co-workers have been the "connecting link" to bring the theories of the masters to the lives and apprehensions of the common people. What honor, years hence, will hang around practical and common-sense books, now but little known.

In the absence of the founder of the JOURNAL it has been much improved, and lifted above some criticisms once made upon it. No one can say now, it has not learned articles on the one hand, and piquant, timely, and interesting literature on the other. Let every one of its friends and readers act together as a great committee to enlarge the circulation of FOWLER AND WELLS' AMERICAN PHRENOLOGICAL JOURNAL. L. H.

THE READING OF THE PUBLIC.—There is an incident related in the life of Michael Angelo, which impresses me as somewhat suggestive. One day walking the streets of Florence in company with friends, he discovered, buried beneath the rubbish of a marble-yard, what he conceived to be a very valuable shaft of

marble. Apparently unconscious of his situation, and with characteristic eagerness, he raised and began cleaning it. His associates interrogated him as to his object, reprehending him for the violation of so simple a rule of propriety, the occasion being so eminently inauspicious for such manifest enthusiasm. "Oh, there's an angel in this stone," said Angelo, "and I must get it out." The shaft was taken to his studio, and with chisel and mallet, with industry and patience, the angel came forth. What occurred of trifling value to the unpracticed eye of his companions, was to the keen perceptions and appreciative intuitions of Michael Angelo "a glory of art" buried away in its cold sarcophagus, which, by the talismanic touch of genius, was destined to rise phoenix-like and command the attention of admiring ages. The analogue, I apprehend, would not be labored and unnatural, was I to compare many persons to a sculptor, and as many to rough stone from the quarry. Let us see. By some agency more or less potent, we are by our acts, words, and general demeanor, chiseling out character. With the naked eye of time we may not be able to realize this in its full meaning and proportion; but with the telescope vision of eternity, it will pass, like a moving Andes, in panoramic view before us. Perhaps the most insidious and fatal enemies morality and humanity must needs contend with are intoxication and licentiousness. But there is yet another subtle and potent agency which completes, as it were, this gloomy triumvirate, which may be denominated "sensational literature."

By the term "sensational" it is foreign to my purpose to confine myself to the narrow limits of novels; but to include the graphic accounts of crimes innumerable which crowd the columns of our secular journals. In a recent issue of a leading journal was to be observed elaborate and exhaustive accounts of at least twenty of the most horrible crimes known to humanity. It is incontrovertibly a fact, that the great cardinal principle of journalism is to inform upon matters of current importance; but it is as equally undeniable, that they manipulate without the horizon of their prerogative, when emphasis is visited with great ingenuity upon the most revolting crimes and the basest wickedness. I affirm that it is not wholesome reading for the youth of our country; that it has an inevitable tendency to pervert the morals, to blunt the finer sensibilities, and as a result deteriorate humanity; in a nutshell, it is absolutely *mental dissipation*. As wholesome food is essential to a vigorous and healthy body, so is it indispensable to a sound and vigorous brain. Literature ought to be an instructor, pure and holy, reflecting the scintillations of honor, purity, and truth. The secular press ought not to be insensible to the in-

fluence it exerts in *chiseling out the features* and *polishing the rough edges* of the young; for when the young observe any indifference to morality in the great circulating mediums of intelligence, they are prone to award it a peculiar credence and regard. We often see the name of God contumaciously referred to, and with empty animadversion, as though it was a bagatelle or hollow mockery. The individual who can find no other suitable subject for jest than the name of his Maker, or must hurl his poisoned shafts of criticism at sacred objects, is a travesty upon humanity. I would suggest to those whose province it is to disseminate intelligence and who have fallen into this grievous error, that they think of what impressions they are making upon the minds of the unsophisticated, and whether such remarks are likely to promote pure thoughts and noble aims. True philosophy, as expounded by one of the master minds of the age, consists "in doing all the good we can, in learning all the good we can." The exaggerated and highly-colored narrations, which only convey the evil that is in man, ought to be dealt with firmly. I would not mean to detract from the well-earned laurels of Byron, when I say that the writings of that poet, breathing the profligacy and abnormality of the man, in connection with a high order of genius, have been the fruitful source of throwing fog and stagnation over the minds of more young men than can be readily imagined. The world would have been fortunate had his master-piece been obliterated from the fair face of literature in the morning of its existence; but as intimated, *it is here* that the radiant gleams of his genius burst upon the world in noontday splendor. Few of us can conceive to what extent *mental dissipation* is indulged in. Ten-cent novels are scattered over the country as numerous as were the swarms of locusts over the land of Pharaoh, and the traffic is lucrative and extensive. The authorities will confirm the assumption, that a very large proportion of juvenile offenders, who find shelter under the shadow of the reformatory, for murder, theft, robbery, arson, and similar offenses, receive their first impulses to evil in reading these novels. Not only does this vicious literature invade the mansions of the rich, but

"With food as well the peasant is supplied,
On Idra's cliffs as Arno's shelvy side."

I would not discourage the reading of some novels, for to some no tenable objection can be made. The works of Scott, Irving, and Dickens teach great moral lessons, giving us a true insight into human nature, and enable us to appreciate its excellences.

All persons who feel a true interest in the moral and intellectual advancement of the country, are tired of seeing vicious literature scat-

tered broadcast through the land, and inveigh against it. Our public bodies do not seem to care to take the matter into consideration, notwithstanding its importance, hence it must be left to private hands to wage the battle. Parents and teachers should see that children do not read such matter. The press should deprecate and expose it, and the pulpit must thunder against it. To do this effectually, the exclamation of Sir Walter Raleigh, when the axe was raised, should be borne in mind, "Fear not, but strike hard."

L. N. COOPER.

PERSONAL.

CHANCELLOR ERASTUS C. BENEDIOT, of the University of the State of New York, died suddenly on October 22d, of apoplexy. He was nearly eighty-one years old. In him New York has lost one of her best known and most honored citizens, a ripe scholar and educator, and an eminent member of the Bar.

THE REV. DR. SAMUEL HANSON COX died on the 9th of October last. He was born in 1793, and entered the Presbyterian ministry in 1817. He became very distinguished as an orator, being, indeed, unsurpassed for extemporaneous address by any pulpit incumbent of his time. He was for many years Professor of Ecclesiastical History in the Union Theological Seminary of New York, and also presided for a time over the Female College at Le Roy, N. Y. For the last twelve years he has lived in great retirement in Westchester County.

MRS. LYDIA MARIA CHILD, the well-known authoress, died, recently, at Wayland, Mass., in the seventy-eighth year of her age. Mrs. Child was born in Medford, in the same State, February 11, 1802, her maiden name being Francis. During her later years Mrs. Child resided with her husband at Wayland, in Worcester County, Mass., where she died. She leaves a very honorable name, not only as an agreeable and earnest writer, but as the benefactress of the poor and the helper of the wretched.

WISDOM.

"Think truly, and thy thought
Shall be a fruitful seed."

INDIFFERENCE is the invincible giant of the world.

SCIENTISTS do not agree with any one who is ahead of them.—PROF. TICE.

THE last triumph of Christianity may be the discovery of a perfect Hygiene.—DR. CHANNING.

IN matters of prudence last thoughts are best; in morality your first thoughts are best.—ROBERT HALL.

MAKING a joke is like throwing a top. If it doesn't come down on its point it will not spin.

No man can be brave who considers pain to be the greatest evil of life; nor temperate who considers pleasure to be the highest good.

If self be denied for the good of others, we receive immeasurably more than we bestow. We have as many fountains of happiness as there are hearts and lives to whose happiness we minister.

ADHERE rigidly and undeviatingly to truth; but while you express what is true, express it in a pleasing manner. Truth is the picture, the manner is the frame that displays it to advantage.

DIOGENES, when blamed for throwing a goblet of wine on the ground and wasting so much liquor, answered: "Had I drunk it, there would have been a double waste. I as well as the wine would have been lost."

MIRTH.

"A little nonsense now and then
Is relished by the wisest men."

It is said that "a young man of society," out making a call, may wear two watches, and yet not know when it is time to go.

"DON'T be afraid," said a snob to a German laborer; "sit down and make yourself my equal." "I would have to plow my brains out," was the reply of the Teuton.

A CAPE MAY sign reads: "Is cream salon cakes, pretzells and candy and cigars oysters and lodging and horses watered constantly on hand."

A SOUTH-END man asked a one-armed organ-grinder if he was a survivor of the late war, and the organist replied: "Hang it, do I act as though I was killed in it?"

See a pin and pick it up,
All the day you'll have good luck;
See a pin and let it lie,
All the day you'll have to cry.

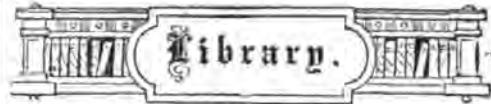
FEAR of his Sovereign did not damp the freedom of Shaftesbury's wit. Charles II. said to him: "Shaftesbury, I believe thou art the wickedest man in England." He bowed, and replied: "For a subject, sir, perhaps I am."

TIGHT boots are an insult to any man's understanding. He who wears tight boots, will have to acknowledge the corn. I will hereafter wear boots as big as my feet, if I have to go barefoot to do it.—SHAW.

A CRASH is heard in the kitchen of a house on Galveston Avenue. The head of the family calls out to the cook: "What have you broken now,

you — idiot?" Matildy stops singing a hymn to answer: "Taint the forf Commandment, bress de Lord."

"CLARENCE, you've got a real kind heart," gratefully observed a young lady on the cars to a sallow-faced youth as he dropped a prize package of pop-corn in her lap. "Yes, Mary, my heart's all right," he sadly replied; "w'zat I want is a new liver."



In this department we give short reviews of such New Books as publishers see fit to send us. In these reviews we seek to treat author and publisher satisfactorily and justly, and also to furnish our readers with such information as shall enable them to form an opinion of the desirability of any particular volume for personal use. It is our wish to notice the better class of books issuing from the press, and we invite publishers to favor us with their recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

BRICKS WITHOUT STRAW. A Novel. By Albion W. Tourgee, author of "A Fool's Errand," etc. 12mo. With Frontispiece Illustration. Price \$1.50. New York: Fords, Howard & Hulbert, 1880.

The phenomenal success of his "A Fool's Errand," doubtless led Dr. Tourgee to write this new book in further consideration or exemplification of his views on the political and social situation South. It does not possess the true character of a novel, although so designated in the title; but is rather a series of incidents, conversations, soliloquies, etc., designed to bring to the notice of the reader in a striking way the author's experience and gleanings of life among the people of a certain section. From the beginning, almost, he takes the position of the advocate for one policy and the opponent of another, while his reasoning, or that of his characters, is a sort of special plea. We are with him in his condemnation of the notorious Ku-Klux, and in that respect differ little from all candid, honorable, humane people, and certain other features of political agitation which have existed in some of the Southern States have only to be known to be similarly condemned. But we can not altogether approve a book which in many respects has the nature of a campaign document, and bids for the favor of partisan sentiment.

Dr. Tourgee is skillful and able in his representation of negro character and detail of incident; the dialect of "Nimbus" is next to perfect, while in the other negro Americans of the book we have equally realistic impersonations. In the female characters (white) we find the rather stale reproduction of conduct and trait familiar to all readers of novels depicting the American woman who makes a half or whole

sacrifice of herself for a principle of public or community importance. Mollie Ainslie is certainly a plucky, true-hearted girl, and deserves our respect for her devotion; but her part in the play is by no means new. To all who sympathize with the negro in his effort to rise in the scale of society; to all who think him oppressed and hindered from availing himself of the privileges accorded by the law, and his right by virtue of newly acquired citizenship, "Bricks without Straw" will be an interesting and moving book, strengthening conviction and stimulating action.

A DAY OF FATE. By Rev. E. P. Roe, author of "A Face Illumined," "Success with Small Fruits," etc. 12mo, pp. 450. Price, \$1.50.

Mr. Roe's success as a novelist, or rather writer of stories of a moral cast, is so thoroughly assured that every new volume bearing his name on the title-page is sought for eagerly by the public. We are informed that the one under notice has reached its twentieth thousand already. What is it? A simple story of the love type, which in its progress unfolds now and then a moral lesson, which would be of value to the reader did he or she reflectively ponder it. The scene is laid in a Quaker family, amid rural surroundings. A variety of character is spread before us—country people and city people, the rustic and the educated, offer pleasing contrasts, and in few respects is there anything to be decried as extravagant or unnatural. Perhaps some readers may call much of the conversation that is detailed tedious and commonplace, because of its containing many passages familiar enough in every-day life, but now and then with the assistance of the good Quaker and the city editor, we have a discussion which rises to the level of philosophy. Emily Warren, the young music-teacher, is certainly a lovable girl, and we don't wonder that the city editor became "distracted" over her. Mr. Roe has photographed her character with a careful hand, and a minute knowledge of feminine dispositions. A thunder-storm, with an almost fatal effect upon the Quaker household, is made a means of bringing out many sharply contrasting traits of the music-teacher's nature, and of hastening to an interesting result the consideration which she has for the city editor, who is already deep in the toils of Cupid. But many pages are necessary before these chief parties to the play are brought to a mutual understanding. Mr. Roe's people are high-minded and pure, and as they pass to and fro in the shifting scenes of the novel, they are made teachers of high and true principles, and their influence is never on the oblique or opaque side of morality.

OVER THE WAY; or, Ned Harris's Resolve. By the author of "Anna Clayton," etc.

To which is added **BRAVE.** By Miss T. H. Griffith. 16mo, cloth. Price \$1. New York: National Temperance Society and Publication House.

A bright, impressive story, very suitable for our young folks; telling how a wife and her son were brought to poverty through the intemperance of a husband, and after the death of the husband the industry of the son and the patience and encouragement of his mother restore the comfort and ease which had formerly been theirs. The behavior of boys when together is described in the manner of one who has observed closely; and the scheming wickedness of an avaricious dramshop keeper is illustrated in a style which is intensely earnest, but not at all exaggerated.

"Brave" is a story of Gospel temperance, or what can be accomplished in the moral reformation of a fallen man through Christian influences. It contains good hints on daily life.

PUBLICATIONS RECEIVED.

BACK BAY DISTRICT AND THE VENDOME, Boston. By Moses King, editor of the *Harvard Register*, Handbook of Boston, etc. Cambridge, Mass. A neat and elegantly illustrated pamphlet of thirty-two pages, describing the district of about a thousand acres, which the city of Boston has added to its area by filling in the salt marshes and waste flats of the back bay. This improvement is comparatively recent. Thirty years ago it was an unsightly suburb, but now one of the finest architectural sections of the Hub. Within its borders are many of Boston's leading public institutions, churches, hotels, and residences. "Vendome" is the name given to the great hotel now building, and estimated to cost a million of dollars. Among the specially attractive features of the pamphlet are the fine engravings which illustrate it. The price is 25 cents.

CEREBRAL TOPOGRAPHY. By S. V. Clevinger. A reprint from the *Journal of Nervous and Mental Diseases*; also the **SULCUS ROLANDO**, and **Intelligence** by the same writer, reprinted from the same journal. The first-mentioned pamphlet is a description of the geography of the brain, in accordance with the latest observations, including those of Gratiolet, Ecker, Huxley, Turner, Broca, etc. The second pamphlet is a treatise on **The Relations of the Fissure of Rolando to the Anterior Lobe of the Brain**, the generally accepted department of the intellectual organism. Dr. Clevinger's opinion is that in accordance with the situation of the fissure mentioned is the extent of cerebral tissue appropriate to the anterior lobe. He has made many dissections of animal brains and also of human, and states his position with a good deal of detail.