

Morse

THE
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A REPOSITORY OF

Science, Literature, and General Intelligence.

DEVOTED TO

ETHNOLOGY, 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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JANUARY TO JUNE, 1881.

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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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ROSCOE CONKLING,

UNITED STATES SENATOR FROM NEW YORK.

PHRENOLOGICAL CHARACTER.

THE organization of Mr. Conkling has, to the physiologist, several marked qualities; they might almost be called peculiarities. He is tall, stately,

and elegant in his form and bearing; his chest is broad and deep, and his shoulders high, square, perfectly flat, and without the slightest stoop. He weighs probably over 180 pounds, and stands nearly

six feet high, but has such fine proportions that he does not look so tall or so large as he really is.

He has the signs of perfect digestion, showing that his blood is abundant, rich, and pure. He has excellent circulation, and first-rate breathing power, and his complexion is as fresh and clear as a girl's. The quality of the hair and skin is very fine, amounting to delicacy, showing that sensitiveness and susceptibility, as well as keen and deep feeling, belong to his organization. The features are delicate; in fact, the face has an almost feminine look; there is a lack of that shaggy, angular roughness which generally belongs to men of great power. We infer that he inherits largely from his mother, and that she was a very superior woman.

He has intuitions intellectually and morally which are exceedingly quick and very correct; the type of his mind, however, is phrenologically more marked in the direction of breadth of thought, comprehensiveness of mind, logic, and philosophy than in the direction of the historical, the practical, and the detailed; for instance, as a merchant, he would see the end from the beginning, the length and breadth and scope of his business, rather than be expert in its details; he would want to sell unbroken packages, in gross, and would not do as well in the retail line. As a lawyer, he would seize upon the great principles involved in a cause, and the argument would hinge upon these; he would tell just enough of the history of the case to give a full understanding of it, but the days and dates and running conversation and unimportant particulars would be, if not unobserved, at least unstated.

He is orderly in a high degree, and has

natural talent for mathematics, so that his mind works with exactness, with a kind of absoluteness which may sometimes seem dogmatic. He has large Mirthfulness, seeing the absurd and ridiculous, and knowing how to make his opponent's cause or argument seem absurd.

He has large Constructiveness; is a natural inventor; had he been trained to architecture and engineering, he would have ranked among his compeers as he does in statesmanship among statesmen.

He has a very fertile imagination, a poetic spirit, a sense of the beautiful and magnificent. His Spirituality gives faith and expansiveness of thought and feeling, the ability to look ahead and anticipate ultimate results; and in his treatment of a subject he has breadth and scope, altitude and profoundness, which command the respect of antagonists; although they may incline to frame an argument against his, they feel its power and know they have stalwart work to do to meet him.

His is the range of mind which deals with original ideas, with solid premises and important consequences. His type of mind is more Websterian than that of any other statesman of his party. In the days of Webster, when great questions were agitated in the Senate, others would make apparently exhaustive speeches, and for three months the question of the day would be handled at length by his compeers, and it excited wonder that Mr. Webster should wait until all the great speakers had been heard on both sides, when he would enter the field and open upon the great questions of bank or tariff, and seem to plow so much more deeply than the rest, that when he had finished no furrows were in sight but Mr.

Webster's; he had really subsoiled, and turned out new earth unseen before.

Mr. Conkling is remarkable for two other points intellectually, namely: the power of analysis and criticism, and possessing as he does such keen and comprehensive logical force, such power of sarcasm, and such polish, he will dissect an opponent, or his theme, with so much keenness and brilliancy and address as to finish the subject.

The other quality is his knowledge of men; he is remarkable for his intuitions in the appreciation of the natures, characters, and peculiarities of those whom he meets. If he had less of dignity, if he would consent to cater to men, he might mellow and mould them at his pleasure; but he seems to erect his own standard of propriety and right, and walking by it himself and demanding that others should conform to it, he sometimes has the air of tyranny, of dictation, something which seems overbearing and perhaps petulant, but it largely comes from his superior intellect, or that broad sagacity which has a wider horizon than that of most men, and the sensitive temperament already mentioned.

He has strong Approbativeness, is sensitive to the approval of the world, but he has too much Self-esteem and Firmness to become subservient to the public will; he desires to do by public sentiment as the driver does by his horse: he seeks to be carried forward by it, but desires to guide it, mould it, master it.

His large Conscientiousness lifts him above speculation and above trick; he would scorn to win a victory by what some men call "tact"; he prefers to bare his manly breast, and with a logical hammer smite his way to victory or fail in the encounter.

He is cautious, but not very secretive, confiding in but few men, and maintaining among people at large a dignified reserve; we fancy he feels in reference to men, as they average, much as a lawyer feels in respect to his client, willing to serve him to the very best of his ability, but supposing himself to be better informed in regard to his rights and the methods of obtaining them than the client, is inclined to say, "Don't worry me with questions, I will manage your case."

He has large Combativeness, and a fair degree of Destructiveness; these give him courage, force, severity when excited, and the power to defend royally or to assail vigorously; and in all his career it is doubted if an instance can be stated in which he has shown a lack of manly courage. Without using the word in its partisan sense, he is a "stalwart man"; he believes in calling things by their right names, as he understands them, and giving emphasis where the strong points are, though they may enrage his antagonists, or even render his own cause less acceptable. He calls a "spade a spade" and risks it.

His reverence is large; hence he has a dignified politeness among men, and a reverent regard for sacred things. He has uncommonly strong friendship, and no man is more loyal to his friends, or stands by them through good and through evil report more faithfully than he.

His Language is well developed, and he has the Vital and Mental temperaments in a high degree; these combine to make his mind work freely and to give him amplitude of expression; thinking as he does, strongly and clearly, his statements are massive, but clean-cut and perfectly clear, and at times exceedingly brilliant.

Lastly, he is calm and cool; his conscious strength renders him self-centered in regard to the subjects which interest him. His pride and courage give him that manly self-hood which lifts him above the common ranks of men, so that he feels capable of leading and being master of the situation.

If he had more development of the perceptive organs, a little less of the imaginative, fewer of the elements of polish, and less of dignity, he would be a more successful popular leader. He has the talent to command respect, and the character which gives him a dignified place among eminent men, but not enough of those mental elements which make one practical and bring him into intimate fellowship with the great mass of men. The Senate, for instance, is a better place for him, with his type of mind and character, than the lower House; among men who are competent to appreciate his strength, he will make his mark and be beloved and respected—among the rank and file, he will not condescend to that familiarity in the style of his arguments or in his personal manners that are calculated to win the crowd.

BIOGRAPHY.

ROSCOE CONKLING is a politician and statesman by natural inheritance, being sprung from a family among whose members were men of honorable public reputation, and when but a young man was called to important civil position. He was born in Albany, N. Y., in the year 1828, and was educated for the legal profession. His father, A. Conkling, served the State of New York in the Seventeenth Congress, subsequently was sent, in 1852, as Minister to Mexico, and has also occupied a judicial position in the

District Court of the United States for the District of New York. Mr. Frederick A. Conkling, one of his brothers, was elected to the Thirty-seventh Congress, and is well known for character and capacity.

Soon after his admission to the Bar, the subject of our sketch acquired prominence as an advocate; his oratorical abilities won attention also in political circles, and he had scarcely practiced a year when he was appointed District Attorney for Oneida County.

In 1858 he was nominated and elected Mayor of Utica, the place of his residence, and the manner in which he discharged the duties of this office contributed to his greater popularity in Republican circles, so that he was nominated as the candidate of that party for Congress, and elected by a large majority. That was the Thirty-sixth Congress, and his brilliant course in the session won the earnest support of his old constituency in subsequent canvasses, so that he was sent to Washington as the representative of his district in the Thirty-seventh, Thirty-eighth, Thirty-ninth, and Fortieth sessions of the National Legislature.

In the legislation upon the conduct of the war, which chiefly concerned his early Congressional experience, he was prominent, taking sides with those who were for its vigorous prosecution, and stimulating his home constituency in expressions of loyalty for the Union. The high quality of his culture, and the finish and force of his oratory commanded the admiration of all, whether friends or opponents, and it was not a matter of surprise that the 4th of March, 1867, found him enrolled among the members of the United States Senate, although but a young man comparatively. He was returned to the Senate, after the expiration of his first six years' term, for a second, and is now in the third, having been elected as it were by all parties in the New York Legislature, there being no opposition to his name.

Mr. Conkling is of striking presence—tall, commanding, with a large brain, a

handsome face, in whose delicately chiseled features the observer reads culture, talent, refinement. He is graceful in attitude and movement, and when addressing an audience his dignified manner admirably fits the lofty style of his oratory. As a speaker he is argumentative in the main, but weaves in with the steps of his syllogism the flowers of rhetoric, and on occasion he can wield the keen blades of satire and invective with an effect scarcely equaled by any other American statesman.

In private life he is a careful, temperate man, his habits being severely regular. He eats but two meals a day, a breakfast between nine and ten A.M. and a dinner at about six P.M., in which he indulges a strong fondness for fruits, while he eschews spirituous liquor in general. He is retiring in manner, and when at home in Utica is rarely seen on the street, yet is accessible to visitors and genial in social intercourse, though permitting no intrusion upon his time when occupied with professional work. Although refined and dignified, he is by no means ostentatious, as is evident from the fact that on arriving in Utica after an absence, he usually rides to his house on the baggage express wagon, and chats familiarly with the driver on the way, while his secretary, if with him, may take a cab.

He is a hard worker. When given a lawcase for argument, he makes himself thoroughly acquainted with its details, and often surprises court and client with the extent of his knowledge of technical details. He is particular about the sources of information and the authenticity of statistics, and in preparing for a speech or an argument these are his chief concern; the language he shall use is generally left to the occasion.

Mr. Conkling married a sister of ex-Governor Seymour, and has but one child, a girl, who was lately married.

One of his most telling speeches was delivered in New York city in September last—a political plea indeed—but from it we take the following extracts, as illustrative of his style as a speaker:

"Whoever is given greeting and audience in such a presence ought indeed to have something worthy—something fit and wise to say. Inadequate in all, save only grateful and respectful appreciation, must be my return. We are citizens of a Republic. We govern ourselves. Here no pomp of eager array in chambers of royalty awaits the birth of boy or girl to wield a hereditary scepter whenever death or revolution pours on the oil of coronation. We know no scepter save a majority's constitutional will. To wield that scepter in equal share is the duty and the right, nay, the birthright of every citizen. The supreme, the final, the only peaceful arbiter here is the ballot-box; and in that urn should be gathered, and from it should be sacredly recorded, the conscience, the judgment, the intelligence of all. The right of free self-government has been in all ages the bright dream of oppressed humanity—the sighed-for privilege to which thrones, dynasties, and power have so long blocked the way. France seeks it by forced marches and daring strides. Mr. Forster, Secretary for Ireland, tells the peerage of England it must take heed lest it fall, and Westminster and England ring with dread echoes or applause. But in the fullness of freedom the Republic of America is alone in the earth; alone in its grandeur; alone in its blessings; alone in its promises and possibilities, and, therefore, alone in the devotion due from its citizens. The time has come when law, duty, and interest require the nation to determine for at least four years its policy in many things.

"Two parties exist; parties should always exist in a Government of majorities, and to support and strengthen the party which most nearly holds his views is among the most laudable, meritorious acts of an American citizen, and this whether he be in official or in private station. Two parties contend for the management of national affairs. One or the other of these two contestants is sure to manage the nation's concerns for some time to come. The question is—

Which of the two is it safer and wiser to trust? It is not a question of candidates. A candidate, if he be an honest, genuine man, will not seek and accept a party nomination to the Presidency, Vice-Presidency, or Congress, and after he is elected become a law unto himself. Few things are more despicable than first to secure elevation at the hands of a party, and then, in the hope of winning pretentious non-partisan applause, to affect superior sanctity, and meanly to imply that those whose support and confidence were eagerly and deferentially sought are wanting in purity, patriotism, or some other title to respect.

"The higher obligations among men are not set down in writing and signed and sealed—they reside in honor and good faith. The fidelity of a nominee belongs to this exalted class, and, therefore, a candidate of a party is but the exponent of a party. The object of political discussion and action is to settle principles, policies, and issues. It is a paltry incident of an election affecting fifty million people that it decides for an occasion the aspirations of individual men.

"As an American profoundly do I deplore the languor, the misfortunes, and the wasted opportunities of any and every portion of our land. The ruinous course of affairs in the South comes

home to every citizen of this great State, whose interests and whose grandeur are so dear to me. The welfare and interest of the South and of the West, and of every portion of the country, is the interest of New York. Whose capital helped to build Western and Southern railways? Who holds the bonds and obligations of Southern communities? When petitions are presented to Congress praying some action to stay repudiation in Louisiana and other Southern States, who sign these memorials as holders of the dishonored bonds? Who sells on credit to the South? Who buys her cotton and tobacco? Who would gain by her increase of production and wealth? Who loses by her inertness and distractions? Do men wish to injure or destroy their own investments? Whoever will answer these questions will know that New York and her people, from love of self and love of gain, saying nothing of other reasons, earnestly long that the South may be peaceful and prosperous, and able to pay her share of taxes and bear her share of the public burdens. From the wheat-fields of Minnesota to the pastures of Texas there is not an acre whose fertility does not benefit New York, nor could she profit by the misfortunes or poverty of a hamlet in all our borders."

THE HUDSON'S BAY INDIANS AND HALF-BREEDS.

I VISITED the great British Northwest, as already promised, with a special view to investigating the characteristics and status of its Indian remnants, and more particularly to ascertain the effects of those *crossings* of Anglo-Saxon with Indian, left by agents of the great Hudson's Bay Company, in progress now for several generations; availing myself of the observations of a Government agent just returned from a tour of six months to all the Indian agencies in that vast territory.

The *problem* of crossing different races

of men is exceedingly important—whether it improves or deteriorates; embodies a natural means for evolving a higher order of humanity, or deteriorates its participants; is a natural law, or violates one.

All my *observations condemn it*. Indian, Ethiopian, and all others compel me to, as contrary to Nature's provisions, and injurious to both the parents and their issue. No. Nature's policy is to keep her genera, species, and races each distinct in itself and separate from all; and for the same reason that she forbids the lion and lamb to become parents to-

gether; lest the lion part of their issue spoil the lamb part. Horse and ass give the mule, embodying all the hardihood of the jack with much more than his size. But Nature wisely stops this hybrid, as she does most others, from going any farther, lest deterioration ensue.

Mulattoes generally lack the power of the full-blooded African, and the originality of the Caucasian, and degenerate more and more with each generation, till their increasing weakness ends in extinction. This issue is often extra brilliant, very pert and smart in learning, and gives promise of great results while young, only to wilt or die early. All the females of the third generation—they rarely reach the fourth—are puny, weakly, ailing, small, flat built, and childless, as far as I have observed. I heard an owner of her negress slave threaten her with a terrible whipping for bearing a mulatto, which had been previously positively interdicted under this penalty. The bearing was all right; but with that paternity, all wrong; because strong *field* hands were wanted, not delicate house-servants. Generally *Negroes* have large Form and Eventuality, with less Causality, and hence their offspring, mulattoes included, are often even quicker to learn and apter scholars than whites, yet their excellences end with *learning* fast, rarely eventuating in depth of thought, or planning or inventive genius—a few Fred. Douglasses excepted; and his reasoning powers obviously come from his white father. Language and speaking talents come about equally from both sides; for *Negroes* are garrulous talkers, and often eloquent speakers; especially on sentimental subjects, religion for example.

Mulattoes are usually *smaller* than *Negroes*, and their descendants become the smaller with each generation. As field hands or for hard work, they fall below either race.

Like general results follow the crossing of whites with Indians. Except in a few respects, they are obviously inferior to either—smaller, weaker. Some are extra fine scholars, classical included, and

carry off prizes in literature and the languages, yet never in mathematics or philosophy; because Language is often remarkably large in the Indian, and is oftener transmitted through mothers than fathers. I rode in the same cars with White Cloud and his Sioux Indian band in 1874, while coming on to Washington, and saw and heard several Indians make short impromptu speeches to their fellows which savored of genuine eloquence, judging from manner, gesture, tones, etc.; and some Indian speeches in the past have surpassed in terseness, pith, power of expression, and all the attributes of true eloquence any Anglo-Saxon speeches ever made. The Indian race is an oratorical one; and hence cross-breeds often evince superior classical and lingual genius—the gift of their mothers—which fully explains the contradictions pointed out in the article on the Brantford Half-breeds, some asserting that they were superior scholars, others inferior—the truth being that, Indian like, they are good in the languages and history—another Indian specialty—yet poor in mathematics and natural philosophy. This solution of that apparent contradiction gives me unfeigned pleasure.

In *business* matters half-breeds usually take after their Indian parentage; generally living from hand to mouth, only a few acquiring much property. They live mostly in poor hovels, little better than the huts of their Indian parentage, providing only the coarsest fare, chiefly a hard unleavened bread, with what poor or offal meat they can beg or get by hook or crook, along with a few vegetables, potatoes mostly; though they often burn up in winter the garden fence made the previous spring. Yet

They are jolly and sociable, great dancers, and exceedingly agile and animated in this amusement. They are a laughing, rollicksome set, living while they live, and taking little thought for to-morrow. I saw two females, on meeting in the street, kiss each other right cordially, and stop and talk and laugh all around, men and women with each

other, all hands evincing genuine, cordial friendship.

The English and French half-breeds differ from each other quite as much as do their fathers; and in precisely the same respects—the French being far more ease-loving, improvident, merry, and thriftless than the English; while those of Scotch paternity are far the best and most frugal and intellectual. Some of them acquire a respectable property; and one of them, a powerful athlete, is regarded as one of the shrewdest of business men, and best executive public officer in Winnipeg, besides being rich and eminently sensible. He is an exception: for, as a rule, they are much like their Indian ancestry, very poor, because very lazy and thriftless, spending as fast as they get, and gathering the fewest possible comforts around them.

As laborers the men are fair only, even poor, and greatly prefer making "trips" with pony and cart to their distant post, and that, usually in white employ, to collect skins, or trap, or barter with and for something, and they trade well in a small way.

French half-breeds oftenest cast their lot with their Indian relations, and affiliate and amalgamate with them, seeming to about lose all civilization, and relapse back into barbarism; while Scotch descendants approximate much more toward civilized ideas and habits. These and other differences between the descendants of French and Saxon are marked, and deserve special attention, as evolving a phase of transmission worthy special investigation.

French half-breed *females* are often really pretty in features, and winning if not coquettish in manner, besides being quite loving and lovable. Yet many are weakly as females, and

All are frail. Virtue is their "unknown quantity," and quality. Though all are rigid, even bigoted, Catholics or Episcopalians, the strictest Sabbatarians, and most scrupulous in observing all the rites and requirements each of her Church, yet not one of either can withstand any

masculine temptation. They consider this their "most easily besetting sin" to be confessed, prayed against, and everything but resisted. And all tolerate each other in it. When any of them desire to make a "raise," they repair to some white settlement and ply this vocation till they obtain means and return to their kin to enjoy their ill-gotten gain, considered and considering themselves as honorable as if it had been earned by labor. But

Their passion runs to whites, not their own color, though to the latter in the absence of the former—a fact which bears directly on this cross-breeding problem, and teaches an important lesson concerning it.

All admixtures are called half-breeds.

My authority for much of this information is Mr. John R. Bell, editor of the *Winnipeg Times*, who is well posted concerning them.

Their paternity is white, and maternity tawny. A cross of tawny paternity would doubtless teach important hereditary lessons. Occasional mulattoes of this kind are worth studying.

A few more facts about the Northwest Indians, and we must close.

Cannibalism exists among them, and a hankering for human flesh, once established, becomes a furore, a resistless mania. One grandmother had killed to eat and eaten her own grandchild, and begged to be killed to prevent her killing and eating others, who, she said, seemed to her like deer, to be killed for food. One of her grandsons, unseen by her, but by general request, took deliberate aim, and shot her through the heart!

Several other cannibal cases were related by the agent, quite as revolting, of the killing to eat and eating both of children and relatives. Whites they did not dare thus to appropriate.

A tall, spare, straight, bony, advanced son of the forest, "blanketed," walked slowly, but with great dignity and haughty disdain through Winnipeg streets. Indians prefer to walk in the middle of streets, instead of on sidewalks. He was proud and stately, but lonely, and ap-

peared to me as if all his former vim and power of mind and muscle had forsaken him—a wreck.

They only *see*, but never *think*. Reasoning out a point, however patent, no matter how clearly, makes no impression upon any Indian's mind or conduct. What he *sees* he comprehends, but he lacks Causality in mind as well as head. Phrenology granted, we would infer this, and this palpable fact was given special stress by the agent above mentioned, Ebenezer McCall—a man pre-eminently fitted for his governmental position. Nor have I ever known one single Indian pe-

culiarity but what tallies perfectly with Indian Phrenology. I shall have more to say of these coincidences hereafter. Having myself taken plaster casts from the heads of Blackhawk, Keokuk, Two-Guns, Ross, Osceola, and many other noted chiefs, and exhumed Indian skulls, East, West, North, and South, by cart-loads, I feel competent to say definitely what phrenological specialties characterize the Indian head, which I purpose to dissect phrenologically in future Numbers. Meanwhile, I am in transit to our Southwest Indians, to see what I can see among them also. O. S. FOWLER.

LIFE A DISAPPOINTMENT.

LIFE is a disappointment to so many chiefly because when starting in it they overestimated their own strength and underrated that of their competitors. Self-sufficiency and ignorance are the pioneers of defeated expectations. The looker-on is not disappointed; it is the actor who is. Overweening self-confidence refuses to see difficulties; and thus the preparation which might overcome them is neglected. The defeat is crushing, because it is deemed impossible. Presumption and arrogance have burned the bridges, and left no opportunity to gather the shattered forces by retreat. Although science and philosophy will greatly assist toward averting many of the consequences of error and mistake, yet there is no infallible rule for one to follow, which guides one always safely and pleasantly. Each generation must learn for itself. There is a point where teaching ends and experience begins. It is this which has set bounds to human knowledge. No man can take up the work of another and pursue it with the same efficiency and success. The father can not give or bequeath the child his matured experience, as he can his property. Men may vaunt themselves as they will, but there is a limit to their power; and that limit seems in some cases to have

been reached in one man. Shakespeare and Bacon had no successors. No man has been able to take up their work where they left it. So far as men's efforts are concerned, their works seem to be completed. No man has yet appeared who can equal what they have done, much less improve upon it. As far as we know, they reached the limit of man's power in the direction in which they taught. The child must mistake the road just as the parent mistook it, and learn which is the right road often only when too old and weary to walk in it. And is it not well that it is so? The wisdom of age and the form of youth can not be joined in beauty. Could the young know their true strength, and foresee the difficulties they have to encounter, they would not fail by the way, but would faint in the beginning. Favorable circumstances bear men on to fortune to a greater extent than the successful are willing to admit. But, happily, wealth is far from being the measure of success; indeed, a true success is a developed character, a high and noble manhood, that ministers to the great heart of humanity. There are thousands of poor, retiring men and women who have done more for the comfort of their fellows than any proud and arrogant millionaire.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER V.

THE BRAIN OF MAN, QUADRUPEDS, AND BIRDS.

WE shall follow in considering the brain a method similar to that which was adopted for the skull, that is to say, after having studied its structure first in man, we shall pass at once to the consideration of its leading anatomical features in quadrupeds and birds, omitting the special details which belong properly to an anatomical treatise.

From the most remote antiquity learned men and physicians sought to find certain organic characteristics which

their brains. Peculiar conformations of the head were so often produced by them, and so accordant to what is known of the persons they represented, that we are forced to concede that ancient artists knew very well that one shape of the head gave to his statue an intelligent character, while another imparted an intellectual cast of a low degree. The heads of all their statues of the gods, especially Jupiter, present certain features in a very high degree of development,

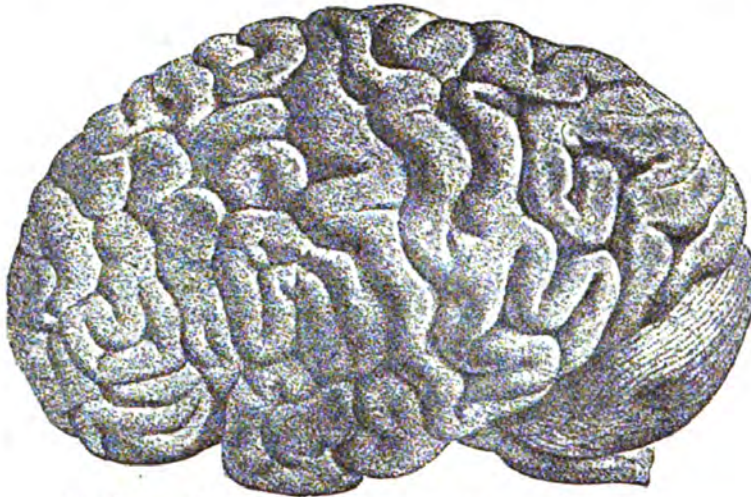


Fig. 193.—LEFT HEMISPHERE AND CEREBELLUM OF THE HUMAN BRAIN.

should be accepted as indications of the brain's function. Artists whose chief talent consisted mainly in the production of accurate forms did more for the physiology of the brain than all the theories and philosophies. Certainly the forms of ancient heads which have been transmitted to us, were not presented as those of men having characteristics which distinguish men under the control of this or that dominant faculty; but the artist who reproduced the features of Homer or Theocritus did not doubt that the outlines of the heads of these men were in harmony with the contour of

while those of slaves, gladiators, and soldiers show, on the contrary, brains of which the parts now attributed to organs of the superior faculties are but feebly developed.

The most minute study of anatomy, however, accomplished nothing for the history of the organs which constitute the brain; and the methods employed by celebrated anatomists and naturalists, for instance, Camper, Daubenton, and Cuvier, had no positive success. The researches undertaken by Haller and Vico d'Azir in comparative anatomy resulted only in pure anatomical approximations

not all tending to explain functions. Gall himself was not led, as some think, to the discovery of the physiology of the brain through its anatomy, but when he thought himself upon the course which was to conduct him to the history of its functions he deemed it quite necessary to occupy himself in part with its anatomy. In that he made proof of a right impression; he walked in the footsteps of one of the most celebrated physiologists who had appeared—Haller, who said that to learn physiology without anatomy was absurd. This great man attributed, with just reason, all the theoretical confusion with

in perfect agreement upon where certain parts terminate. If we examine the nervous mass which during life is inclosed in the cranium (Figs. 193, 195), we shall see that it is composed of several parts, which are distinguished by their form and volume.

First, there are two grand divisions: the *cerebrum* and the *cerebellum*—one situated anteriorly (Fig. 193) the most voluminous; the other lying posteriorly, and in man under the cerebrum. The cerebrum, which is usually meant when the term brain is used, forms the largest part of the nervous system contained in the skull, and it alone in man and in cer-

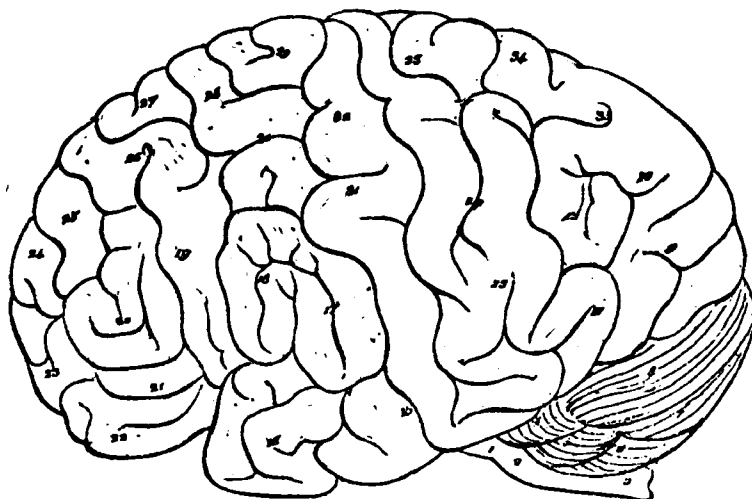


Fig. 194.—LEFT HEMISPHERE AND CEREBELLUM OF THE HUMAN BRAIN. OUTLINE.

which the world had been inundated to those cabinet physicists who sought to make physiology and medicine without having studied the actual organs of man or animals. "Never," said Haller, "will such people make progress in the natural sciences or in medicine."

Gall sought by the study of anatomy to associate the organs of the brain with its functions.

The Greeks gave the name *encephalon*, the Latins *cerebrum*, to the whole nervous mass inclosed in the skull of man and the vertebrate animals. The anatomists of our day consider this but a portion of the nervous mass, and are not yet

tain of the mammals is provided with folds having some analogy by their appearance to the intestines; hence their name of *convolutions*. The other part situated behind the cerebellum, or the little brain, is composed of layers so that it may not be confounded with the cerebrum.

Below the cerebellum is another part: it is at the beginning of the spinal column, which is distributed in the canal formed by the articulation of the several vertebræ belonging to the spinal column. (See Fig. 196, b, b.) The cerebrum in man is composed of two anatomically distinct parts, each having an oblong form

and usually showing less breadth in front than behind. These are named *hemispheres*; they are separated by a deep channel, in which lies the fold of the dura-mater, known as the *falx cerebri*. It is at once perceived that these hemispheres are similar in form and size and general markings, although not perfectly alike. Quadrupeds with a smooth cerebrum, such as the rodent and the great family of birds, show but little difference

Nos. 19, 20, 21, 22, 23, etc.); (2), the *middle lobe*, which occupies the central fossa (Fig. 194, Nos. 15, 16, 17, 18); (3), the *posterior lobe*, occupying the back part of the cranium (Fig. 194, Nos. 9, 10, 11, 12). The last is generally the largest.

Many of the prominent physiologists of the present day have agreed upon a more convenient division of the hemispheres into four lobes, which are named according to situation thus: (1), Frontal

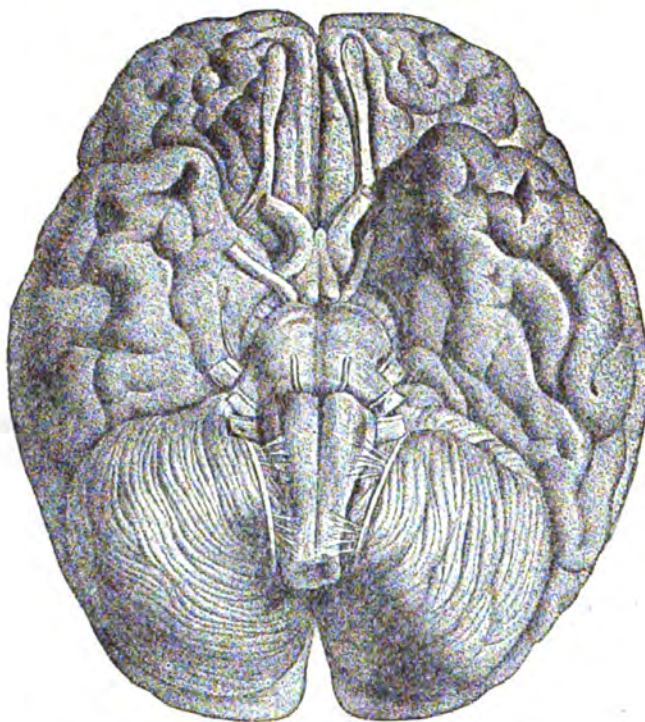


Fig. 195.—INFERIOR SURFACE OF THE HUMAN BRAIN.

in the volume of the hemispheres. Man, of all the animals, shows the greatest variety in this respect. Bichat thought, but wrongly, that the want of perfect symmetry between the two hemispheres of the brain should have an influence upon the judgment. At the death of this celebrated man, the form of his very irregular cranium witnessed against his own assertion.

Three principal parts or *lobes* are usually designated as belonging to each hemisphere: (1), the *anterior lobe*, which lies in the skull over the orbits (Fig. 194,

lobe; (2), Parietal lobe; (3), Occipital lobe; (4), Temporal lobe. The boundaries of these lobes are determined by the situation of the fissures, viz: the fissure of Rolando marking the superficial extent of the frontal; the fissure of Rolando and the Perpendicular fissure indicating the superior extent of the Parietal; the Perpendicular fissure being the superior boundary of the occipital; and the fissure of Silvius being the upper boundary of the Temporal lobe (Gratiolet, Bastian, etc.)

As we have seen, the dura-mater covers

the whole brain and lines the interior of the skull, and is so elevated by the cerebral convolutions in life that they form impressions in the interior plate of the cranium, and in the orbital plates and temporal fossæ. So close indeed is the correspondence, that if a plaster cast of the cranial cavity be made, it will be found to have the form of the encephalon as covered by the dura-mater, with its arteries and veins exhibited in a

plate, as do also those adjacent belonging to the frontal lobe.

2. At the posterior end of this fissure are two curved cylindrical bodies, *n*: these are the optic nerves—which in their prolongation are distributed each in a globe of the eyes, where it forms by its expansion the membrane known as the retina.

3. Between these nerves an expanded body, *m*, is seen: the sub-sphenoidal root or stem, at the base of which are two

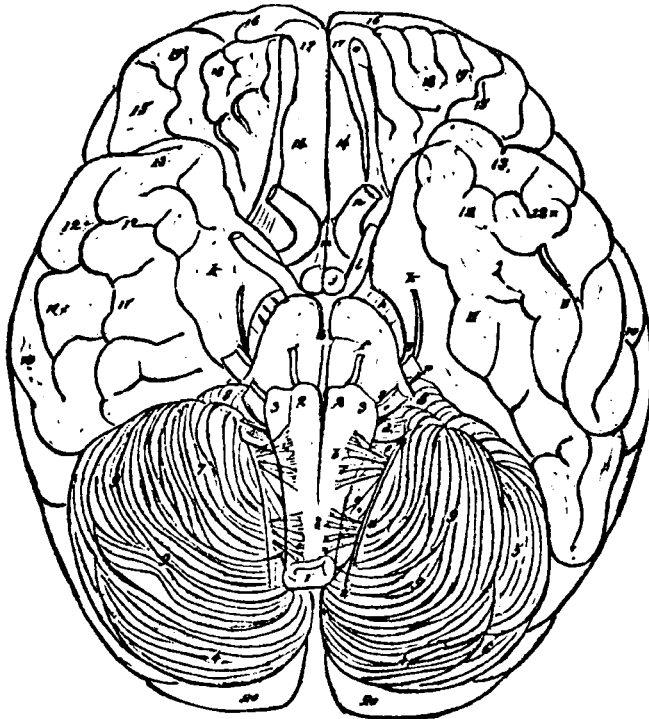


Fig. 196.—INFERIOR SURFACE OF THE HUMAN BRAIN. OUTLINE.

striking manner. On its lower surface the human brain shows several features which it is important to note (Figs. 194, 196). Proceeding from front to rear, we find:

1. A fissure or division between the hemispheres. Lying on each side, near the line of separation, is an elongated rounded mass, *o*, terminating by an oval extremity a little expanded; this is the olfactory nerve which distributes itself in the nasal cavities. The convolution in which it is placed lies upon the orbital

rounded bodies, *j*, known in most of the anatomical works as the mammary tubercles on account of their form. These are white or pale-colored on the surface and gray inside.

4. Projecting on each side of the mammary tubercles are the common oculo-motor nerves, or those of the third pair *l*, which penetrate into the orbital cavities by the sphenoidal cleft. Outside these nerves are two large, striated bundles, *h*, proceeding from within outwardly; these are the "grand fascies" of Gall,

or the cerebral peduncles of other anatomists.

5. Between these fascies, more outwardly, is a long nervous thread, q: the nerve of the fourth pair, or pathetic nerve.

6. Directly behind it a bundle of considerable size and laminated, p: the nerve of the fifth pair, or the Trifacial.

7. Laterally and adjoining the coarse cerebral bundles, h, are numerous convolutions occupying the middle and lateral fossæ of the base of the skull, and indicated by the Nos. 10, 11, 12, 13, k, k, and forming in great part the middle lobe or

temporal lobe of the brain. These are more voluminous and rounded than those which lie upon the orbitary plates.

The space between the convolution, 12, and that marked 15 (Fig. 196), is called Fissure of Silvius, separating the anterior or frontal lobe from the middle (or temporal). The lower surface of the posterior or occipital lobes is concealed by the cerebellum, except the convolutions indicated by the number 20. When the brain is not deprived of the dura-mater that shows a transverse fold slightly inclined, separating the cerebellum from the hemispheres.

A VISION OF WAR.

WHILE silently reflecting how sweet it was that peace prevailed throughout our land, a voice said: "What know you of war that you fancy peace so great a boon? Look forth!"

Through vast regions of boundless air my vision seemed to pierce and behold a broad plain covered with ripened grain spread before me. The far-away chimes of a church were ringing, when suddenly with fife-shriek and drum-beat an army burst into the fields, forming in battle array. Soon cannon-ball, shot and shell hissed, thundered, and flashed through the scene. Mangled men, groaning, blackened, with dishevelled hair, torn limbs, and streaming blood, lay everywhere; still the fife uttered its shriek, still men, distorted to demons, fought, raved, died, throughout a long summer day. "Do you know this field?" whispered the voice. My horror-white lips motioned "Waterloo!"

The vision passed; then a great snow-waste appeared. The air seemed hissing cold. It was night, yet a light shone abroad; when I sought its source, for it was too spectral for God's daylight, too vivid for the fair radiance of moonbeams, I perceived it came from the burning of a large city. Up the tall, shining spires the flames mounted, leaped; melted with

the fierce fire-kisses they fell with crash and roar. Soldiers swarmed everywhere, fighting the unresisting. At length all faded. Through the dim, succeeding silence a long, dark procession passed in the biting air, and one by one, two by two, a group, a line, they dropped beside the way, and snow-wreaths winded round them as they turned dead, blank faces to the sky. "You know this!" murmured the voice.

"Ay! Moscow, Russia, Napoleon's army," I whispered, as the spectre-scene faded into blankness.

"Look again!" the invisible presence said.

"No!" I cried; "I will not. Why should my soul be harrowed by horrors enacted before I had being? Need I burden myself with the agonies, sins, atrocities that have darkened earth since the first man struck down his brother, inaugurating bloodshed, murder?"

The voice came again: "Well, it matters nothing that you should see those long-past events. War has been known in your day. You were too young, too ignorant to appreciate its terrible aspects; yet you must learn this lesson. I command you look again."

Despite myself I looked out; the sun was slowly rising. A forest appeared,

bright with a halo of green leaves and mingled sunbeams; beside the forest a corn-field rustled its ripening leaves. Everything was in motion. Men in gray apparel were forming in line for miles under cover of the forest; in front of them three bridges spanned a slight stream; sixty great guns, more terrible than dragons, commanded the chief one. As the sun stood fully out, its mighty eye turned upon the scene; the tumult of war broke forth. Smoke, shot, shell, filled the air. One side wavered, then the other. Fresh troops sprang up, as 'twere from the earth. One regiment I followed with my eyes—a thousand men; they rushed into this maelstrom; thirty-two, baptized in blood, came forth; every cannon was a fiery furnace, every square yard of ground an epitome of hell.

Noon came, one o'clock, two, three, four. "Great God!" I cried, "will it never end?" Four times the contested corn-field changed hands; new troops in gray came; the officer of the blues looked dark, was forced back; his attack became defense; he called for help; only five thousand men came, with the order, "Hold the bridge to the last man, or all is lost." But the firing grows less fierce; the sun swoops to the west, seems to hasten from the horrible sight, sinks below the horizon, silence falls, as I sigh, "Our country and our God can not forget Antietam."

The picture faded; another rose like a mist; the brightness of June filled the air; it was night—a night of turmoil. Groans of wounded men came borne on the night breeze; anxiety brooded in the air. There had been battles; men were snatching fitful slumbers, resting on their arms. A small village appeared, through which armed men rode. A short distance away, where white marble tablets of the dead stood like spirits surveying the scene, men in blue are stationed. One could see that pits were being dug, earthworks thrown up, the struggle would go on by daylight.

Morning came and passed, three o'clock struck; then batteries belched forth death. With a fierce cry the infantry in

gray charged, the blue were forced back; the gray tried to gain the rocky height; they struggled, wrestled, writhed, fell back, again advanced, twisted in and in, like two great serpents the two armies contended; then night curtailed the scene. Again the sun rose, the July sun, sending its hot beams upon men torn, disfigured, dead; upon men wounded, yet untended by mother's hand, by sister's love; upon long lines of men in hostile array with weapons bright in the sunlight. They dashed with deadly fierceness upon each other and fought for hours. Then came the silence which precedes tempest; three hours it lasted, one o'clock struck, a signal gun spoke; then one hundred and twenty-five guns concentrated fire on the men in blue, stationed upon Cemetery Hill; a hundred guns replied, the earth shook, the roar was like the crash of worlds, the range was short, the aim accurate, death feasted.

The blues were resting when the fire opened; lying upon the grass, they fell again as they sprang up—dead, with cigars in their lips; dead, with bread in their hands; dead, grasping the miniatures of loved women. Horses, plunging headlong, shrieked aloud with fright and agony; branches of trees, earth-clods, bits of splintered grave-stones flew crashing around. In five minutes the hill, in all unsheltered spots, was clear of every moving being; the dead below, the dead above, were equally silent. Directed to other points, for an hour the guns roared incessantly. The blues were hushed, the grays thought the hour their own. Forward, with near three-mile lines of strong infantry, with measured tread, across the plain, up the hill, they advance. Four o'clock strikes! Silent as the dead the blues remain; the grays still advance three lines deep. Suddenly, from thrice six thousand guns an avalanche of leaden death is hurled upon them. Like snow in summer the first line melts; the second, like a tempest, sweeps onward; the blue gunners are bayoneted, the red, white, and red standard waves above their guns; but an enfilading fire strikes the

line, it goes down to dust. As the smoke rises all who live throw down their arms. It is the last struggle, it is defeat to the gray. The blood of forty thousand men, with a dreadful baptism, had re-christened—no, not that—deluged Gettysburg.

"No more," I shrieked, "no more." "None of this blood can be attributed to me, a woman, far from the conflict, utterly without political influence. This blood can not, shall not stain me!"

The voice whispered, "What! have ye not heard he who is not for us is against us, and he who gathereth not with us scattereth abroad? Thou hast a voice, thou dost wield a certain influence with a pen; hast thou ever used them in endeavoring to promulgate peace principles, in discouraging the war sentiment? Thy brother's blood crieth to thee from every rood of earth beneath the sun. Cease frivolous pursuits, go forth preaching the gospel of peace to all people, to every nation. If thou canst estimate it, tell the world what the human butcher bill of England, Russia, Egypt, Persia, France, America, has been. The money-value of a man-slave in our land varied from four hundred to one thousand dollars. Count, then, if thou canst, how many millions of money war has swept from earth, if men are simply beasts of burden. The worth of tears, widowhood, orphanage, is not counted here on earth. 'Tis not so above. There they are estimated, valued, set down in the great book of record.

"Try to comprehend the far-reaching consequences of the Crimean war, when 750,000 men were slaughtered at a cost of \$1,700,000,000; of the Franco-German war, when 215,000 men were slain, at a cost of \$2,000,000,000; of the Russo-Turkish war, when 600,000 men murdered each other at a cost of \$1,250,000,000; of the late American conflict, when 800,000 men were butchered at the cost of \$7,400,000,000.

"Consider the acts of violence prompted by fostering the war-spirit in mankind. Consider the cost of standing armies, in money and in moral deterioration. Consider the immense amount of labor

and treasure that have been expended, and afterward destroyed or locked up in fortifications, forts, arsenals, ammunition, and weapons of war. Behold the earth, with grain-fields trampled hard as stone, with forests mangled or burnt. Behold dwellings, storehouses, villages, cities plundered, destroyed, leaving their helpless inhabitants, innocent women and children homeless, foodless, to perish.

"Ponder all these things in thy heart of hearts, realize fully what war has taken away, and what it has prevented by improper expenditure of labor and money. Then thou mayst be fitted to speak with force and authority upon the most vital question of the day—the end of warfare, the promotion of peace, by settling difficulties between nations through arbitration.

"True, thou art weak and slight of body and mind, but the crying of a feeble infant may waken the strong man, sending him forth to the labors of the world. Thy little wail may be caught up by the giant mind of some soul, awaiting a great intellectual and moral waking. Thy voice may yet reverberate throughout the centuries, though unheard by mortal ears, drowned by the trumpet-tones of one thou hast called forth into the work. Go write, speak; thou art commissioned 'one of the least of the little ones,' in the army of that Prince of Peace who said, 'Blessed are the peace-makers, for they shall be called the children of God.'"

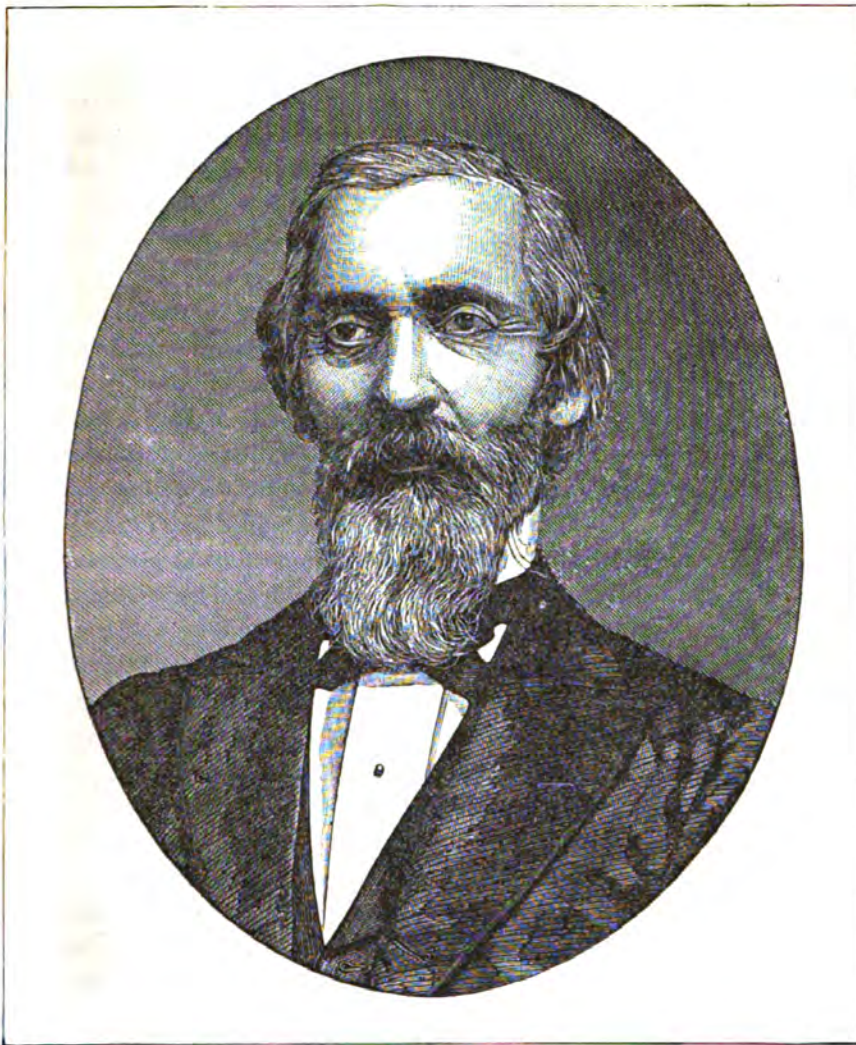
AMELIE V. PETIT, PH.B.

UNFORGETTING.

Oh, could we but forget! Thank God we come
From the eternal past, no memory kept
Of those celestial bowers in which we slept
Mid amaranths and roses:—floated home
O'er seas of amber, 'neath the crystal dome
Of unremembered suns and stars. We wept,
And with our tears oblivion fell: then steep
We through the ivory gates of life, like foam
Cast on the shore, forgetful of the coast
From whence it came; thence we float on, and on,
Accumulating thought on thought, wild tossed,
Full-freighted barques; the sad winds making
moan

At through our heavy sales; no memory lost
Of all our griefs, or our mishaps—not one!

ELIZABETH OAKES SMITH.



DAVID BINGHAM MOSELEY,
PUBLISHER OF THE "RELIGIOUS HERALD."

PHRENOLOGICAL CHARACTER.

THE gentleman whose portrait we present has an uncommonly large head, measuring twenty-three and a half inches, and it is very high from the eye and ear, showing that the size is not mainly made up of circumference. Some men have heads like a one-story house—they measure large around, but being low, their real contents is not very great.

Other heads are two stories high, and some three stories; hence the high head that measures large around contains most brain, and as the top-head is related to moral power, a high head is the most desirable. Many a man wears a large hat although he has but a medium-sized brain. Some wear a hat of only medium size, but the head rising very high, they possess large brains. This was true of

Sir Walter Scott ; the regions of the intellect, the moral sentiments, and the imagination were very large in him, while the circumference of the head was but moderate.

The weight and height of Mr. Moseley show that he is rather slim and wiry—he stands five feet eight inches, and weighs one hundred and thirty-five pounds, so the head must be considered very large as compared with the size of the body. Being of a muscular and tough organization, without any fatty matter to add weight, we regard him as strong, enduring, positive, active, energetic, physically considered ; and those traits belonging to an active Mental temperament, pertain to the brain and the mind.

In this front view of the head the height and width are indicated, but not the length. Being favored with a side view of the head and the measurement, we find it to be very long from front to rear, and particularly long from the opening of the ear to the center of the forehead. This last development shows a comprehensive, and at the same time a very practical mind. He has a strong perceptive intellect—adapting him, first, to gather all the facts that are within the range of his experience or observation. Secondly, the middle part of the forehead, half-way from the eyebrow to the hair, is also very full, indicating a remarkable capacity to retain in detail and in freshness the facts which his large observing organs enable him to gain. If he had been devoted to a political paper instead of a religious one, he would have been known far and wide for that historical memory which would recall campaigns of twenty years ago ; if he were a political editor, it would be unsafe for a

man of unsound morals and crooked ways to offer himself as a candidate for an office of public trust, for Mr. Moseley's memory would enable him to go back and recall the improper principles, the abuse of authority, the lack of morality, or any phase of discreditable conduct, with a minuteness that would startle the subject of his criticism.

The upper part of the forehead is large, which indicates power to reason and think soundly and strongly, and to base his arguments on the facts which his great perception and memory enable him to acquire and retain.

He is naturally very fond of traveling, remembers roads and places, and having also large Order, he inclines to have a place for everything and everything in place about his office and business. He will have a rule for everything, as well as a place for things, and desires that everything shall be done promptly as to time and method, and faithfully and fully. Nothing troubles him more than an unfaithful person, who tries to shirk his duty, and leave things undone, or shabbily done. He would train up boys and young men to habits of business and promptness, which would be, in their future, decided factors of success ; we can hardly imagine a boy placed under his control, who should not grow up punctual, prompt, honorable, and upright, unless by nature he were organized for delinquency, and if so, this man would not be likely to keep him long.

He has mechanical judgment, which would give him a relish for everything in the line of invention ; he has enough of the conservative elements to hold on to all that is good in the old, and enough of the spirit of progress to reach forth to that which is an improvement, and to

keep up with the spirit of the age ; while some men get ripe at fifty, or ten years before, and no progressive movement, no new idea afterward will ever win them ; they are set in their usages and habits, and want no "new-fangled " notions.

If this gentleman were a teacher he would make a capital one, even at his present age ; and if a new book were published which was really better in its methods, he would see the value of it and adopt it ; he is as ready to adopt changes as most men of thirty ; is fresh and well kept, like a tree that continues to put forth new wood every year. He will remain young as long he lives, will be getting new ideas, and adapting himself to whatever is progressive, if the new methods are better than the past.

He is independent in his spirit, but not haughty and dignified ; he has consistency of character rather than a domineering, overbearing spirit.

His social nature enables him to win friends, though he is not very overt in his manifestations ; people find him in the right place when they are in a tight place, as he comes to their aid with advice and counsel, and if he is an intimate friend of a man he will come to his aid before he gets to the tight place, and give him counsel such as he will be likely to value. He is a good man for poor people to count on, and though he may not be noisy in his gifts, he has a quiet way of making his generosity felt. He is naturally inclined to contribute to good objects, and to do for them beyond what money would represent ; giving his countenance and aid, and doubtless he has given thousands of dollars in the way of editorial assistance which many other men would have managed to work in in the way of advertisement. That which

he approves he heartily indorses and earnestly works for. That which he thinks is wrong, he tries to hedge up and make its progress hard ; he is not likely to make many enemies : even those whose cause he opposes will not feel any special unpleasantness or personal animosity toward him, although they may be offended with the influence he brings to bear against them ; in other words, people who know him, believe that he means to be true, just, upright.

He has Cautiousness which sometimes magnifies the difficulties which he may have to encounter, and he will spend more time and money and effort to assure himself and his interests against detriment than he need. Such an organization would keep a man at his post, not permitting him to shoulder his responsibilities upon somebody else. If he held a public position he would be in his office as many hours as any one would, so as to see that everything went on rightly ; he would not sign cheques without reading them so as to know their real import ; nor would he hide behind subordinates in their defalcations in a department he had the control of. He would consider it his business to know whom he employed and to be responsible for whatever was done in his department.

He has the desire to acquire, and will conduct a business on principles of economy, and he does it largely by being present himself and looking after details, and seeing that nothing is wasted or squandered through carelessness or negligence.

If he were connected with a school which has its ten thousand particulars to look after, he would see that they were all attended to. If he were devoted to a manufacturing business he would deem nothing too small for his notice, nothing too

troublesome for his industry, and he would bring his sagacity to bear on the major as well as the minor matters.

He is a clear, distinct talker, not wordy as a writer or speaker; he comes to the point, tells what he means, and stops when he gets through.

He ought to be known for social amenity, especially in the family circle; young men believe in him; he takes an interest in them and they grow up regarding him as an elder brother to give them advice and aid in times of temptation and trial of strength. He inclines to look on the favorable side, to exercise faith which reaches into the future, to work for the immortal verities both as they relate to this life and the life to come.

BIOGRAPHY.

Westfield, Mass., has furnished several of Hartford's prominent citizens, and among them none more highly esteemed than the subject of this sketch, whose portrait illuminates the neighboring page. At the time he came down to try his fortunes in the attractive capital of the good old Commonwealth of Connecticut, there were no railroads in the country, but a regular coach line over the Albany turnpike connected Westfield and Hartford. It was in 1829. He was then sixteen years of age. He had had a slight acquaintance with printing, gained in the *Westfield News Letter* office, a paper which has been united with the *Western Hampden Times*. The Goodwins, who had control in the *Courant* office at that time, immediately took him into their employ. Several times that paper has moved its stakes since he took hold upon it, but the pleasure of remembering that he was foreman of the printing department when the now venerable *Connecticut Courant* added its daily edition, remains to him.

In 1843 he began to publish the *Relig-*

ious Herald, and, as it happens, made his first headquarters in the building whose site is now occupied by the new *Courant* building. Three other Congregational papers in previous years had been started in Connecticut, and their lists of subscribers successfully sold out, in New York and Boston, for want of sufficient support. His brother Samuel, who had been graduated from Yale College and the Yale Divinity School, assisted in the canvass for subscribers, and the paper has been issued without intermission, weekly, for thirty-eight years, under its present management.

The "Life of Dr. Horace Bushnell," just published by Harper & Brothers, of New York, associates that theologian, known in other countries as well as in America, with the *Herald*, in which the famous controversy for heresy was largely carried on.

The office of the paper now occupies rooms in Batterson's Building, overlooking Bushnell Park. The history of the paper is almost his own history. He is better known in his influence through the paper than from being conspicuous in public places. He has hardly moved among men even locally, but has been, of all men, a most retiring and home-living man when away from his office. A father of nine children, eight of whom he has seen grow up to man's estate, he rejoices now in a goodly heritage of offspring and heirs, who, however, will not inherit so large a legacy of material wealth as of good character, good name, and sound doctrine in the faith. His two sons are connected with the office, the younger being a graduate of the Yale class of '74. Four of his five daughters are married; one is the wife of the book publisher, J. B. Burr, of Hartford. His grandchildren already number a goodly society of little ones—eleven in all.

Mr. Moseley's executive ability must be more than ordinary, or he could not have been able to carry on his business so long and so successfully. The fluctuations in the markets of the world during the long period which his business career

covers, have been as great, perhaps, in the materials of his industry as in that of any other trade. The sizes of other newspapers have changed from small to large or otherwise; from one quality of white paper to another, to correspond with changes in the prices of paper, material, and labor. Paper has varied within the limits of eight cents and twenty-five cents per pound. But he has never decreased the size from the start of the *Religious Herald*, which, on the other hand, has shown an enlargement and improvement in all the attempts at change which he has made; and the improvements in printing he has seen are some of the marvels of the nineteenth century—from the old John J. Welles and Franklin hand-presses up to the modern Bullock. The *Courant* was printed on one of those old hand-presses in 1829. The growth of railroads at the rate of 4,000 miles a year in this country and the use of electricity, is hardly greater than the power of the newspaper press.

Mr. Moseley was an ardent supporter of the anti-slavery movement, a warm friend of colonization and philanthropic projects, and has lent his earnest and unremitting encouragement to educational institutions and all the accessories of religion. Connecticut has been an unwearied field for money-gatherers for beneficiary purposes, and the *Herald* files show how largely appeals have been made to the benevolent through its columns.

The *Independent*, of New York city, was started a few years after the *Herald*, and both are conducted by laymen. The religious papers of all denominations of Christians are almost exclusively conducted by ministers as editors; but for permanency and leadership and satisfaction, judging summarily from their experience, Mr. Bowen and Mr. Moseley have not been surpassed by many pastors at their posts, and the congregations they address are far larger than the largest church. Mr. Moseley conducted his paper with nice discrimination in numerous controversies, notably the Taylor and Tyler troubles of the

two Connecticut theological seminaries which they represented, and the Dr. Bushnell arraignment, when on both sides the paper was the battle-field for the disputants. Discussions of doctrinal questions have occupied a good portion of the room in his columns from the first, laymen and clergymen of various denominations being allowed free play. The catholicity and broad-mindedness of the man are thus strongly pronounced. Simple as to aims and methods, he has been vigilant, serene, trustful; he has seldom lost patience, and never lost heart or hope.

When nominated on the temperance ticket in the first Congressional district in Connecticut, six or eight years ago, his vote was larger than that of the candidate for Governor on the same ticket.

For many years Mr. Moseley has been an officer in the Pearl Street church. He has had a rich experience in Christian living and character building. He has been a diligent student of the Word of God, a lover of the good, the true, and the beautiful, and he has exemplified by his life, knowledge, faith, in a modest, quiet manner, much to the delight of his friends, the health and strength of a sound Christian character, which may be called an accumulated property of priceless value.

ENCOURAGING TO WOMEN WHO WORK.

—The services of women as copyists and reporters are more frequent in law offices than ever before. Ten years ago no woman reporter was to be seen in a room where a referee was trying a case; to-day the sight is becoming a common one. A well-known lawyer said recently that as type writers women were vastly superior to men; they could get more out of the machine, and get it in better shape than most men could; and that as stenographic reporters of law cases, they were fully the equals of men in accuracy, legibility, and trustworthiness. He considered such work very trying to the nerves of anybody, and demanding much physical endurance.

WATKINS GLEN.

A GEOLOGICAL POEM.

SEVERAL years ago the following lines from the pen of that celebrated traveler, Mr. Mark Twain, made so deep an impression as to induce the undersigned to visit the locality alluded to in the title :

"If one desires to be so stirred by a poem of nature wrought in the happily commingled graces of picturesque rocks, glimpsed distances, foliage color, shifting lights and shadows, and falling water, that the tears almost come into his eyes, he need not go away from America to enjoy such an experience. The Rainbow Fall in Watkins Glen is an example. It would recede into pitiable insignificance if the callous tourist drew an arithmetic on it, but, left to compete for the honors simply on the scenic grace and beauty, it could challenge the Old World and the New to produce its peer."

On reading the above I was able to sympathize keenly with the sentiment of Artemus Ward in regard to New Zealand. He said: "I have always entertained a burning desire to reach New Zealand—in fact, I have always felt that if I could reach New Zealand, I would not have lived in vain." And I felt that until I had interviewed Watkins Glen, my life might be considered an eminent failure. Consequently on the 17th of September, 1880, I "took shipping" at the foot of Chambers Street, N. Y., and arrived at the dépôt of the Erie Railroad, at 9 o'clock A.M. Notwithstanding my infatuation in regard to the "Glen," however, I had no sooner passed Port Jervis, than I became oblivious of everything save the marvelous scenery along the Erie Road. It would be impossible to overestimate the beauty of this region. For a hundred miles the limpid waters of the Delaware play hide-and-seek among the hills, bathing their feet of purple and gold, and laughing in the autumn sunshine. At Deposit, the Delaware is left behind, and a few miles further on, a

second panorama of verdure-clad rocks and rippling waters delights the artistic sense. This is the Susquehanna.

At Elmira I changed cars, and after a ride of twenty miles, arrived at the town of Watkins, on Seneca Lake, at 9 o'clock P.M. The village lies just at the entrance of the great Glen—or gorge, or canyon—which runs through the mountains for a distance of some five miles; the chief wonders and beauties being comprised within the first two miles. What is properly known as the "Glen," consists of a marvelous chain of caverns and cascades. The caverns are of all imaginable sizes and depths, and the cascades are formed by a mountain brook which leaps from ledge to ledge, amid overshadowing masses of hemlocks, oaks, and pines, until a total descent is made of some 500 feet. The vast and rugged walls are covered with the loveliest mosses and ferns, and appear like enormous pillars or buttresses of shingly stone, that seem at every instant ready to topple over upon the devoted pigmies who look up from the cool and misty footpaths and bridges far below.

The mind grows dizzy in an attempt to calculate the myriads of ages which must have elapsed since the first dashing torrent began the work of scooping out the bed-rock of this stupendous gorge! In various places delicious emerald pools rest in hollows or basins which could not have been more perfectly cut and polished by the most skillful artisans. Here, doubtless, stood many an awe-struck Indian long before the first white man ever dreamed of an American continent!

Innumerable stairways and paths afford every facility for exploring the heights and depths, and the sight presented from the beautiful bridge which connects the two buildings known as the "Mountain House" is one of the wildest. Among the most celebrated points of interest are: "Fairy Cascade," "Neptune's Pool,"

"Glen Cathedral," "Rainbow Falls," and the "Pool of the Nymphs."

Nothing can surpass the witchery of "Rainbow Falls," even though the *rainbow* only appears during a certain hour of the day in the summer months. In reality there are *three* falls, and so perfectly proportioned as to appear like a trio of gigantic steps silvered over with flowing water. At the foot of each is a miniature emerald lake so limpid as to possess one with a frantic desire to jump in. The middle pool I immediately christened "Diana's Bath." It forms a perfect circle in the solid rock, is blue as indigo, and at least twenty feet in depth.

To wander upon a hot summer day beneath the overhanging ledges—after one has become reconciled to their apparent demoniac tendency to tumble suddenly and bury one beyond all hope of resurrection—when the mingled flash of sunlight and spray gilds the crags and the vegetation, and the music of innumerable rills echoes amid the grim, eternal walls, while the subtle odors of the pines and the wild asters steal upon the sense, is about as near an approach to Elysium

as can well be dreamed of. Hours vanish almost like so many minutes, and a deep solemnity steals upon the soul while indulging in such close communion with the august spirit of Nature. Perhaps the grandest sight of all is what is known as "Glen Cathedral," and on visiting this colossal amphitheatre about the hour of sunset, the sensation is like that induced by the sublimest of Beethoven's music. If Irving's demons of the Catskills were to burst from the mysterious recesses, one could not but regard them as entirely appropriate.

On one of the overhanging cliffs dwells one of our finest artists, Captain Hope, and in his large gallery is a picture of "Rainbow Falls" which is equal in my opinion to anything Church or Bierstadt ever touched.

The story of the "Glen" is the old tale of everything illustrious. Mr. Ells, the genial editor of the *Watkins Express*, says that when he first brought it into general notice he was laughed at for his pains. It was then valued at \$5,000. Now it could not be bought for \$250,000.

AUGUSTUS WATTERS.

A LAKE VOLCANO.

NOT long since a volcanic eruption occurred in Lake Ilopango, San Salvador, the phenomena of which were communicated to *La Nature* by M. J. Laferrière, the French Consul. Marine volcanoes are not so rare that we do not occasionally hear of their effects in the production of a tidal wave, which sweeps over a neighboring coast, destroying life and property, or in the erection of an island with a rugged, bristling surface, where before was a very deep bottom.

The occurrence in San Salvador is particularly interesting, and we are enabled to accompany the description of it with an illustration from a photograph, showing the nature of the eruption and the crater which was suddenly raised in the middle of the lake.

Earthquakes were felt in San Salvador

in the first half of January of last year; there were three strong shocks, less violent, however, than those of 1876. These earthquakes apparently had their center in the vicinity of Lake Ilopango, in the midst of which rose at length three volcanic openings connected with each other. This new crater, seen from a distance, appears like a small islet, rising above the surface of the water, however, about twenty metres. An attempt was made to approach it in a boat, but the waters were all in a state of ebullition from contact with the burning rock, and gave off torrents of steam. An abundant column of smoke rose in the air, assuming the aspect of an immense cloud, which was seen from a great distance, and formed an imposing spectacle. The phenomenon was preceded by an excep-

tional rising of the lake, increased by the abundant winter rains. According to an old tradition, the Spaniards maintained that when the lake rises earthquakes are to be feared. Formerly, also, it was the

phenomena seem, therefore, to justify this tradition.

If it is difficult to explain the fact, it is still interesting to remember that many volcanoes are submarine, that others are



A LAKE VOLCANO.

custom to dig trenches to facilitate the escape of the waters. This practice was followed without intermission for a century, and volcanic phenomena did not appear during all that time. The present

found for the most part in islands or in maritime regions, and that water may be one of the feeders of volcanic fires. Lake Ilopango, also known as Lake Cojutepec, is, according to M. Laferrière, a sunk cra-

ter. It is in the volcanic line, and it is a general fact, in Central America, that lakes alternate with volcanic cones. The water of this lake is brackish, very bitter, and almost viscous. It gives off, some-

times, here and there, bubbles of sulphohydric acid gas. The lake is about 12 kilometres long by 16 broad; the depth unknown. It is about 12 kilometres from the city of San Salvador.

THE MISSION OF BEAUTY.

FEW will care to dispute, after a little thought, that every thing, as well as every person, has an influence; and that its influence may be favorable or otherwise on the human mind, and also that nothing is unworthy of consideration which in any way, directly or indirectly, affects humanity.

One can not go into the deep woods without a feeling of awe coming over him, though the mind may be too much occupied for a time to perceive it. Yet the solemn grandeur and profound silence will surely make an impression on the most uncultured soul, and influence decidedly the thoughts and feelings. Involuntarily we are enlivened and grow more cheerful in a bright, sunny room, and feel depressed in a gloomy one, and if these transient conditions produce certain effects on our minds and feelings according to their different characters, how much greater and more potent would be the result of the constant association with conditions which are harmonious and healthful, or otherwise.

How many morbid impulses have their birth and nurture in dark, dismal rooms, till, at length, they take form and prove a curse to their possessor and all connected with him. How many criminals, think you, spring from homes that are cheery and sunny, whose inmates have made them beautiful and attractive because they loved beautiful things, and thought it not a waste of money or time to buy and care for them? Wickedness seeks darkness rather than light, is antagonistic to whatever is lovely, and can not breathe the atmosphere of purity and beauty.

Fewer dyspeptics would there be if the

breakfast-room were made beautiful—not with tinsel, care-absorbing ornaments, but with the real living beauty of sunshine and flowers and pleasant pictures in addition to the usual furnishing. Fewer children would come into the world warped mentally and deformed physically, and with all sorts of unnatural longings and tendencies, were their mothers, before their birth, surrounded by cheery, pleasant objects which tend to suggest pure thoughts and desires. Children reared amid refined surroundings instinctively shun opposite conditions, and ever after retain a love for whatever is beautiful that no circumstances can entirely crush out.

Pictures and flowers and treasures of art are invaluable aids in cultivating in human souls a desire for a higher and better life. There is no mind, however rude and ignorant, but what has some desire for the beautiful, and whatever cultivates this faculty of the soul, by just so much elevates that soul into a higher and purer atmosphere, and makes its former conditions repulsive and undesirable.

Therefore, friends, cultivate flowers; gather the beautiful in art and nature around you, and think nothing wasted that is expended in that direction. It will expand and purify your own lives, and through you the lives of others. It will have a direct and beneficial influence on all who come within its atmosphere, and they will go away feeling better and happier, though they may not be conscious of the cause. If you can do nothing else toward redeeming the race, you can, at least, make some little corner so bright and beautiful that nothing wrong can have birth or exist there; and all that is good

and pure and aspiring, in your own natures and others who are connected with you, will instinctively respond to the sweet influence, and will return to you in

full measure as much as they have received, and you will have the sweet satisfaction of having done what you could.

RITA BELL.

MAD FASHION.

CUSTOM is said to be the world's great idol, and with much truth, for he who sets himself in hostility to custom, soon discovers to his cost how powerful is its hold upon society. The fiercest conflicts waged by the champions of

or disarranging the hair called "bang" is universal among young and old of our female population. If there ever were a fashion more absurd and idiotic in the catalogue of woman coiffures from the days of Sardanapalus to the present hour, we have not seen or heard of it.



progress have been with the partisans of custom, it being of little avail that the errors, inconsistencies, and absurdities of old practices were shown, and the necessity of true and appropriate methods demonstrated.

Fashion can scarcely be regarded as custom, but is somehow subsidiary to it. There is nothing more changeable, fickle, and delusive than the ways of fashion, yet it is one of the canons of custom recognized by that upper stratum of humankind known as "good society"—"to follow fashion."

Hence it is that the mode of arranging

It is probable that the bang was designed originally to cover a weak and puny forehead, and possibly the first wearer possessed a luxuriant growth of hair of a crisp and frizzly character, so that when combed over the forehead it imparted an apparent fullness to the intellectual lobes. But that motive has long been ignored, if it ever had an existence, as the shape and class of forehead and the type of hair are not in the least regarded by the votaries of the bang. We doubt not that curly hair is preferred as more suitable, but no matter how limp, straight, moist, thick, or thin, it must be worked down as

near to the eyebrows as possible. We have seen aged women with patches of false semi-gray locks straggling over forehead and eyes in a most promiscuous way, and seemingly from their conduct lending confusion to vision, and disturbing their mental equilibrium.

Ladies of uncertain youth whose scalps in front are but thinly endowed with "the glory of women" wear bangs which remind us of a terraced lawn which has suffered in a summer's drouth: here and there a blade of green, bringing out in sharp contrast the dried and withered turf.

A Philadelphia daily paper says that "the girl who bangs her hair often makes

the wife who bangs her husband's." We shouldn't wonder if the Philadelphia joker is about right.

Cropped hair is quite proper for children—it prevents tangles and that frow-siness usual to long-haired children; but even in the case of children a patch of hair three inches long cut straight across and pasted down upon the forehead is a disfigurement.

Look upon our portraits—one of a society "belle," with a coiffure of the latest design, and the other of a modest, bright, unconventional girl. Does it take long, oh reader, to decide for which of the two you will vote?

D.

WHAT DID IT?

A PHRENOLOGICAL lecturer came to our town! Nothing wonderful or startling in that very common fact, do you say? Certainly not; but this was more than twenty years ago, and at a time when most of our village sages sniffed contemptuously at the idea of their worthy craniums being manipulated by such a class of "adventurers" and "humbugs" as they chose to style the professors of Phrenology. Our town was but a small New England village, and that fact must render emphasis to the announcement beginning this article. Lowville boasted then scarcely three hundred inhabitants; consequently, as a rule, traveling shows turned a cold shoulder upon it, public speakers ignored that small corner of creation, and it was left in primitive peace and quiet. Peace, did I say? Not exactly. There were two churches at the "four corners," whose pastors and members were going to heaven by such different roads that they could not clasp hands on their journey; there were also the inevitable rural sewing-circles, and the usual resort of the intelligent lords of creation, where they daily aired their wisdom on the little low "stoop" of the village museum of dry-goods and groceries.

Now this propounder of strange doc-

trines, this phrenological lecturer, was a lady; or, at least, the bills advertising her advent gave her name as Miss Lela Ripley. All Lowville was horrified. A woman! Oh, shades of St. Paul! A woman lecturing! What total depravity!

"A woman's spear is her hum," enunciated the village oracle, Jack Bean: "they shouldn't take a man's position in the world; they air the weaker vessel. Shakespeare says, 'I'd like to ketch my woman talking in public,'" and he looked the personification of outraged mankind at the mere idea; but his face softened as he remembered the dear womanly soul at home—his sweet home goddess "Mariar," engaged at that very moment in removing the fall crop of potatoes to the bin in the cellar.

The lecturer came; the town hall was filled to overflowing with the curious denizens of Lowville; nothing less than a circus could have brought another man, woman, or child. The lady was young, good-looking, intelligent, and magnetic; thoroughly in love with her subject, and an eminent expounder of it. She demonstrated Phrenology by the arguments and researches of great men, and proved her own knowledge by her truthful character delineations, based upon the heads

offered up to her—rather sheepishly, we must say—by some of the masculine doubters in the assembly. At the close of the meeting it was voted to invite the lady to remain for a few days and give a course of lectures. The invitation was accepted, and, it is needless to say, that the subject of Phrenology, and its true sister Physiognomy, made a great impression on the minds of the entire thinking community.

What was the result? is the question I wish to answer. A lyceum was gradually formed as the result of the various debates held upon the subject, then a literary society and a small reading club, each member contributing to a small

fund, intended to be invested in the purchase of the JOURNAL and other works treating on the science of Phrenology. One would hardly believe it possible, after five years' absence, to find so great a change in the culture and improvement of the place as our little town evinced, and to-day it has sent out more cultured men and women, I believe, than any other town of its size in New England. Its academy, its public schools, and its library of several thousand volumes, its reading-room and lecture fund, I truly and earnestly attribute to that much-berated anomaly of American civilization—a female lecturer.

A. L. LEWIS.

ANTI-MALTHUS—No. 2.

MILLENNIAL BULLETINS.

"The Vision is for many days."

IN the PHRENOLOGICAL JOURNAL for last August there was an article entitled, "Anti-Malthus: Colonize the Whole Earth with Good and Wise People; and thus Fulfill its Normal Destiny." The points maintained were these:

1. There are thirty-three billion acres of dry land upon our globe, and a billion and a half of people. Filled with people at the Belgic rate it would contain nearly thirty billions; at the Saxon rate, twenty-two billions; at the Japanese rate, twelve billions; at the Chinese rate, six and a half billions.

2. It was shown that Malthus was unreasonable and inconsistent in maintaining that there is any present danger of over-population of the earth.

3. It was averred that *wise and good human creatures are Nature's great disinfectant*; and that the earth will not be thoroughly healthy, and therefore habitable, until it is completely filled with such people, who will drain its swamps, and by the highest culture prevent all malaria.

4. After showing how the earth would be prepared for such an immense popu-

lation, through the growth of science and art, the following statement was made in conclusion: "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 billions of 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."

The object of the present article is to furnish illustrations of the probable nature of the bulletins that will be issued from that central office when the popu-

lation shall have reached twenty billions. These illustrations will be given as quotations from the daily official newspaper organ of the Central Council, and some discussion of each will be added.

"BULLETIN 1.—Population too thick in Van Diemen's Land. Make room for them in Patagonia."

Of course, such an exigency and such an event as are here supposed must seem very remote, when we consider the sparse population of those countries, and the seeming undesirableness of Patagonia as a place of residence. But population is already pushing in there from Buenos Ayres.

"BULLETIN 2.—Too many oranges raised in the world. The Valley of the Amazon must—for five years—raise them only for home consumption."

Here we begin to catch a glimpse of the fact that the long prophesied "Millennium," or blissful condition of the race, could not possibly be realized until the uses of steam, electricity, etc., had been discovered. Granted the fact that the earth could not be healthy until filled with good and wise people; we come next upon the fact that the immense population proposed could not be kept in harmonious working order without the swift means of intercommunication furnished by those agencies. Furthermore, that a much higher plane of morality than any single race has yet displayed would have to be reached by the whole race before any imaginable external machinery would avail to preserve the peace and prosperity of such a vast aggregation of nations, which must all yield implicit obedience to the wise laws and instructions issuing from the sages gathered at the grand center; for otherwise, no matter how well-intentioned most communities might be, a single in-harmonic member in the family of nations would cause a break in the orchestration—dire confusion, famine, pestilence, and starvation through a large section of the earth.

Higher morality—loftier manhood and womanhood—is, therefore, the one re-

maining need, before "the good time coming" can be ushered in. As the writer stood in the gallery of Machinery Hall, in the World's Fair at Philadelphia, he said: "Before me here is the physical basis for the Millennium. But all these fruits of science and art are now monopolized by the few shrewd and forceful. It remains, therefore, for the masses to be so morally and intellectually elevated that they will be strong and good and wise enough to enter upon their rightful inheritance in the elements of production and the means of distribution, including those results of human genius. The farmers in India, Ireland, Persia, and the "seven years of (practical) famine in a land of plenty" in this country—1873-80—show how useless it would be to fill the earth with people until a general high morality makes decent self-government and national government possible.

But this necessary dissertation leaves no room to discuss the orange crop, and this subject must be passed with a bare allusion to the fact that either the Orinoco or Amazon basin could feed the present population of the earth.

"BULLETIN 3.—A bad case of coast fever at the mouth of the Congo River, Africa. The authorities must account for this oversight."

[The mouth of the Congo will then be as healthy as our White Mountains are now.]

This, again, seems extravagant to the superficial observer, as it is well known that a white person can now scarcely live at all in that malaria-soaked region. But what is malaria? It is simply a noxious gas liberated from abnormally rotting animal or vegetable substances—when no longer serviceable in their organic shapes. Covering these substances lightly with dry earth quickly and wonderfully dissolves them into their original elements, and makes useful fructifying manure of them, without letting any atom escape to poison living organisms. Think you that there will be malarious fever in any part of beautiful, fertile

Africa when twenty billions of the wise and good inhabit the earth? No, indeed! Why, even now, in densely-peopled portions of China, the well-instructed peasant carries a basket to gather from the highway anything of a manurial nature he may observe in passing.

"BULLETIN 4.—The people of France must elevate their spiritual and æsthetic tone so as to bring them to a lower breeding ratio; or prepare to begin, four years from now, to send annually to Kamschatka their surplus population, to the amount of a million a year. Their normal limit, at present, is two hundred millions, which is now considerably exceeded."

In just such a manner would population need to be regulated and transferred: and the absolute necessity of a central guidance becomes more apparent as we proceed. France, for various well-known reasons, is now stationary as to population. Under improved conditions the country would naturally fill up; and that mercurial race, so hard to control, might then need the prospect of a large forced emigration from "La Belle France" to the less genial region mentioned, to induce them to curtail their increase. But, of course, in the universally bettered conditions of those times, life in Kamschatka would be more enjoyable than it now is in the most favored regions.

"BULLETIN 5.—Too many foreign airships and air-palaces gather in summer over the lake regions of Italy, Scotland, and Ireland; over the Yellowstone and other American parks and resorts; around the higher peaks of the Andes in South America, the Himalayas in Asia, and the Mountains of the Moon in Africa. They obscure the view and are otherwise a nuisance."

Of course, we all know that the occurrence of such events is only a question of time. The first steam-lifting balloon was a sure prophecy of the swift-moving, heavy-freighted air-palace. The clustering of such vehicles about the most attractive places in summer is a natural event.

"BULLETIN 6.—The State of Virginia, U. S., will be under censure for sparse population and inferior cultivation of the region once known as 'The Dismal Swamp,' if another case of chills and fever occurs there."

O, ye shiverers! beside all malaria-breeding places, does it seem impossible for you to realize the possibility of such immunity from this poison fiend—this evil "Prince of the Power of the Air?" Behold how many old-settled regions, once redolent of miasma, are now even under imperfect care and cultivation, apparently quite free from it. The English literature of Shakespeare's time abounds with allusions to the ague-smitten people of districts of Britain now quite exempt from such evils. But what a new departure it would be to have the officials of States and counties instructed by the higher authorities to bring more population into them in order to increase their healthfulness! This would present a refreshing contrast to the methods adopted by soil monopolists in Scotland and Ireland, who drive the population from whole counties, to turn the land into sheep and cattle ranges and game preserves. How utterly depressing to the people driven out is the idea that they are "cumberers of the ground." How encouraging, on the other hand, to the people invited, would be a call for population, when those invited were assured that they could not only prosper in the new home, but also promote the prosperity of their new neighbors—and even the health of those neighbors.

How encouraging, by the way, is this call for a twenty-fold peopling of the earth, to the wretched multitudes of the city tenement-houses; who have, indeed, reason to think that *they* are cumberers of the ground. But, alas! how few are "good and wise!"—or have a chance to be!

"BULLETIN 7.—The Khan of Tartary is notified that if we can't prevent portions of reclaimed desert from being again denuded of trees and other vegetation, and relaxing into barrenness, steps will be taken to put a better man in his place."

[It will be observed that the perfect "Millennium" has not yet arrived.]

In the first article considerable space was devoted to the methods by which wastes and wildernesses and deserts would be reclaimed and made fertile. That process is in progress in portions of our own country. The so-called desert lands, this side of the Rocky Mountains, are being rapidly reclaimed, and the rain belt is widening as the soil is broken up and tree-planting progresses. Unfortunately thousands are ruined "in mind, body, and estate," who, trusting to the lying reports of land and railroad agents, rely too soon upon these recuperative agencies. But we can not yet begin to see the limits of the improvements that will accrue in this regard from agricultural chemistry, irrigation, artesian wells, etc.

As to chemistry, for instance, some one has discovered, lately, that vast spaces on Long Island need only the addition of a certain cheap chemical element to make them yield bountiful harvests.

"BULLETIN 8.—A case of miscarriage in the Island of Sumatra is another warning to women not to spend all night dancing during their last month. Twenty billions of people is little enough to keep the earth healthy and happy. The nice balances of population can not be maintained if such mishaps become frequent again."

That seems extravagant, even as a fancy, concerning the good time coming. But who shall say what is impossible in such directions? We know that there are Indian races existing, among whom miscarriages are of very rare occurrence, and whose women are occupied only for a few hours in parturition. The time prophesied will surely come, when "a man shall be more precious than fine gold"—yea, even an infant. It appears strange, again, that this preciousness of humanity, this dignity of human nature, should occur when the earth is full of people, rather than when population is scant. But this seems ordained, and careful study of all the facts shows that it is natural. Yet how stupendous, how

overwhelmingly glorious the idea, that instead of nations slaughtering each other with all the enginery of war that diabolical ingenuity can invent; instead of rulers of such "civilized" nations as England tacitly encouraging famine and starvation in its dependent Indias and Irelands, as "a means of bringing population down to the proper number;" instead of infanticide and foeticide being encouraged not only in heathen India and China, but also in Christian Europe and America; instead of the strong everywhere ruthlessly destroying and shortening the lives of the weak by forcing them to overwork and hurtful work: a time should come when human creatures would be so precious that a foeticide occurring in an island of the Asiatic Seas would be bulletined throughout the twenty billions of the earth's inhabitants as a rare and shocking event!

"BULLETIN 9.—A stranger was found yesterday wandering near Behring's Straits, American side, after ten in the morning, without his breakfast—no one having offered him any. He had missed the morning air-ferry-ship, and had been overlooked. Such occurrences take the bloom from our boasted New Civilization."

That certainly opens a vista of felicity in the high-noon of our glorious planet, that is delightful to contemplate. There is nothing impossible about this. Given a world full of wise and good people, producing abundant food for all—guarding carefully against accidents to any—and the necessary conditions are obtained. Even now abundance of nourishment for all living people always exists on the earth. If "man to man would brother be," it would be properly distributed. Listen to this description of the waste of natural products in South America, which contains vast unoccupied acres of the most fertile lands in the world.

Col. George Earl Church, of London, in a report to the Governments of Brazil and Bolivia, says:

"Only the ocean fringe of South America had been, to a limited extent, developed by modern methods of transit;

the Pacific coast represented simply the sharp slope of an uninterrupted mountain wall from Panama to Patagonia, and neither man nor beast could travel across the snow-swept barrier, abreast of the head-waters of the Amazon in Peru and Bolivia, without scaling the passes at an elevation in no place lower, and in most of the passes as high, as the loftiest peak of the Alps; Peru, with a Babel-like ambition, was then working heavenward with its gigantic railway system, ignoring the fact that its richest and most extensive lands are on the Atlantic slope. Alone of all the South American States, the Argentine Republic appeared to appreciate the problem of opening the interior, and, with the force of its credit and energy, pushed its railways toward the heart of the continent. . . . I found millions of sheep, llamas, and alpacas, browsing upon the mountain sides, and not a cargo of wool was exported; vast herds of cattle roamed the plains, and yet an ox-hide was worth scarcely more than a pound of leather in the European market; hundreds of tons of the richest coffee in the world were rotting on the bushes, and only about ten tons per annum were sent abroad as a rare delicacy; abundant crops of sugar in the river districts were considered a misfortune by the planter, because there was no market; the valleys of Cochabamba were rich in cereal wealth, unsalable when the crop was too great for home consumption; not a valley or mountain-side but gave agricultural, medicinal, and other products, such as commanded ready sale in any foreign market; sixty-five kinds of rare and beautiful cabinet woods stood untouched by man in the great virgin forests of the north and east. The mountains were weighed down with silver, copper, tin, and other metals, and the people gazing upon a wealth sufficient to pay the national debts of the world, and yet unavailable for lack of means of communication."

"BULLETIN 10.—The Central Office is happy to announce that the Caucasian is now the only race on the earth. The

last specimen of an inferior breed—a mixture of Malay, Creole, and Esquimaux—died last week in New Zealand."

It is "all very fine"—humane, brotherly to extol the other races; but the fact remains that the Caucasian is by far the highest. It seems scarcely possible that the perfect life hoped for can be realized on this globe until the other races have gradually passed away, as the North American Indian is now doing. We must be just and generous to these races, and give them every chance of improvement while they remain; but if it is their fate to pass away we can not prevent it. It seems apparent, for instance, from the history of South America, that their intermingling by marriage with us only produces an inferior mongrel, and hinders the advent of the perfect human being. They must "go."

"BULLETIN 11.—The North Pole Summer Sanitariums and Ice Cures being inconveniently crowded of late years, large establishments of the sort are rapidly springing up at the South Pole, on the Asiatic side, with daily air-ship lines to all principal points south of the Equator."

There is nothing extraordinary about this, when already we find the wealthy yachtsmen of England taking their summer trips around the North Cape of Sweden, the most northerly point of Western Europe.

"BULLETIN 12.—The wool crop is getting short. Sheep-raising is not pushed properly on some of the higher slopes of the Andes, Rocky Mountains, Himalayas, and Balkans."

Thus will the watchful eyes of the Central Sages continually take in the situation on every rood of *terra firma*; every rood will be to them a "holy rood"—to be guarded with religious care. The resources of our planet—its capacities for making twenty or thirty billion people comfortable and happy—are immeasurable, when once wisdom and goodness are permanently assured for the whole race. The Infinite One now, when at length it seems safe to do so, has opened the eyes of our keenest men to secrets

of art and nature, the possession of which gives them powers such as our forefathers would have considered "Divine," or miraculous. These powers will not long be monopolized by Rothschilds, Goulds, Vanderbilts, and Bonanza kings.

"BULLETIN 13.—A large part of the people of New Orleans, U. S., turned out on Wednesday to bid farewell to a woman who had been banished to Nova Zembla, for wasting a bucket of slops, by emptying it from a steamer into the Mississippi, instead of consigning it to the proper manurial receptacle."

Well, it must be acknowledged that this is rather straining a point, as to the mass of the population attending this farewell. But the idea about such a waste being considered reprehensible in that "Beautiful Hereafter" is "solid." A storm of indignation will soon arise against the system of agriculture that has sent the virgin soil of so many of our States to Europe, in the shape of tobacco, cotton, wheat, etc., and so much more of our fertility to the sea through the sewers of our cities.

"BULLETIN 14.—The Central Council takes pleasure in announcing that apparently as a result of the solar convulsions of recent years, and the consequent violent, but harmless perturbations of our planet, several new, warm streams have been for some time pouring from the Equator to both poles. Those of the Pacific converging at Behring's Straits pour through into the Arctic region a current so hot that it is hardly endurable as a hot bath. The American Gulf Stream and the Japanese Curo Siwo are much hotter than before. As a consequence, the climate is so changing in those northern regions that upper British America, Siberia, and some of the Antarctic lands are becoming quite pleasant and fruitful regions. If this process continues a few years, we may be able to announce the possibility of raising the earth's population to twenty-five billions. Other causes, as yet unexplainable, have produced an increase of direct sun-heat in those regions. P. S. Another fact noticeable is a diminished heat in the Torrid Zone."

"BULLETIN 15.—The electric light towers of the world generally will have to be more carefully treated. Complaints come in from various quarters that travelers along very prominent highways are

frequently unable to read their newspapers at night."

"BULLETIN 16.—The people of a village on the banks of the Niger River, Africa, were horror-struck lately, at observing an odor of decaying, malaria-breeding vegetation, issuing from the garden of a citizen. Investigation showed a rank undergrowth of rotting weeds. The man excused himself on the plea that being a poet he had been for a fortnight in a fine frenzy of imaginative creation, and had neglected his weeds. Excuse not received. He was sent to the Antarctic Fisheries, where high cultivation of the soil is not called for, and there is no chance to waste the food-producing gases."

"BULLETIN 17.—A melancholy circumstance is reported from the Bernese Alps. A lovely maiden of eighteen years told her first, and therefore true, love three years ago that she believed in long engagements, and did not wish to marry him for at least five years. Not willing, of course, to think of marrying any but his 'own and only one,' fearing that his admiration for the other sex might overcome his resolution in that unprecedented long interval, he built himself a stone hut high up in the Alps, and subsists as a goat-herdsman, and occasionally visits his whimsical betrothed. Girls should be careful how they trifle with these sacred matters."

The above, soberly considered, must be counted as a legitimate illustration of the fact that on a paradisaical planet, there will be an absolute lack of tragedies; and incidents that seem laughably trivial to us, as matters of national consideration, will be the only variations from the uniform felicity. In that blissful time the first love will be usually the only love. For all young people will be then thoroughly instructed in physiology, phrenology, psychometry, hygiene, etc., so that they will guard their hearts until a true mate appears. Moreover, all then living in associated homes, will have an abundance of young folks to choose from, and will thus avoid the hap-hazard marriages that inevitably result from the isolation of our present modes of life.

"BULLETIN 18.—It has chanced, 'in the whirligig of time,' that Boston, once so proud of its superiority, is now the most barbarous place on the earth. A

middle-aged citizen so far forgot himself in the heat of argument yesterday, as to call another citizen 'a liar.'"

"BULLETIN 19.—In the present active state of human sympathy, people need to be careful about making demands upon it. Several air-ships arriving lately at Tobolsk from the North, containing people who said that they had tasted no strawberries and cream this year—the people of that place immediately stripped their vines of the delicious berries to present them to the strangers, and so had none for themselves for a week afterward."

"BULLETIN 20.—On and after the 10th prox. the Society of Sky Painters will present a series of paintings by the new process upon the zenith on each clear day; passing around the earth from east to west. They will begin at Siam; and knowing by telegraph how far each picture is seen, will make them continuous

by beginning the next at the farthest point at which the picture of the previous ray was plainly visible. The panorama will illustrate the battles of Armageddon—the last great battles between right and wrong, truth and error, reason and madness, vice and virtue, selfishness and benevolence, religion and atheism, order and disorder. These were fought upon the soil of North America, and their representation will form very striking pictures."

Now all this will seem very fanciful to some, very absurd to others. But every one of these "bulletins" is somewhat founded upon existing facts.

Even if all the fancywork be set aside, the truth remains, that the doctrine concerning the filling of the earth with good and wise people is incontrovertible.

SAMUEL LEAVITT.

TOBACCO.

I GAZE upon thy blackened form,
Of many ills the type;
And think I see three multifiform
In snuff, cigar, and pipe.
Thou comest not in winning shape,
The apple, orange, or the grape,
Or bunch of cherries ripe;
From Nicotine in winding press,
Thou comest in thy present dress.

Thou savorest not of things divine,
In odor or in taste,
But what is most assuredly thine,
Deception, filth, and waste;
Deceitful as the serpent's wile,
Filthy as matter can make vile,
Or manliness defaced;
Wasteful of money, health, and food;
Worker of everything but good.

Thy *smoke* is not the *incense-cloud*,
Puffed from the brown cigar;
Or curling o'er the smoking crowd
In drinking-room or car;
Thy *marks* are not the signs of grace,
That face and walls and floors deface,
And foul the air afar.
The garments of thy devotees
Scent the odorous *Cassia-trees*.

I think me of a perfect man,
In God's own image bright;
His thoughts, his deeds, since life began,
Refulgent in God's light.
Not Aaron's oil runs down his beard;
'Tis with thy yellow juice besmeared,
Most patent to the sight;
His mouth emits thy fetid smoke—
Who dares to hazard such a joke?

Thou art a curse unto the soil,
'Neath Nature's strong protest;
From whom the senses all recoil,
As from a hated guest;
The vilest creeping things will turn,
Thy presence and effluvia spurn—
A vegetable pest.
What dost thou in a world so pure,
But prove what mortals can endure?

Of slavery born, thou makest slaves;
Not of some monarch grand,
O'er whose throne a banner waves,
Obeyed in every land;
But slaves of the Narcotic king,
Abhorred by every living thing
That meet thy hated brand.
Feeding on smoke, they chew thy cud—
Much viler than the serpent's food.

We would not thrust thy brownish *snuff*
Into the sentient nose;
That facial member would rebuff
The insult with its frow;
The taste, belligerent, forbids
To put into the mouth thy *quids*
As nausea-making foes;
Both nose and mouth forbid their use
As chimney-pipes to thy abuse!

"Put ye away all filthiness,"
Proclaims the Holy Word;
And can its ministers do less,
The Spirit in them stirred?
Shall spittoon, quid, and foul cigar,
With tainted lips and breath, debar
Belief where Christ is heard?
Tobacco fumes but ill agree
With Gospel faith and purity.

"Shun drugs and drinks that work abuse,"
So reads the Buddha rule;
Rum, opium, and tobacco-juice
The Gospel ridicule;
Go to the heathen, smoking saint,
And learn to free thee from the taint
Untaught in Jesus' school;
And do not to the world proclaim
The sanction of the Pagan's bane!

REV. JNO. WAUGH.



HEALTH A CONDITION OF COMMUNITY PROSPERITY.

[From a letter addressed by Prof. W. H. Brewer to the Common Council of New Haven, Conn., we extract the following pertinent statements, the length of the communication precluding its entire publication here. Prof. Brewer is President of the Health Board of that city.]

EVERY student of history and of political economy notices the wonderfully rapid accumulation of wealth and capital in modern times, compared with what it has been in previous ages. The material wealth and working capital of the civilized world has more than trebled within less than a lifetime. The accumulation of wealth and property (and it is this which represents the aggregate savings from labor) during the last few years more than equals all that had been saved in all the thousands of years that had gone before, and that, too, while there has been a more general enjoyment of the comforts of life, and a much greater indulgence in its luxuries.

The nature and sources of this rapid growth has been the subject of much discussion by statesmen and political economists. The causes usually assigned are the invention of modern machinery, the use of steam as a motor, the growth of modern means of transportation by sea and land, the application of the natural sciences to the arts and industries, the spread of popular education, the diminution of wars and the production of the precious metals.

There is no question but that each and all of these have had their influence, but there is one still greater cause which is too often overlooked, simply because it is not so conspicuous. The greatest of all causes is to be found in the better average health of civilized countries, and the longer average term of life which is now secured to workingmen.

It was not merely war, nor because they did not have steam, nor did not know about greenbacks, that kept the masses in poverty all through the middle ages—it was disease, and the death that came from disease, that kept the nations poor.

With all our material resources, with all our boasted inventions, our railroads and our steam-power, we would be as poor to-day as they were then, were disease so common, pestilence so terrible and wasting, and the average years of a man's working life so shortened, as they then were.

The history of the middle ages is a sad succession of plagues, of cities devastated, of States impoverished, of laborers swept away in millions, by successive waves of pestilence that followed each other as often as cities grew populous. Between the common sickness which was ever present, and the pestilences which swept off their millions at a swoop, the average period available for actual labor in man was perhaps not more than half what it now is. Meanwhile, it took just

as long to rear children to a working age as now, and sickness was just as expensive; so, between the diminished power of production, the waste by sickness, the panics and checks to commerce caused by plagues which were raging somewhere all the time, it is no wonder that wealthy people were comparatively few and the masses sunk in abject poverty.

If we are tempted to think that we are saved from this by steam, or machinery, or increased production of the precious metals, let us look at any pestilence-stricken city of modern times. A single pestilence of but a few months came near bankrupting Savannah, and laid a check on her progress and a burden on her resources which it will take many long years to overcome. Or, worse still, Memphis with its two pestilences. And such may be the loss to any American city if it neglects sanitary laws.

Our modern civilization is one of intense competition. Each producing community is now in a struggle with all the rest of the world, as it never was before. If it have any special advantage, it may prosper; if it have any special disadvantage, it either lags behind in the swift race, or by standing still it relatively declines, or else it goes under in the hard struggle of productive or commercial competition. And what heavier burden to bear than sickness?

And yet this fact is liable to be overlooked or forgotten. The healthy man hopes that sickness will never come and may be careless of his health, and the healthy community rarely awakens to danger until epidemic sickness sets in, and then the loss is actually begun.

It is the part of sanitary science to point out the dangers and suggest means of prevention, and when epidemics actually set in, to suggest remedies; it is the part of sanitary legislation to provide means to apply these remedies; it is the function of Health Boards to administer them. But from the nature of the case, the better they do their work the less obvious are their labors. The officer who heroically stands at his post during the

time of pestilence, labors to stay its dread work, helps the suffering and comforts the dying, is a hero, and the heroism is of a kind that can be seen, no praise is too high; but the other officer, who by his labors *prevents* the pestilence and keeps it so far off that the danger is scarcely seen, receives no such praise—too often, in its stead, criticism and opposition and indifference.

It is because of the nature of sanitary work, that its value in increasing the prosperity of a city is so often overlooked. In the ordinary pursuits of business the clang of machinery, the brilliancy of the applications of science to the arts, the bustle of business, the romantic ways in which the precious metals have been discovered and won, are more conspicuous in the eyes of the public than the quiet, persistent, unromantic, but heroic fight with unseen, but unwholesome influences which lurk in the air of our towns. These malicious influences, mostly growing out of our modes of life, are ever present in all our cities, ever growing unless checked, always producing disease, and from time to time, specially inviting pestilence, as persistent as sin, as tireless as nature, and as pitiless as death.

The rapid growth of town and city populations, as compared with the country, during the last forty or fifty years, has been made possible only by the power which modern sanitary science gives us to prevent, to check, and to combat epidemics. As matters were before, a pestilence of but a few weeks or months would put back the growth of a city for years. This city has had but one visitation of yellow fever; it lasted scarcely two months, and from all I can ascertain by a careful investigation of the matter, it took from eight to ten years to recover from that shock. Indeed, can we say that it *ever* recovered? What New Haven might have been, had it not been for that check, just at a time of rapidly growing commercial importance, we can never know, but that citizens left with their capital to go into business elsewhere and never came back, and that trade left the place and never

returned, is certain. What "*might have been*," had this pestilence not fallen on us eighty-six years ago, we can never know; what *may be* if another pestilence comes, we know well. Too many cities have had such a bitter experience, even in modern times, for us to be ignorant of the effects.

We insure our manufactories from loss by fire to ensure their being rebuilt if once burned—even with this, the temporary suspension of the work may drive trade elsewhere. Hence, premiums are cheerfully paid to guard against the possible contingency, and before the conflagration comes, we cheerfully purchase fire engines and apparatus, and organize skilled men to use them when the emergency comes. Here it is recognized that all this, though expensive in the beginning, is cheap in the end, and yet how reluctantly any such means are taken to guard against a worse destroyer of our wealth and prosperity! The arguments used even by official bodies against adequate support of public health administration in many, if not most, cities, are curiosities of inconsistency, and will be cited as such by the next generation.

It must not be forgotten that Health Boards are now more strongly demanded and called for because of their pecuniary importance than because of their function in allaying human suffering or saving human life. So long as merely men died and health was lost, and sorrow fell on thousands of homes, Memphis went on as of old, dug her cess-pools deeper and more of them, and did without sewers, but when the loud voice of Trade cried out, "We can not afford to allow Memphis to longer stand as a menace to the commercial prosperity of the great Mississippi Valley," then, and not till then, was a system of sewerage begun.

A high death-rate means lessened vigor, lessened powers of production, a check on prosperity, a burden on industry. A low death-rate, in modern cities, can only be secured by public sanitation, and by an intelligent and efficient co-operation of the public with an active Health Board. A single epidemic, but one-fourth as bad

as that in Memphis last year, would cost this city more and leave us with higher taxes than the most expensive system of sewers and of garbage collection than was ever dreamed of here. *And there is nothing to prevent it, except public sanitation.* We had that very disease here once, and the city did not recover its prosperity for ten years, and it lost some phases of prestige which it never regained. An epidemic of small-pox a few years since lost to the city of Philadelphia, in ways which could be estimated, above twenty millions of dollars. This city a little later was seriously threatened with a similar epidemic, which was effectually stayed, and the health officials were perhaps more severely criticised for their work than for any other one thing they have ever done! The results, however, have amply demonstrated the wisdom of their action.

The fact must be kept before the public that as production and commerce and trade are now carried on, few cities can afford to allow a pestilence to invade them. *And if it comes to a city with the natural advantages of soil and climate we have, it is due either to official ignorance or public neglect.* There is perhaps not a single kind of pestilence which has afflicted any civilized city of temperate climates, during the dark ages or since, over which we have not now control, if the community act up to the light and knowledge we have; and, on the other hand, as business is now carried on, no city can now be so afflicted as many then were, and not be bankrupted and financially ruined.

Moreover, a pestilence is only an intensified manifestation of disease; most of its disastrous effects may be produced by the less intense form of prolonged but general ill-health, and it is perfectly safe to say that no northern city can be really prosperous and really sickly at the same time. The health of people (since a community is but an aggregation of individuals whose personal success is dependent upon their vigor in body and mind) is the real foundation upon which the prosperity of the city and the wealth of the community depends.

DISEASES FROM INTEMPERANCE.

WE know of no limit to the diseases produced or provoked by the use of alcoholic liquors. It makes bad blood, and bad blood is a fertilizer for all kinds of disease. The liver of the drinker of alcoholic drinks is *always* diseased. Sometimes it is inflamed and enlarged, as we see in beer-drinkers, though it is by no means confined to them. Dr. Francis of Edinburgh (Scotland), says: "I once asked Mr. Fife, the anatomist at Edinburgh, who was many years dissector at the University, 'how great was the largest-sized liver he had ever encountered in his preparation of dead bodies for collegiate purposes.' He answered: 'Fifty pounds, and this occurred in the person of an inebriate who had long lived in the East Indies.'" The ordinary weight of a healthy liver is from four to nine pounds. Moreover, this man's liver did not do its proper normal work, for he died of deficiency of bile. Dr. Francis says that the "livers of those who abuse their constitutions with alcohol are usually very small and hard, and of a pale straw color, and that this condition follows that of the enlarged liver. The former is filled with hard knots or tubercles, and making what the English gin-drinkers call the 'hob-nailed liver.'"

Of course the liver can not do its duty in cleansing the blood in either case, and hence the alcohol-drinker is a ready victim to any disease that is abroad. In cholera seasons, the drinkers become the first victims. Dr. A. M. Adams, of Glasgow, says: "I have found the use of alcoholic drinks to be the most powerful predisposing cause of cholera with which I am acquainted; were I one of the authorities, and had the power, I would placard every spirit-shop in town with large bills containing the words, 'CHOLERA SOLD HERE.'" One of the reasons for this good doctor's opinion was, that while his cholera patients who were "temperate" died in the proportion of nineteen per cent., those who were intemperate died in the enormous proportion of ninety-one per cent.

Mr. E. C. Delavan, of Albany, N. Y., a business man and a close observer of facts, says that in 1832, when the cholera broke out in Albany, he was engaged with others in erecting a large block of buildings, and had about 100 men employed thereon. They were just about to leave, when he persuaded them to remain and abstain from strong drink. They did so, and not one of them died, nor was the work intermitted one day. In another part of the city he had about fifty men engaged in digging clay. He bound them by the same bargain, and they too escaped. But another gang of thirty, in the same clay-bank, were furnished with strong drink, and ten of them died with whisky-cholera.

One of Mr. Delavan's partners was so impressed with these facts, that he set inquiries on foot which gathered up the following statistics for Albany:

Whole number of deaths (of persons over 16)...	336
Intemperate.....	140
Free and moderate drinkers.....	136
Strictly temperate.....	5
Members of Temperance Societies.....	2
Unknown.....	3
	<hr/>
	336 336

Population 20,000. Members of Temperance Societies 5,000.

In New Castle (Great Britain), during one cholera season there was in the lower part of the town on Christmas day a terrible drunken scene among both men and women. Some were brawling and fighting; others were staggering drunk, all seeming to have lost shame and caring for nothing. Within two days of that time no less than ninety-eight of these persons were smitten by the pestilence, the most of whom died in a few hours. One of the worst streets was nearly swept of drunkards from one end to the other. What made matters worse was, that strong drink of some kind was usually considered a specific against the disease. We might crowd many pages with similar statements.

It is believed that yellow fever might often come under the same category, that at least the *first* victims are usually

drinkers. We have the testimony of a physician in the *Boston Medical Journal*, that it was so in New Orleans upon one occasion, that 5,000 foreigners, who were mostly drinkers, died before the disease touched a single citizen or sober man. This testimony is from the early days of the Temperance Reformation. Why do we not have such statements now? Now and then we find them, as in the case of sun-stroke in St. Louis in 1879, when it was stated that all the cases of sun-stroke in that sudden heated term were drinking men. Too often such facts are suppressed. Our physicians, if not intentional abettors of the rum-sellers, are yet too often dependent on the deceitful "medicine," and too determined to uphold it to bring out such facts as they might about it. We must get rid of the idea that it is an excellent medicine before we can fight it very heartily.

We will not dwell on such cases as these. People generally have little idea that bad blood has much to do with such diseases. They seem to think that their germs fly in the air, and are as likely to alight upon and make victims of the good and the abstinent as the vile and the tippler. Our principal object here is to find how alcohol poisons the blood, and in how many ways this poisoning shows itself. It is not an uncommon idea that alcoholic drinks produce a few definite diseases, such as gout and *delirium tremens*, not even reckoning intoxication, which is the first and most serious form of alcoholic disease. One physician of some note, gravely told me not long since that alcoholic drinks produced one disease only, and that was alcoholism, and when I said that alcohol caused apoplexy and *delirium tremens*, etc., he replied, "so do other things." The difficulty, it will be seen at once, is that alcohol is considered a specific cause of some one or more diseases, and producing them always and only. This co-exists with the idea that it will cure some diseases and prevent others—consumption, for example.

Against this fallacy, we may bring the

testimony of Dr. B. W. Richardson, one of the best possible authorities, who tells us that there is an "alcoholic consumption," with well-marked peculiarities coming to those who have no hereditary phthisical predisposition. "They are often men of excellent build of body and of active mind and habits. Neither are they in the ordinary sense drunkards; they may never have been intoxicated in the whole course of their lives; but they partake freely of any and every alcoholic drink that comes in their way, and they bear alcohol with a tolerance that is remarkable to observers. More than half of those whom I have seen stricken down with alcoholic phthisis, have said that they never before had a day's illness; but, questioned closely, it was found that none of them had actually been quite well. As a rule, men of this class are thoughtless of their own health and prospects. Their faces are the best part of them; some of them have fallen back on beer, and others have quite given up drinking, do not care for it—of course they are the last ones to think that the drink has hurt them; but their case is the most hopeless of all, for there is absolutely no cure whatever for alcoholic consumption."

But Dr. Richardson goes further than this: he says that "drinking people are more liable to take cold than other people." This attacks a superstition wide-spread among the people, for there is no more common medical excuse for taking "a drink of something," than to keep the drinker from taking cold. We have not space here to explain the cause of this delusion (it would occupy an entire article profitably), but we have Dr. Richardson's authority for this, and we need ask no better. After describing the condition of a person who has taken a small quantity of some alcoholic drink, sufficient to excite him without actually causing intoxication, etc., etc., he says: "Should the person in this stage go out into the cold air, he easily takes cold, and in frosty weather readily contracts congestion of the lungs, and that disease

which is known as bronchitis. Nothing is more common in winter-time than the production of disease from this cause. When I say that in our country alone thousands of persons are affected in the manner described, during sudden changes of season from warm to cold, I do not at all overestimate the danger."

Dr. Richardson is not alone in this result of experience and observation. Notwithstanding the popular notion above referred to, that the drinker is safe from consumption, we find older doctors giving very decided testimony in the same direction. Dr. Grindrod says in his excellent work, "Bacchus," written more than forty years ago: "Dr. M'Lean assures me he has attended at least fifty cases of fatal consumption of the lungs brought on by intemperance." Dr. Buchanan says that "malt liquors occasion obstructions and inflammations of the lungs." Dr. Mackintosh, in his "Elements of Pathology," states that among the British soldiery during the war, pneumonia of a very fatal character frequently occurred from this cause, particularly when combined with cold. Sir James Clark observes: "We believe that the abuse of spirituous liquors among the lower classes in this country is productive of tuberculous diseases, to an extent far beyond what is usually imagined."

To appreciate all this fully, we need but to reflect that everybody is more liable to take cold when the blood is in bad condition, and this brings us back to the fact that ever stares us in the face—the blood of the alcohol-drinker is always in bad condition. This is due to the state of the stomach as well as of the liver. Dr. Sewall, who is famous for looking into the stomachs of drunkards, says: "Alcohol is a poison forever at war with man's organism, and in all its forms and degrees of strength, produces irritation of the stomach, which is liable to result in inflammation, ulceration, etc. It may be asserted with confidence, that no one who indulges habitually in alcoholic drinks, whether in the form of wine or

more ardent spirits, possesses a healthy stomach."

Dr. Saunders, in his "Treatise on Diseases of the Liver," asserts that the stomachs of those who have died under the habit of drinking, have, on dissection, generally been found in a flabby and inelastic state, capable of secreting only diseased fluids.

Dr. James Johnson says: "The beer-bibber has little reason to exult over the dram-drinker. If he escapes dropsy of the abdomen he runs the risk of water on the chest, a much worse disease. If he have immunity from disorder of the liver, he becomes predisposed to derangements of the heart; he becomes overloaded with fat and dies apoplectic, etc."

These doctors do not hesitate to show a great number of diseases arising from the drink. They prove just what common-sense everywhere ought to show, that the bad blood caused by alcoholic drinks breaks out in one disease or another as circumstances may decide. That the bad blood is there is shown by the plainest indications.

If these cases could be readily recognized as resulting from the use of alcoholic drinks, it would be an immense gain to health and to temperance, and the real cause would be avoided more and more, as the truth gained the attention of the people. But we are sorry to say that when it comes to a case in hand the doctors, instead of warning people as they ought of their danger, lend a hand to fatal deceit. Hear what Dr. Homer O. Hitchcock says in his Report of the Michigan State Board of Health, for the year 1874: "In almost all cases of death more or less caused by alcohol, there is some disease or accident intervening which is credited with being the real cause. In many other instances in which persons do actually die of delirium tremens or even from the immediate effects of an overdose of alcohol, the physician will trump up some disease of a more respectable sound to give to the family, and this *respectable lie* gets into the vital statistics."

Doubtless Dr. Hitchcock has abundant proof of what he says, for doctors are not over-fond of exposing their own craft.

Drinking and tippling people and some others are prone to think and to say, "Only drunk! he'll soon be over it," and they talk of the effects of the liquor passing off, "He'll soon be all right again," and the way they talk about reformed men, or rather the way in which reformed men talk about themselves, and in which temperance people speak of them in reference to these things, show that there is no adequate popular idea of the permanent effects of alcoholic drinks. The truth is, it is a terrible blood poisoner and organic deranger. Dr. Richardson (whom we delight to quote because he is so well known and so definite in his statements) says he, doubts

if any man who has once passed through the dead-drunk stage can be quite as sound as he was before; and he further says with regard to tippling people generally: "As a cause of disease, it (alcohol) gives origin to great populations of afflicted persons, many of whom suffer even to death without suspecting from what they suffer and unsuspected. Some of these live just short of natural old age; others to ripe middle age; others only to ripe adolescence." Of heredity he says nothing here. Others say more in that line; but that requires a paper by itself, as do also the effects upon the brain and the mental condition. Who can tell where the line for "natural old age" would be drawn if the race were not poisoned, fearfully poisoned by their immense use of alcoholic liquors!

JULIA COLMAN.

THE FUNCTION OF SLEEP.

AN interesting volume on "Sleep and Sleeplessness," published recently by J. M. Granville, contains certain views worthy of consideration, and some useful hints to those who do not sleep well. The author says that sleep is performed by the nervous system, either through a single center or by the several centers connected with various parts or organs of the body, from the supreme cerebral centers which control the immediate apparatus of intentional thought to the ganglia that regulate the work of the viscera. He believes the sympathetic system plays a conspicuous part in the production of the phenomenon, and this is why the due performance of the function is so readily prevented as it is by disorderly action in almost any part of the body, even when there is no sensation of pain or of uneasiness at the seat of the disturbance. People who do not sleep well and regularly are peculiarly liable to functional disorders; and, conversely, those who are subject to the anomalous maladies and symptoms too often set down to fancy, but actually ex-

isting and traceable with care to some special ganglion of the sympathetic system (for example, uneasiness in the "pit of the stomach," or aching pain in the lower lumbar region of the spine) are disturbed or disorderly sleepers. Sleep is a nerve state, whether the part sleeping be the brain or certain parts of the organ, the muscular system or viscera. The modifications which take place in the vessel supplying the system or organ that sleeps are the effects or consequences, instead of the causes of its condition.

The author devotes a chapter to the subject of going to sleep, and the use of narcotics for the purpose of inducing it, observing that "the state they produce is not sleep, but a condition of narcotism that counterfeits sleep," adding, "When a man says, 'I want a quiet night; I can not obtain it by going to sleep, or I am afraid to trust to the chances of natural rest, so I will poison myself a little, just enough to make me unconscious or slightly paralyze my nerve centers, not enough to kill.' If this fact should be

kept clearly before the mind the reckless use of drugs which produce a state that mocks sleep, would be limited." The state of inaction which is brought about by natural sleep is very different from that which is produced by paralysis of any degree.

"Habit greatly helps the performance of the initial act, and the cultivation of a habit of going to sleep in a particular way, at a particular time, will do more to procure regular and healthy sleep than any other artifice. The formation of the habit is, in fact, the creation or development of a special center, or combination, in the nervous system, which will henceforward produce sleep as a natural rhyth-

mical process. If this were more generally recognized, persons who suffer from sleeplessness of the sort which consists in simply being 'unable to go to sleep,' would set themselves resolutely to form such a habit. It is necessary that the training should be explicit, and include attention to details. It is not very important what a person does with the intention of going to sleep, but he should do precisely the same thing, in the same way, at the same time and under as nearly as possible the same conditions, night after night for a considerable period, say three or four weeks at least. The result, as the editor himself knows from experience, will amply reward the effort."

NOTES IN SCIENCE AND AGRICULTURE.

Revival of Sodom and Gomorrah.—It is reported, says a writer in the *Scientific American*, that French capitalists have secured a grant for a railway line from Jaffa to the interior of Palestine, which will open up the Jordan valley and the whole region north of the Suez Canal. In certain contingencies this road might become of great military usefulness, but it appears further that the productive resources of the country are considerable, and what is more surprising, that the Dead Sea itself can be turned to commercial account. Chief of these at present are the stores of natural combustibles for which that region is noted.

Hitherto the main obstacle to the development of steam traffic in the Levant has been the total absence of combustible material. Not only Egypt, but the shores of Syria and the Red Sea, are completely stripped of wood, and the coal imported from the West commands a price ranging from \$10 to \$24 a ton. Now the masses of asphalt continually thrown up by the Dead Sea attest the presence of vast subterranean layers of fossil vegetable matter, and these signs were not long overlooked by the enterprising men attracted to Suez by the opening of the canal and the movement of commerce in that direction. Recently numerous soundings have been made between Jaffa and the Dead Sea, which, so far, have not disclosed any deposits of coal proper, but, on the other hand, have laid bare inexhaustible beds of lignite.

Of itself this store of lignite is likely to prove an inestimable gain to the industries and commerce of the Levant; but we should add that the juxtaposition of asphalt in great quantities furnishes the elements of a mixture of lignite and asphaltum in the form of bricks, which is equal in heating capacity to the richest bituminous coal, while its cost on the ground is only \$2.50 a ton. It is known

that similar bricks, made up of coal dust and bituminous debris from gas works, are much sought after by French railways, since, besides their heating power, they greatly facilitate stowage, owing to their regular shape. Of course, the bitumen of lower Palestine has been known from immemorial times, and was used to impart solidity to the structures of unbaked clay in Assyria and Egypt; but it may be said that the discovery of the subterranean combustible has lifted once for all the curse which has so long rested upon Sodom and Gomorrah, and will transform the wasted shores of the Dead Sea into a focus of industry and a magazine of wealth.

Analysis of Barley, Rice, and MAIZE.—The following comparative analysis of the three grains are by Pillitz:

	BARLEY.	RICE.	MAIZE.
	Air dried at 237° F.	Air dried at 237° F.	Air dried at 237° F.
Moisture.....	13.83	12.51	13.89
Starch.....	62.65	74.88	72.27
Insoluble ash.....	1.07	0.30	0.33
Fatty matters.....	2.66	3.08	5.03
Cellulose.....	7.76	0.76	4.19
Insoluble albu- minoids.....	12.43	8.78	8.63
Dextrine.....	1.70	1.11	0.76
Sugar.....	2.43	traces	1.38
Soluble albu- minoids.....	1.77	0.41	1.87
Soluble ash.....	1.26	0.45	1.15
Extractive matter.....	1.50	0.11	1.43
	100.53	100.18	100.00

Change by Grafting.—C. M. Hovey, of Boston, stated at a meeting of the Massachusetts Horticultural Society, that the pear has been grafted on the quince by the French for two hundred years, without changing the variety. The rose has been grafted on the brier for as long a time, and the old cabbage rose has remained without an atom of change. He said he would like to see if any one could find a Baldwin or a Hubbardston apple that had been changed by grafting. He had known the Bartlett pear sixty years, and all the grafting it has undergone in all that time has wrought no change in it. Sometimes dormant buds shot out near dividing lines, and careless observers claimed changes which had not taken place. The only authentic instances of a new variety by grafting were when a variegated-leaved plant was grafted on a green-leaved one, as in case of *Abutilon Darwinii*.

Another Cave.—New openings in the earth are being found almost yearly. Pennsylvania appears to have its sensation in the hole line.

The Philadelphia *Times* has an account of a prehistoric cavern, recently discovered five miles from the Delaware Water Gap, and three miles west of Stroudsburg. "The cave is elevated about 800 feet above the river level, at what is known as Mosier's Knob. A few days ago Dr. Leidy, of the Academy of Natural Sciences of Philadelphia, and Dr. T. C. Porter, of Lafayette College, Easton, arrived here and made researches in the cave, so far as it has been explored.

"The bottom of the cavern was found to be covered with a thick deposit of clay, on the top of which was a deposit, varying in depth, of a dark substance, and on this is an incrustation of lime which has fallen from the roof of the cave. It is the deposit of rich, dark material that particularly interests the scientists, and to this Dr. Leidy and Dr. Porter gave their attention. They found many indications of the presence in the cave at one time or another of many animals, some of which were doubtless brought there by animals of prey, and others used it for their dens. Among the bones of animals found were the jaw-bones of the raccoon, skunk, weasel, beaver, squirrel, porcupine, woodchuck, fox, wild-cat, elk, deer, and bison; the shells of two or more turtles, the bones of wild turkey, and the vertebræ of snakes in large quantities. Other bones will doubtless reveal the presence of other animals. The most interesting specimens found, however, were the head and teeth of a gigantic beaver (*Castoroides Ohioensis*) and a large peccary (*Dicotyles compressus*), neither of which have ever been found before in Pennsylvania. Besides these were found bones which had been burned and split—evidently the work of the aborigines, who sought the marrow in the bones. Indian relics were also found, among them being polished bone needles and bodkins, sea-shells, and fragments of quartz, which had been used as ornaments."

The Sea-Squirt.—This organism, known to the naturalists as *ascidia pedunculata*, is an example of one of those singular beings which have so much puzzled naturalists in assigning a boundary between the vegetable and animal kingdoms. It is, in fact, a rooted animal. It resembles a plant in having clearly-defined roots, a stalk and branches or peduncles, to the extremities of which are attached stomachs which receive and digest food and eject excrementitious matter. In its first stages the sea-squirt swims freely about in the same manner as sponges, corals, and sea-anemones; but then it is also true of many plants that they freely swim in their young state, but some of them never become rooted or fixed, and swim or



float throughout their entire existence. It is not generally known, but it is nevertheless the fact, that the sea-weed commences life as a minute free swimming speck, propelled by cilia similar to the cilia of the monad. It will be seen from these few examples that the difficulties of determining the lower animals from plants on mechanical principles are so great as to be insurmountable. Equally great difficulties are met in the application of chemical or microscopical tests. Physiology finds itself on the same footing in the attempt to separate plants from animals by consideration of manifestations of nervous, assimilative, or reproductive power—to define the line between the two kingdoms.

Utilizing Milkweed.—A writer in the *Providence Journal* predicts a useful future for the milkweed, which has heretofore been considered only a cumberer of the ground. Its seed yield a finer oil than linseed; its gum can be used instead of India-rubber; and from its floss, a fabric resembling Irish poplin has been made; while the young shoots are used in the spring by some people instead of asparagus, which they resemble in flavor. Now, pertinently adds the writer, if uses can be discovered for the thistle and whiteweed, they may prove friends in disguise.

To Detect Gas in Mines.—An ingenious instrument, termed a "spark-tube," for indicating the presence of inflammable gases in mines, was lately exhibited and explained at the meeting of the Manchester Geological Society, by Dr. Angus Smith. The design of the instrument is taken from the old compression syringe used for igniting tinder, and the instrument consists of a small brass tube with glass let in at the bottom, which is closed up, and a piston and rod fitting closely in the tube. The air to be tested is taken into the tube either from the top or by means of a stop-cock at the bottom, and then the piston rapidly pressed down with the hand, the compression of the air thus effected with the aid of spongy platinum causing the gases to explode inside the tube, the explosion being visible through the glass let in at the bottom. Dr. Smith stated that the presence of gas down to $2\frac{1}{2}^{\circ}$ could be detected by the instrument, and as the explosion within the tube was perfectly harmless, he thought the instrument might afford a useful means for exploring gaseous mines.

Injurious Effects from Vulcanite Plates.—Samuel Sexton, M.D., in an article published in the *American Journal of Medical Sciences*, for January, 1880, states that vulcanite plates produce diseases that are more frequently the source of reflex aural disease than any others worn. They have been in use for over twenty years, and their adoption is very general. The constituents of this are caoutchouc, the sulphur required in the vulcanizing process, and vermilion or the sulphide of mercury, used for the color it imparts. The quantity of the latter ingredient is believed to be equal in weight to both the other substances mentioned; accurate knowledge, however, is withheld by the manufacturers. The gradual disintegration of these plates, as they are worn in the mouth, liberates a salt of mercury whose poisonous effects are well known. But besides yielding a poison, they are otherwise injurious to health. Inquiries from dentists elicit the fact that at least one-third of all those who attempt to wear them experience great irritation of the mouth, an irritation that is frequently accompanied by hypersecretion of the buccal fluid. The sufferer

usually lays aside the plate until informed of the necessity of becoming accustomed to its presence by uninterrupted use. Vulcanite is a non-conductor of heat, and the effect of its contact with the highly sensitive tissues of the mouth is to produce hyperæmia and inflammation. Another source of injury is the very close contact of these plates, which is maintained by atmospheric pressure and may favor the absorption of their substances.—*Medical and Surgical Reporter.*

Pears which Pay.—W. J. F., in the *Rural New-Yorker*, writes on this topic:

"Yesterday I asked a neighbor, who has grown several acres of pears for years, what variety he had found most profitable. His pear orchard consists mainly of four varieties: Bartlett, Seckel, Winter Nelis, and Lawrence. It would have yielded thus far twice as much clear profit if all the trees had been Bartletts. Now, however, this variety is blighting badly, while some other kinds are coming in its place. The Lawrence is a poor bearer while young, but is healthy and more productive as the trees get old. My friend has not had such good success as he should in disposing of Winter Nelis, a late pear which needs to be sent to Boston, New York, or Philadelphia, to secure a good market. Excepting the Bartlett, the Seckel is probably the best pear for profitable marketing. The tree is mostly free from blight, and the fruit, though small, is always in demand. There is this to be said in favor of the Bartlett that though it has blighted badly of late, the trees have paid for themselves before the others began to bear much. For quick returns there is no better variety. Beurre Clairgeau is a coarse, poor pear, but so fine-looking that it always sells well. Flemish Beauty, on the contrary, though equally fine-looking, is more apt to glut the market than any other. Much of the profit in orcharding depends on judicious selection of varieties. Other sections may need other favorites, but for Western New York the above hints will be of value."

Acceleration of Nervous Velocity
BY THE WILL.—A translation in the *Journal of the Franklin Institute* says that Chauveau has lately undertaken two distinct sets of experiments. In the first, he compared the velocity of transmission in the nerves of the laryngeal muscles (red voluntary muscles), and in those of the cervical position of the œsophagus (red involuntary muscles). In the second, the comparison was extended to the nerves of the terminal portion of the œsophagus (pale involuntary muscles). He finds that in the motor nerves of the red involuntary muscles, the velocity of transmission of centrifugal excitement is about eight times less than in the nerves of muscles which have an identical structure, but which belong to the portion of the muscular system that is controlled by the will.



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H. S. DRAYTON, A.M., *Editor.* N. SIZER, *Associate.*

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FOR THE NEW YEAR.

ANOTHER year has opened upon us with its freightage of joy and sorrow. It is not within the power of man to determine its issues, but it is within his power to adapt himself to them, so that the joy and the sorrow they bear shall conduce to his mental expansion and soul growth. The world *is* to us according to the way in which we view it and deal with it. Some have stoic-like asserted that "the world is what we make it," implying that the responsibility for his happiness or misery lies with a man. This we can not agree to, for the individual is but an insignificant part of the great aggregate of society, and subject in the physical sense to its movements and influences. But in the mental sense he can make the rulings of society work for his good by accepting them, and quietly and patiently turning to account the little or much in them that is useful to him.

Apparent evil so often turns out to be positive good, that we should be very slow to condemn an occurrence even though it seem to have no cheerful side.

"Behind a frowning Providence
He hides a smiling face."

writes Cowper in that beautiful hymn which has been the solace of many an oppressed heart, giving expression to a sublime truth which the whole course of human life, from the beginning, has demonstrated.

In the outset of the New Year let us resolve to do our part bravely and earnestly in the work which lies directly before. If in the past we discern that we have permitted passion, propensity, appetite, selfishness to have too much sway in our conduct, let us determine to allow the higher nature—kindness, patience, gentleness, temperance—to exercise more influence. Let Hope, Spirituality, and devotion also enter more into our every-day activities, and then we can not fail to be more cheerful, truthful, and diligent.

The secret of happiness is found by him who has subordinated the selfish elements to the moral and intellectual, because he realizes that it is through selfishness and appetite a man is most vexed, harassed, and thrown out of balance.

CABINET COLLOQUY.—No. 10.

WHAT AILS OUR BOY?

A LADY is announced, and we rise to greet her. She is accompanied by a boy about seven years old.

"I have called here," she begins, "because my brother-in-law has frequently urged me to bring my little boy to you and obtain your opinion of him. I have no confidence in Phrenology, to tell the truth, because I don't see how any one can tell what there is in the head from an inspection of its outside, any more

than you could tell the quality of a package of tea from an inspection of the outside of the case. However, all I can say hasn't the least effect upon my brother-in-law's opinion; and as for my husband, he's neutral in the matter, and merely says, 'Take Ernest down and see what they will say of him.' So here I am."

Yours is not a singular case, madam. There are many mothers, and fathers too, who need advice with regard to their children, but are unwilling to apply to the phrenologist, because for one reason or another, and that usually taken at second hand, they entertain a disbelief in it. So they neglect doing that which would prove of advantage to themselves, and perhaps of invaluable life-long service to their children.

"I know, sir, that most mothers are over-indulgent for the true welfare of their children, and I know that in most families the little ones particularly grow up without any proper training or discipline; but I have watched my children—I've a girl older than Ernest—and I think I understand their characters better than any stranger could."

A mother, we remarked, should know more about her children than any one else. We believe that intelligent mothers usually know all that is necessary to know concerning their young charges, but the unfortunate fact is only too manifest, that in the majority of cases parents do not adapt their training to their knowledge. I observe in our young friend here, a head of large proportions, quite too large for his body in its present state of health. You see it is broad between the ears. That indicates a good degree of natural energy; then, too, he has a light complexion, fine hair, a thin, delicate skin, and is small-boned like

yourself—a very nervous organization, in fact. Hence, he is inclined to activity, likes to be employed about something, and that something must not generally be of a trivial, childish nature to suit him.

"Very true, sir. He isn't like other children; doesn't seem to care much for toys, which please boys of his age. And we've thought it very strange."

He has a very good intellect, and a generous, open disposition, but owing to the lack of physical strength, his brain not being well supported, he becomes soon fatigued and languid—a condition which frets him and renders him irritable and impatient. I think that one of your experiences with him is frequently of this sort: After a good night's sleep he awakens cheery, buoyant, happy, and acts in a way to win your commendation, until about noon, when he becomes fretful and troublesome, nothing contenting him more than momentarily.

"Very true indeed, sir. You have described the characteristic which gives us at home the most annoyance. He can be the best of boys at times, and then again we can not do anything to suit him. In fact, he worries me sometimes almost out of my senses. We have supposed him sickly, and have obtained our physician's advice. He said that Ernest was troubled with indigestion, but prescriptions don't do him any good—rather make him more troublesome."

He has a good deal of your organization, madam, as regards nervous sensitiveness and susceptibility, while there is also a masculine force and determination. Those strong faculties of his crave a large share of blood nourishment, and if they do not receive it they disturb his whole mental balance by their irregular,

fitful action, and hence the irritability and restlessness of which you complain. Yet take him on his intellectual side and you find that you can reason with him, young as he is; "talk him," to use the common phrase, "into anything." He likes to talk, and patient, gentle speech rarely fails to win him over to your side, even when in his most irritable and obstinate moods.

"Yes, I must say you are right in that," said the mother, "remarkably so. There's Mr. Bond, my brother-in-law, who can do just as he pleases with Ernest—Don't disturb those papers (this to the boy), the gentleman will not like it."

Ernest had been looking restlessly around from the moment of his entrance into our domain. He had gone from one shelf to another, peering at busts, crania, and books, and now had settled himself over a pile of papers and magazines which lay in one corner.

My boy, we said to him, look at what you like there, you will not injure them. He looked at us quizzically for a moment, then turned with an expression of pleasure to the pile of literature, and was soon deep in its contents.

"He can read some," remarked the lady, "although we have never sent him to school; took the books his sister had used and studied the alphabet, and spelled out the simple words, and so on, until now he can do very well in the Second Reader. He's very ambitious."

Yes, and that is one element which may make him a conspicuous man in society, or blight his prospects.

"How?"

Because it will lead him to extremes in the exercise of his faculties, if he be not carefully guided, and so break him down in body and mind before maturity.

It is well that you have not sent him to school.

"Oh, I wanted to do so long ago, but Mr. Bond insisted that he was too young, and would easily pick up all that was necessary at home until he was eight or nine years old. But I assure you it has been a trial to me, because every day he gets at his sister's books and bothers me with all sorts of questions about them, and allows her no peace until she has given him a lesson. So you think he ought not to be sent to school yet, sir?"

Not till he is stronger physically. You should give him abundance of out-of-door exercise, and see to it that he has an abundance of sleep; the exercise to develop his muscular system, the sleep to soothe and invigorate his nervous organism. You should be particular in his diet, giving him only such food as is readily digested and highly nutritious, and counting out of the bill of fare all substances which heat, irritate, stimulate, and excite. You should aim, in fine, to nourish and build up his body, so as to bring about an equilibrium between his brain and body—that condition of vitality in the latter which is essential to its healthful activity.

"Oh, doctor, I wish that you would write out in full a set of directions for me. You have made me feel that in some respects I haven't done just what was best for my boy. I will confess that there is a great deal in your science, for you have stated things which are most true, and have cleared up some doubts that have long troubled me."

Whatever I have said, madam, you are welcome to, but I think that a regular examination will be of much use to you, as well as to the child.

"Well, that is what I should be glad to have."

We then conducted the lady and Ernest, who had become interested in a *Wide Awake*, into the "atelier" of our chief examiner, and introduced them to him. A few minutes afterward, having occasion to pass the door of the Cabinet, we observed that the lady was earnestly attentive to the remarks of the examiner, which an amanuensis was deftly taking down, while the boy was apparently dividing his attention between the pictures of the magazine and the address of which he was the principal subject.

OUR SPHERE.

WHEN the PHRENOLOGICAL JOURNAL was started in 1838 it was to represent the science of Phrenology in America. Great Britain had its magazine or organ in the celebrated Edinburgh *Phrenological Journal*, of which George Combe was for years editor, and there were two publications of the same type on the continent of Europe. As time went on the scope of the American magazine widened; it became more and more a teacher; its conductors realizing with their growing experience its power as an instrumentality of moral culture. There were times in the course of its long life when it seemed as if it were absolutely necessary to suspend the JOURNAL publication; such crises have happened to every serial publication of respectable age, however strong it may appear to-day. But at such times the sense of pecuniary embarrassment was overborne by the conviction that it would be a great moral loss to the reading public, and that every sacrifice in behalf of

its continuance would be richly compensated in the future. So it has been bravely, yea, heroically, kept up.

There has been no rich return in pecuniary profit at any period of its publication, because the motive of *doing* good has always been dominant in its management; but if the voice of thousands and tens of thousands of readers in testimony of benefit to mind and body derived through its counsel can compensate for the labor and time given to it, its proprietors and editors have been most lavishly remunerated.

There lie before us several letters lately received from subscribers. Picking up one we find it to have come from Pennsylvania. One remark is striking: "I will write John [a friend to whom our correspondent wishes us to send the JOURNAL] and tell him that I present these *invaluable* JOURNALS to him, that he may see for himself that there is *no* book or journal under heaven of more value than it is."

Another is dated Liverpool, Eng., and in it occurs this paragraph:

"The humble writer and admirer of your efforts to advance the good cause had to work hard since he was ten years of age, and he can say with truth, that a knowledge of the above subjects (Phrenology and Hygiene) has given him more real pleasure, and been the means of making him more happy and contented than all he has read on other subjects."

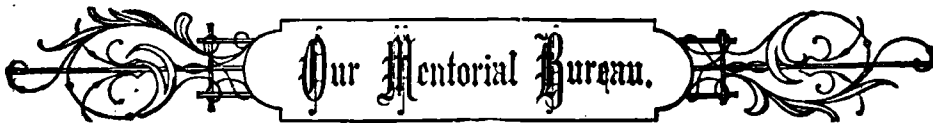
He goes on further to express an earnest desire to have the truths of Phrenology disseminated among the workingmen, accounting it one of their greatest needs, and thinks some plan ought to be devised to bring Phrenology and Hygiene to every workingman's home.

Such testimony is what a lawyer would

call primary evidence and deserving of respect; and as scores of letters containing similar or as marked expressions of approval come to hand, week after week, we feel greatly encouraged, and a new impulse is given to our hope of realizing what most wise heads would regard a purely Utopian whim, namely, placing the JOURNAL in every home throughout the land. Even as in the day of Demosthenes, whose strong words against Philip of Macedon had need only to be backed up by the martial power of Greece to hurl back the proud invader from the heroic soil, so to-day, if the good words which come to us from every direction could exert their proper sway upon the minds of the people, every home in the

land would be cheered by the light of phrenological truth.

PORTENTOUS.—We are told by a contributor to the *Dental Laboratory* that fully "half a ton of pure gold, worth half a million of dollars, is annually packed into people's teeth in the United States, and that at this rate all the gold in circulation would be buried in the earth in three hundred years." This statement should have a very startling effect upon our hard-money statesmen, and furnish new and profitable suggestions to the advocates of paper currency. If our people are to have all the gold packed into their jaws what will there be for their pockets?



"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.

ORGANIZATION OF THE LAWYER.—

A. S. K.—One who would make the profession of law his pursuit and be thoroughly successful should have a good physical constitution and a well-organized brain. The lawyer needs to be conversant with all subjects. In his practice he is called upon to consider nearly everything—now a question of medical science enters into a case; now it is a matter of theological doctrine; he may have to defend a clergyman who has rendered himself a subject of ecclesiastical criti-

clism or censure; again it is a question of chemistry which brings him as an advocate before the court; again it is a literary matter, perhaps a controversy between an author and a publisher; again it is a question of mechanical science—indeed, the scope of the legal profession covers all subjects which are likely to become matters of controversy, therefore a well-developed intellect is a prime requisite. The side-head should be pretty well filled out, the organs of Constructiveness, Ideality, Secretiveness, Cautiousness, etc., being strong and active. The social nature should be active, and, of course, the moral sentiments should have their sway in his mental operations, rendering him kind, sympathetic, sincere, honorable, straightforward, and appreciative of trusts placed in him by others.

THE MORE EFFICIENT PREACHER.—

J. P.—*Question*: I know of two preachers: one of them has all the organs full and harmonious, and a harmonious temperament, or very near it. The other has the organs full, except Destructiveness, Combativeness, Firmness, and Conscientiousness which are large, Destructiveness and Conscientiousness especially, the Mental temperament being dominant. Which of these will do the most good or have the greater influence?

Answer: Of course the man with the stronger faculties, because he will be more energetic. Large Destructiveness will stimulate him to work and large Conscientiousness will render him assiduous and circumspect. The first man you have described will live in a quiet way pursuing an even course, rather disposed, if anything, to let things do as they please; or will, as people generally say, "let well enough alone," that condition being one usually of laxity and weakness.

DRINK AT MEALS AGAIN.—S. W. L.

—We do not approve the opinion of Webber. It has been stated over and over again, that it is best not to drink freely of liquids while eating, because such a practice interferes with the proper mastication of food, the salivary juices being too much diluted to have their normal effect, while the stomach-power is reduced. Having finished a meal, a moderate drink helps to cleanse the month, and meets all the want of fluid which the healthy system craves.

You yourself are a pretty good testimonial of our views on this question, as you say: "Use no drinks at meals, no salts or spices, often drink nothing for two or three months, and feel well; am active as a boy; although at sixty years, I have every prospect to make another threescore."

Can supply you with a Bible and the Apocrypha extra, in good binding, for \$8.

POOR SPELLER.—Your Language is evidently defective as well as your Individuality if you are unable to remember the correct orthography of words. The letter you have written us shows no errors, and we do not think you are so badly off as you represent. Perhaps like some young men you are ambitious to use big words, "jaw-breakers," for the sake of appearing learned. If so, this is a mistake; the most effective language is that made up of plain, simple terms. Master the vocabulary of words of one or two syllables, and you will have a fund sufficient for all practical purposes.

SLEEPY WHEN READING.—W. W. R.

—Your temperament is probably of a sluggish character, or your circulation is slow, so that after a day's work, when you sit in your easy-chair at home, a phase of congestion ensues which causes your sleepiness. If you are accustomed to standing at the desk try to read in that posture. If your faculties are tired by your day's work, it is not likely that you will derive very much profit from reading at night, and it would be better for you to snatch a few minutes now and then in the course of the day for useful reading, even though you are compelled to make up the time thus employed by some night work.

If your attention could be kept thoroughly alive, however, we think you would not sleep.

SPRAINED WRIST.—J. D. M.—The strain or sprain of which you speak was not produced at one sitting at the piano, but the result of much practice covering probably much time; hence you were not aware of the injury you had sustained until its development. It would be better for you to stop your practice altogether for a time; meanwhile bathe the wrist several times a day with cool water, so that the nervous structure shall be toned up.

HEAD VARIATION.—C. D. W.—There must have been a mistake in the measurement. If you used the common tape line for the purpose it was probably incorrect. We have rarely met with a tape measure such as is usually sold at the fancy stores which was exact. Possibly, however, the dilatation was due to illness, and that cause having been removed the head returned to what is a fair size for a woman. It will need a good robust body to balance it well to give it all the vitality the organs will require for efficient working.

BRACES.—Instruments for keeping the body erect are beneficial if they do not become matters of dependence, so that after being worn awhile one grows to feel uncomfortable and weak without them. If a person have weak lungs, a disposition to bend forward so that the chest is cramped, a good brace will help to relieve the chest, straighten the back and shoulders, and give the lungs more freedom for respiration. The "Mirror of the Mind" will answer all your questions in regard to the way in which character is delineated from likenesses. Please to send a three-cent stamp when you write for it.

MOTOR CENTERS.—In one or more back Numbers of the PHRENOLOGICAL JOURNAL the experiments of Ferrier and others have been described, with their results, in indicating parts of the brain which may be stimulated by galvanism, and when stimulated certain muscular movements are found to follow. Those parts are called "motor centers" by Ferrier and other gentlemen of his school.

INGERSOLL'S HEAD.—H. R.—We have not had an opportunity as yet, ourselves, to examine the head of this extraordinary liberal thinker, but should be glad to have it. Can you supply us with a good photograph? Such as are floating around are untrustworthy for our purpose. We think that we can explain his conduct to your satisfaction, but must have the data.



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

MORALITY IN POLITICAL CONTESTS.—

Very early in the season, in fact before the snow of winter had left us last year, the political horizon began to assume the aspect usually seen just before a great quadrennial storm, and after that the clouds grew denser and darker till the storm broke forth and raged with increasing violence until the final culmination on the 2d of November; and now that it is passed, and the clouds are gone, we may look for a reign of quiet among the elements, broken only by storms of local importance, till another four years shall pass, when the return of another cyclone of bitterness, scandal, and vituperation may be expected.

From the beginning of June till now, one could scarcely pick a political newspaper up, whose every page and column was not filled with accusations of the most malignant type, against men who stand high in the estimation of their constituents. Why this wholesale demolition of reputation? Our learned political philosophers consider it necessary, so that an intelligent public may be able with all wisdom to choose able and upright men to make and enforce their laws. And as it is necessary to choose these servants once in four years, it is expected at that time, that all who can wield the pen will, with all diligence, proceed to misrepresent the ability of the opposing candidate, and vilify his character; and these sickening recitals are continued till victory perches on the banners of one of the candidates and defeat on the other, when both candidates may become gentlemen in the estimation of all parties. This process of choosing public servants is such that passion rules supreme and reason is pushed aside, and all that is at other times considered mean and contemptible, is now regarded as right and honorable. A man who would not do a mean thing to save all that is dear to him, will unconsciously find himself borne along in this political tempest which is covering an opponent with moral pollution, and for no other reason than that those who know him best see fit to honor him above all others, because of his ability and integrity.

It may be urged as an excuse, that when a man comes before the people and asks their suffrages for any position of trust, that the people should know all there is to know of him as regards his capabilities and moral worth, that they may make comparisons between him and his opponent; and did this end with a truthful statement, none could complain. But it is a fact, too well known to be controverted, that

the truth is not what is wanted. Again, some will urge that this course is necessary that defeat may be avoided. If it is necessary for a political party to use such means to avoid defeat, the sooner such a party is wiped out of existence the better for the people and nation. It is not generally supposed that the superstructure of righteousness can be built with safety upon iniquity as a foundation. Pollution can not produce purity; neither can evil become pregnant with good. But does it avert defeat? One party uses calumny and is successful, while the opposing party using it to an equal extent meets with disaster. But this is not all. So common has it become to use scandal during a political campaign that no matter how high a man may stand, or how pure and upright he may be, it is expected that the "mud-engines" will be turned upon him as soon as he is chosen as a leader, and it is also expected that nothing more will be heard of these attacks on his reputation after the candidate has left the political arena. It is an insult to the intelligence of the American people to suppose they can be biased in their choice of a ruler by any such tactics. This being the case, how absurd it is to conduct a campaign on such principles.

But is not the course of ministers of religion very frequently no less foolish and irrational? They will pray earnestly that the God of righteousness will so move the hearts of the people that they may choose wisely when selecting the rulers of this great nation, and all this while they may be secretly rejoicing over the latest campaign fabrication that has been produced against some leader of the party that is opposed to their views. Does a political opponent cease to be one of God's creatures, so that we are no longer under obligation to obey the laws of our Creator concerning him? Will the God of eternal truth condescend to bless falsehood? Can we expect Him to turn our foolishness into wisdom and our wickedness to goodness?

The time has come to sound a halt. This outrageous proceeding should be cried down by all lovers of truth. That a man must be made to appear a knave because he seeks to become an official, is no more reasonable than that a minister of the Gospel should be so treated when seeking a position. The reputation of the statesman is dearer to him than wealth, and yet people will do all that is possible to deprive him of the former, while they build prisons and penitentiaries for any one who would attempt to deprive him unjustly of the latter. We would heartily despise any one who would maliciously publish to the world our failings that actually exist, and yet do not rebuke him who maliciously publishes a falsehood about a political candidate.

Wise statesmen, in times of old, laid the found-

dations of this Government, and we honor their names to-day. Other great statesmen have guided the ship of State through the turbulent seas, and we are proud to call them our countrymen. Yet all these have been maligned from the time they began to climb above the common people, till they reached the topmost round of the ladder of fame. That they were not injured by it, does not make the acts of their enemies any the less Satanic. A failure does not take anything from the guilt of the would-be perpetrator. To do evil that good may come is contrary to all pure moral teaching; but in this case it is simply doing an evil of the worst conceivable form, without the merit of having any good whatever result from it.

We claim to be a people having some wisdom, a people that loves truth and despises all that is mean and false; but in this particular we certainly fail to fulfill our claims.

LOREN E. CHURCHILL.

PHRENOLOGY IN SPRINGFIELD, MASS.

—That veteran phrenologist, P. L. Buell, now Librarian of the Athenaeum, Westfield, Mass., was invited by A. L. Thompson, Esq., Superintendent of the "Springfield Fraternity," a temperance organization, to give a lecture on Phrenology before that Institution, on Wednesday evening, November 3d. He accepted the invitation, and gave his lecture, applying the science to health, education, etc., and closed with the examination of several heads of persons selected by a committee appointed for the purpose, to the satisfaction of all present, as appears by the following notice taken from the *Springfield Republican* of November 4th:

"The first of the Fraternity's winter series of weekly lectures brought together a good audience at their rooms over Haynes' clothing store last evening, who heard an interesting talk by P. L. Buell on 'Phrenology.' After the lecture several heads were examined, the inferences from the Phrenological developments being quite definite, and in most cases correct; Mr. Buell giving while blindfolded the main characteristics of one subject. Questions and answers were freely exchanged, and an animated discussion spun out the evening's entertainment until ten o'clock. The winter's course promises to be full of instruction and amusement."

WHAT ARE WE LIVING FOR?—If there has ever lived one who has not at some period in life asked himself the question, "What am I living for?" that one must be set down as not possessing a mind of sufficient strength to form an idea. Multitudes can answer such a query with satisfaction. Their life-work is plainly set before them. It is something that no other can do so well, something they delight to do, something they are doing for loved ones, and they are

the happiest of mortals. They never grow weary of their work, never wish for anything else to do. Some are surrounded with the objects of their love and care, and as yet know no sorrowing. Others have heard from dying lips the injunction, "Promise me this ere I go," or, "Do this for my sake when I am gone," and the vows are kept as sacredly, and the duties performed as faithfully, as if the departed were hovering near in spirit-form conscious of earthly affairs. It is sweet for them to live, for they make life pleasant to others, and beyond the grave await for them the awards of a well-spent life.

There are many others around whose pathway, in spite of earnest striving, weeds and brambles have grown till the light and warmth of the sun is excluded. And with a feeling somewhat akin to a wish, yet not sighing, murmuring, or regretting, it is mentally asked, "Would another have done as well here where I have walked, had I chosen the other way? Could I have caused the flowers and sunshine and pleasure to abound there as here? Would a ghost have haunted this path but for me?" Whatever replies are silently given, the doubt still remains, yet they live on contented and serene, for, having a work to do, life is not being spent in vain.

The only answer to the question given by far too many individuals is, "I don't know." Being surrounded with everything which makes a sojourn in this sphere pleasant, they little dream of making it profitable to themselves or any one else. They are creatures of circumstances. They have not been yet called to bear any burdens, fight battles, or make sacrifices. Should circumstances change so as to bring out their latent characteristics, we might find them good workers, brave soldiers, and faithful servants. But the end for which they were given an existence is hidden away in the dim shadows of the future, and they have no desire to peer into those shadows; would be very much surprised should a sudden gleam of light reveal to them anything of particular importance to do. As the song says, they are content to "Let the world jog along as it will." Numbers are made miserable by the consciousness of the useless, unprofitable lives they are leading. They would gladly make life worth the living, but discouraged and overcome by fruitless attempts and bitter disappointments, they would willingly "shuffle off this mortal coil." What an awful feeling to think you are of no use in the world! To feel that you would not be missed if taken out of it! Is it worth while to live on in misery, achieving nothing for one's self or for others? Some think not, and act upon the conclusion; hence the occasional suicide. Not content to take life as it comes, they have been restless and impatient; going forward and causing misfortunes, perhaps; weary of well-doing, have done ill. What they have

done dwindles into insignificance compared with that which they would have done. "Why has that which I so much wished to do been withheld from me? What else is there for me to do? Is my life to be a failure?" These and many more like queries arise in their minds, and to the question, "What am I living for?" they would answer, "I don't know;" but not in the careless, unconcerned tone of the former, but in one which tells of the sadness and gloom of despair.

If this life be only "a narrow vale lying between the cold, barren peaks of two eternities," then it would be as well for the last described to their "quietus make with a bare bodkin," or anything else convenient. We can not believe this. Those eternities are not barren, and this life prepares us for a higher existence beyond; and troubles, sorrows, and failures here are as necessary for most of us as happiness, contentment, and success seem to be for the few.

DELPHINE RAYMER.

PERSONAL.

LIEUT. SCHWATKA relates that in the whole course of his long and trying sledge journey of 8,000 miles in the heart of the Arctic wilds, with the thermometer sometimes sixty degrees below zero, not a single drop of spirituous liquor was drunk. The men, however, were warmly clad, and supplied with abundance of nutritious food, expressly selected for its heat-producing qualities. Another temperance lecture!

OLON ROBINSON, the long and well-known agricultural writer, died on election day at Jacksonville, Fla., where he had resided for some time. On the night before he died he gave instructions that if Garfield should be elected on the following day he wished his body to be wrapped in the American flag, placed in a pine coffin and buried. His instructions were carried out.

MRS. HAYES has invited Mrs. Garfield to visit her this winter in Washington, in order that she may become acquainted with the domestic and social routine of the White House. A very thoughtful procedure, and altogether in keeping with the exalted character of the lady of the White House, and worthy of a systematic following in future years.

PROF. L. N. FOWLER lately visited and lectured, by invitation, in Sheffield, England. The *Post*, of that city, devotes a large space to a very complimentary notice of the lecture and the man, designating him as "the ablest exponent of Phrenology and Physiology in England."

LUCRETIA MOTT died November 11th, at the age of eighty-seven. She was one of the most remarkable women of the period. In religious,

social, and political reforms she bore a conspicuous part, but always acting from pure and unselfish motives. In a future Number we shall publish a sketch of her life.

WISDOM.

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

FLATTERY is like cologne water; to be smelled of, not swallowed.—BILLINGS.

TO HEAR patiently, and answer precisely, are the great perfections of conversation.—ROCHE-FOUCAULD.

EVERY lie, great or small, is the brink of a precipice, the depth of which none but Omniscience can fathom.

WHEN our cup runs over we let others drink the drops that fall, but not a drop within the rim, and call it charity.

TRUE friends visit us in prosperity only when invited, but in adversity they come without invitation.—THEOPHRASTUS.

MAN is not born to solve the problem of the universe, but to find out what he has to do; and to restrain himself within the limits of his comprehension.—GOETHE.

THE MAN who is curious to see how the world would get along without him can find out by sticking a cambric needle in a mill-pond and then withdrawing it and looking at the hole.

THE REV. ROWLAND HILL, entering the house of one of his congregations, and seeing a child on a rocking-horse, exclaimed, "Dear me! how wondrously like some Christians! There is motion, but no progress."

MIRTH.

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

"TRUTH is said to be stranger than fiction—it is to most pholks."

"I WISH I was a pudding, mamma." "Why?" "Cause I should have a lot of sugar put into me."

If a young man haint got a well-balanced head I like to see him part his hair in the middle. Don't you?—BILLINGS.

A MAN out West was offered a plate of macaroni soup, but declined it, declaring that they "couldn't play off any hilled pipe-stems on him."

DOCTOR (learned-looking and speaking slowly): "Well, mariner, which tooth do you want extracted? Is it the molar or the incisor?" Jack (short and sharp): "It is in the upper tier, on the larboard side."

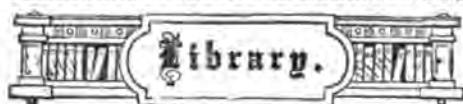
"If I have ever used any unkind words, Hannah," said Mr. Smiley to Mrs. Smiley, reflectively, "I take them all back." "Yes, I suppose you want to use them over again," was the not very soothing reply.

THANKS to my gentle, absent friend—
A kiss you in the letter send ;
But ah ! the thrilling charm is lost
In kisses that arrive by post ;
That fruit can only tasteful be
When gathered melting from the tree.

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.

SCENE—Hotel in Cologne. Fidgety English party : "There seems to be quite a commotion in the hotel, Kellner!" Kellner : "Ja wohl ! De drain has chust gom in, kvite full!" Fidgety party, who is not yet accustomed to the German way of pronouncing English, is aghast.—*Punch*.

A SAD-LOOKING man went into a Burlington drug-store. "Can you give me," he asked, "something that will drive from my mind the thoughts of sorrow and bitter recollections?" And the druggist nodded and put him up a little dose of quinine and wormwood, and rhubarb and epsom salts and a dash of castor oil, and gave it to him, and for six months the man couldn't think of anything in the world except new schemes for getting the taste out of his mouth.—*Havekeye*.



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.

JOHN SWINTON'S TRAVELS; or, Current Views and Notes of Forty Days in France and England. By John Swinton. Price, 25 cents. New York : G. W. Carleton & Co.

In this little book, from the pen of a journalist whose experience is broad and comprehensive, we have some original views of French and English life and character. It was his fortune to be in Paris at the time of the new national holiday for the commemoration of the fall of the Bastille, and the excessive manifestation of popular enthusiasm which distinguished that day is graphically depicted. Mr. Swinton's sympathies

are with the masses, and he writes warmly of the opportunities which the new Republic has afforded them for mental and social elevation. He speaks of the "variety show" presented by London, its contrasted glory and shame. He saw the heroes of French letters, Victor Hugo and the much-venerated Thomas Carlyle, and gives us entertaining portraits of them.

MEDICAL HINTS ON THE PRODUCTION AND MANAGEMENT OF THE SINGING VOICE. By LENOX BROWNE, F.R.C.S., Senior Surgeon to the National London Throat and Ear Hospital, etc. Eighth edition, revised, etc. New York : M. L. Holbrook.

This book has had a large sale in England, and properly so, as it presents in an easy, didactic style many important matters which musical people should be conversant with, and those who are not musical will not lose ought by its careful reading. Dr. Browne treats of the structure of the Larynx and the method of its action in the production of tone. The troubles or disorders to which the throat and chest are subject are pointed out, and valuable hints—hygienic and medical—are given for their prevention or remedy. The price is 25 cents.

MONTEZUMA AND THE CONQUEST OF MEXICO. By Edward Eggleston and Lillie Eggleston Seelye. 12mo, pp. 385. Cloth. Price, \$1.25. New York : Dodd, Mead & Co.

Another volume in the Series of "Famous American Indians" comes to us from the press of the enterprising book firm mentioned in the title above. And this time it concerns that period of Central American history which has always possessed a romantic interest for the general reader. The graphic sketches of Tecumseh, Brant, and others, which have given a popular character to previous volumes of this series, can not claim the semi-poetic glamour which invests the pathetic story of the destruction of the Aztec supremacy and glory by the Spanish invaders. Evidently the authors have found in "Montezuma" a theme congenial, for they have produced a really attractive as well as instructive volume. The materials for the work were not abundant, but such as were available have been used with diligence and tact. The early life and habits of the last of the Aztecs are portrayed with minuteness, and in fine contrast with the gentle, luxurious manners of the Indian king, is the character of Hernando Cortes, the ambitious, grasping conqueror. One can not help indulging a feeling of hearty sympathy for Montezuma as he reads the long record of enroachments, exactions, heartlessness, and barbarity which characterized the career of the Spaniard in Mexico, and his heroism in the midst of suffering and defeat commands our respect. We feel that though but half civilized and an idolater, he exhibited a spirit and nobility to which his determined enemy, Cortes, has no claim.

ALCOHOL AND HYGIENE; an Elementary Lesson-Book for Schools. By Julia Colman, author of "The Catechism in Alcohol," "The Juvenile Temperance Manual," etc. 16mo, pp. 231.

It may be said in general, and with a particular fitness, that all Miss Colman's work in behalf of the Temperance cause is positive and practical. She is thoroughly conversant with the subject in its various relations, and boldly attacks alcohol and alcoholism from the scientific side; showing why and how liquor-drinking poisons body and mind, and impairs human usefulness. In preparing the book under notice she had in view the very important object of instructing children in the principles of Temperance through the channels of reason, prudence, and economy; in other words, supplying them with fundamental information which should fortify them against forming habits tending toward intemperance. In clear and vigorous English the origin and nature of Alcohol is treated of according to the best authorities, and how it affects man. She points out the evil it works in society, and contrasts the drinker with the abstainer. The book is an interesting one for the general reader, and in the hands of a wise teacher can be made an attractive textbook for the young. Price, in cloth, 63 cts. Copies can be obtained of the author, No. 54 Bible House, New York, or at this office.

THE RELIGION OF SPIRITUALISM. Its Phenomena and Philosophy. By Samuel Watson, author of "Clock Struck One, Two, and Three." 12mo, pp. 399. Printed for the Author by Edward O. Jenkins, New York. Price \$1.75.

The author states in the title-page of his book, "thirty-six years a Methodist minister," and it might be added, a prominent minister in Western Methodism during a considerable part of that time. Whether or not this should give special weight to his present utterance, will be left to the reader's discretion. Mr. Watson is of opinion that phenomena of a supernatural or spiritualistic sort are necessary in the present condition of religious affairs to demonstrate the truth of Christianity; to supersede faith by knowledge; to harmonize sectarian organizations, and promote the reign of the Divine will in the human heart.

The usual Bible passages are reviewed, which are cited to support the doctrines of Spiritualism, from the appearance of the angels to Adam and Eve, to the manifestations of which the apostles of Christ were the subjects. These statements are of course taken literally. Besides such topics as "Writing mediums," Materialization, the Philosophy of Spirit Control, the Nature of Death, are subjects of careful discussion by the author. Interpreting St. Paul's celebrated statements in 1 Corinthians

xv., he says: "The birth, death, and resurrection of the man, and the sowing, death, and germination of the grain, are thus mutually representative; and the comparison of the apostle is justified and borne out even into details. In both, death is therefore the gate of life; or, more properly speaking, there is no death, as it is taught by theology. . . . It (death) bursts the bars of the prison—throws down the doors that the 'inner man' may ascend. The body is as the chrysalis concealed in the grub. It rends the pupa case that the psyche may come forth. It is the pulling down of the scaffolding that the building may be considered." Hence immediately after death the spirit is in a state of conscious activity, and capable of exercising its individual properties. Two hundred or more pages are occupied by "Communications," which, as a rule, are of a good class, intelligent, and with a motive; and "speaking better things" for the cause the author advocates than the average "phenomena" of the Spiritualist.

PUBLICATIONS RECEIVED.

WHAT'S THE MATTER? By Joseph Jackson. 95 pages, paper; price 20 cents. New York: The Authors' Publishing Company.

This is number 27 of the "Satchel Series," published by this enterprising house. The author's name, as in the title, is not unknown to readers of the *PHRENOLOGICAL JOURNAL*. Those who have read the piquant "Family Letters" may infer the character of this little volume. It is, in fact, a discussion in the same sprightly, humorous, but nevertheless practical and pointed manner of the unhealthful practices so prevalent in the dress and life of our women. It warmly advocates dress reform on rational as well as healthful grounds, and points out how women abuse themselves in many ways by their obstinate adherence to the tyrannies of fashion. Of course, as hygienists, we heartily approve of the book, and hope it will be read by fathers and mothers, sons and daughters, throughout the country.

THE CHURCH AND TEMPERANCE: A Paper by Hon. William E. Dodge, read before the Pan-Presbyterian Council in Philadelphia. Price, 10 cents. The National Temperance Society and Publication House, New York. A stirring paper by one of our leading New York citizens. May we hope that it will have some effect in awakening the attention of the American pulpit to the earnest consideration of the drink-evil. Oh, for effort organized and wide-spread in the Church! Were one-tenth of our ministers active for the promotion of purity and decency in their congregations, a great revolution in society would soon result.

REPORT OF THE BUREAU OF GENERAL SANITARY SCIENCE, Climatology and Hygiene, to the American Institute of Homeopathy, Session of 1880. We are indebted to Mr. B. W. James, of Philadelphia, the Chairman of the Bureau, for a copy of this interesting report, in which is discussed International Quarantine, Sea-coast Quarantine, Disinfection of Baggage, Location of Quarantine Stations, etc.

THE STORY OF A LIVE SCHOOL. This is the title of a neatly illustrated little book, in which our neighbor, Mr. S. S. Packard, pleasantly describes the qualifications of a good school. He has been a successful teacher, and concisely sets forth the result of twenty-five years' experience in fitting young men and women for the practical duties of life.

THE NORTH AMERICAN JOURNAL OF HOMEOPATHY for November, 1880, contains several strong articles. That on "Psychological Medicine" being a powerful argument for the action of mind upon mind in disease, and the necessity of strength, sympathy, cheerfulness, hopeful expectation to successful medical treatment.

TORNADOES AND THE WEATHER. By Isaac B. Noyes. Reprinted from the *Kansas City Review of Science and Industry* for September, 1880. Mr. Noyes has taken up the subject of Meteorology and discusses it with a good show of erudition and careful analysis.

THE LIFE AND WORK OF CHARLES SPURGEON. By the Rev. William H. Yarrow. With an Introduction by John Stanford Holme, LL.D. No. 46 of the "Standard Series," in convenient octavo form. I. K. Funk & Co., publishers. Price, 20 cents.

"OUR LITTLE ONES" is a new juvenile monthly, issued by the Russell Publishing Co., of Boston. It is charmingly illustrated, and both reading matter and pictures are of the kind to interest children under ten years of age. It should be a success.

POPULAR SCIENCE MONTHLY, for November, is an unusually interesting number of this expositor of advanced science and liberal thought. We deem the articles entitled "The Sun's Heat," "The Glacial Man in America," "Profusion of Life," "Hypnotism," as particularly worthy of reading.

THE BIBLE AND THE NEWSPAPER. By Chas. H. Spurgeon. No. 43 of "The Standard Series," published by I. K. Funk & Co., New York. Price 15 cents.

PULPIT TABLE-TALK. By Edward B. Ramsay, LL.D., Dean of Edinburgh. No. 41 of "The Standard Series." Price 10 cents.

LACON; or, Many Things in Few Words; addressed to those who think. By Rev. C. C. Colton, A.M., late Fellow of King's College, Cambridge; also of "The Standard Series." Price 20 cents.

AMERICA REVISITED. By George Augustus Sala. A compilation of his correspondence while on a visit to this country. "Standard Series." pp. 84. Price 20 cents.

LETTERS FROM A CITIZEN OF THE WORLD TO HIS FRIENDS IN THE EAST; or, Europe through the Eyes of a Chinese Philosopher. By Oliver Goldsmith. No. 44 of "The Standard Series." Price 20 cents.

THE COMPOUND OXYGEN TREATMENT. Its Mode of Action and Results. By G. R. Starkey, A.M., M.D. Starkey & Palen, Philadelphia, Publishers.

SCRIBNER'S MONTHLY has appeared in a new dress, a substantial-looking cover, which incloses the same high class of literature and art which have won praise in both Europe and America. We note in the last two Numbers an increase in substantial contributions.

SUBSCRIBERS' OPINIONS.

Mrs. G. T., of Minnesota, in writing to us, says: "I have read the *PHRENOLOGICAL JOURNAL* for three or four years with the most intense interest. I have fully determined never to be without it again; it makes me a better wife and mother."

C. L., of Pennsylvania, writes: "I will always speak a good word for the *JOURNAL*, as opportunity may offer, as I can do so with a clear conscience, knowing that it leads all other Journals in the cause of moral purity; and being confident that the purity of the reading matter it contains makes it a special favorite in the houses of the refined."

J. W. C., of Tennessee, writes: "Please send me your *JOURNAL*. I have taken it for several years past, and would not be deprived of its monthly visits for any reasonable amount of money. In my humble opinion nothing in the United States surpasses it in truth, purity, and elevated thought. No young man in America should be deprived of its valuable teaching, pure sentiments, sound reasoning, and elegant diction."

C. W. D., writing from Iowa, January 1, 1879, says: "I received your written description of my character some time ago. I must say that it is excellent; my friends all say that it 'hits the nail on the head' every time. One friend in particular, who is a *red-hot* opponent of Phrenology, had to admit that you had 'guessed' well."

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February, 1881.

[WHOLE No. 507.]



J. HYATT SMITH,

CLERGYMAN AND MEMBER OF CONGRESS.

THERE are usually to be found among the great body of gentlemen who make up our National Legislature a few whose profession is that of the ministry. The majority of these are from the South

or West. This year New York sends to Washington one in the person of the Rev. J. Hyatt Smith, a well-known Baptist preacher, of Brooklyn, who was put in nomination by the Independent Re-

publicans, and having largely the support of the Democrats, defeated at the late election Mr. S. B. Chittenden, who for years has represented the third district in Congress.

Mr. Smith has a head measuring twenty-three and a quarter inches, which is decidedly large, and sufficiently so for a man weighing one hundred and eighty pounds. At the time we made our observation his weight was only one hundred and forty pounds, and as he has gained little, if any, flesh since then, we will say, were it not for the fact that he is remarkably wiry and enduring, he would have been worn out and laid away long ago. The breathing apparatus and the circulatory system being good, they furnish the vivifying principles; but he ought to have a little more digestive power, so that he can more abundantly convert food into nourishment. He ought to sleep eight hours or more, and so many hours of sleep would be the best use of that much of his time.

Not only has he a large brain, but he has sensibility, quickness of feeling, and intensity of being, and when excited he seems to take wing, as some birds do when much pressed—though they can walk, they fly.

He has a fervid imagination, but that is not the strong point of his mind. His Causality qualifies him to understand the philosophy of facts. He reasons soundly, squarely, and strongly; and when he is conscious that he has the logical basis under his feet, he feels very independent in his position.

He is very methodical, systematizes everything, works by rule when he can, and always has in his thought a system, an objective point, a thing to be reached, an object to be wrought out, and he does not lose sight of it.

Mirthfulness is enormously developed, and if he had been trained to be a comic actor, he would have taken the palm from anything that is to-day on the boards. It is said there is but one step between the sublime and the ridiculous; certainly the organ which recognizes logical congruity, Causality, lies side by side with Mirthfulness. The finest wits of the world that we have known had large Causality as well as large Mirthfulness. Dr. Franklin was pre-eminently developed in that direction, and the form of this head in that region is very much like that of Franklin.

He is a critic, and sometimes it is difficult for him to avoid overhauling clumsy statements and awkward arguments, even when he is not exactly called upon by circumstances to do it, and is obliged sometimes to restrain himself from striking out against that which is susceptible to ridicule or contempt. Absurdity seems to him extremely absurd. It is so glaring that he can hardly let it alone; and if he were an editor, he would be thrusting sharp sticks at a great many of his brethren; and would make his paper, if not a *Toledo Blade*, at least a sharp one.

He has the power of imitation to such a degree that he is able to adapt himself to anybody, and co-ordinate the word and the action; and though he has good powers of description, he inclines also to act it out as well as to talk it.

His sympathy is almost too strong for his own comfort. He bears the cares and sorrows of others, and carries himself among people of his acquaintance as a hat-rack for everybody's troubles. Veneration is large, and he has a profound sense of whatever is great or sacred, and though his Imitation and Mirthfulness may often take the helm and ride the billow, his Veneration is still a profoundly

strong and deep-toned element in his nature; and when he meets greatness or goodness, especially if they are both combined, he pays them tribute that is profound, and would feel ashamed of himself to hold back one jot or tittle of the just merit of anybody.

His Firmness is enormously developed, and his persistency is not often matched. He can be led by his sympathies, by his affection, by his reason and judgment, but he can not be driven, and never has felt willing to yield to simple power.

His Self-esteem is large. He believes in himself and feels an inclination to take responsibility and bear it squarely. He does not ask leave to be, to do, and to suffer; is willing to work his way. When a child he never wanted help; did not want to be led by the hand, nor petted, nor protected.

He has ambition, but it is not vanity. It is a love of success, and the desire to come out ahead; the wish to disappoint those who croak; and his best friends, who said he could not succeed in a given enterprise, he would like to disappoint, and would enjoy it better than if he had triumphed over a competitor or an enemy. His Approbativeness nestles up, as it were, to Self-esteem and Firmness, and the three organs work together, and the feeling is, "I must! I can! I will!"

He is very strong in the social dispositions; loves ardently; is fraternal, paternal, conjugal, and patriotic; consequently, wherever he goes he is surrounded by friends in all phases of life, and people who get near him and understand more of him than the general observer does, will think more of him than those who are outside.

His Combativeness is large enough to make him a little pugnacious; and his

Destructiveness is sufficient to make him severe; but he doubtless has steered clear of mere personal controversies; and when he is engaged in any public cause, and has committed himself to it, he works for himself in working for the cause, but not for himself *per se*. When he feels that he is sustaining somebody or some sentiment, some idea or some great cause, he can work for it with a good deal more freedom than if it were a mere personal matter. Hence as a lawyer, he would struggle for a client with a strong *esprit de corps*, and work a great deal harder than if the case were his own.

He has not quite enough of Secretiveness, and the public know his faults. He does not know how to conceal his thoughts and purposes. People read him like a book.

He looks on the bright side; has faith in the higher life. He relishes poetry and art, romance, music; and is rather remarkable for two strong sides of character: one, that of tenderness, affection, and sympathy; the other that of courage, self-reliance, determination, combined with a kind of conscientious logic that stands on its own pins and "fights it out on that line."

His Language is large enough to serve him whenever required. We fancy that in public speaking he never thinks of the words—simply follows the line of the thought and lets the words crystallize around that. We can express it in this way: That his illustrations, originating in Imagination and Comparison, enable him to talk symbolically, as if he saw a great panorama, and had only to look at the scenes and describe them. Imagination paints the pictures, and Comparison guides him to select those most appropriate.

J. HYATT SMITH was born at Saratoga, N. Y., in 1824. His father was a school-teacher, who naturally superintended his son's education, and not being possessed of abundance of this world's goods, sent him early into the busy stream of life to dare and do for himself. Young Hyatt went to Detroit, where he obtained a clerkship; but under the ministry of the Dr. Duffield, senior, he was converted to the Baptist household of faith, and then determined to bend his energies toward becoming a clergyman of the same Church. His father, being a Presbyterian, was much surprised by the course of his son; but finding it was a matter of serious conviction, he placed no obstacles in the young man's way. Diligently giving himself to business to earn a livelihood, and as diligently prosecuting his studies for the ministry, Hyatt entered a bank in Albany, and remained at the desk until he was ready to preach. The business training which he thus gained has ever since been of incalculable value to him. It has given him the hearty sympathy with business men which has largely contributed to his success, and enabled him to be of valuable assistance in carrying certain church indebtednesses, the burden of which has largely fallen on his shoulders.

In 1848 Mr. Smith went from the bank desk to the pulpit, being licensed to preach at Dr. Welch's Baptist church in Albany. His first charge was at Poughkeepsie, where he did good work until 1852. At this time the Second Baptist church of Cleveland, a new organization with only a few members, saw in the young pastor the man of their choice. Mr. Smith took charge, and in three years, during which he labored there, the congregation increased to four hundred.

Then the people of the Washington Street Baptist church, in Buffalo, expressed a desire for his pastoral services, and from 1855 to 1860 he served them with marked success. From 1860 to 1867 Mr. Smith occupied the pulpit of the Eleventh Baptist church of Philadelphia.

Finally the Lee Avenue Baptist church of Brooklyn, N. Y., invited him to take charge of their spiritual affairs, and he entered upon his ministry there in 1867. He appears to be eminently fitted for building up and enlarging a church, establishing it upon a healthy basis. In the Lee Avenue church he found room for the exercise of his inventive and financial faculties, for the growth of his audience required the enlargement of the edifice, and this was done amid embarrassments and obstacles which were due to the financial troubles that came upon the country soon after the enlargement had been determined upon.

Part, however, of the obstacles to this undertaking were found in the famous controversy on the Communion question, which made so much stir in Baptist circles in the early part of the last decade. For several years the conviction had been gaining ground in his mind that what is commonly known in the Baptist churches as "close communion" is an error, and ought to be abolished. Regarding the communion table as the table of the Lord, and not of any particular church or aggregation of churches, he was not disposed to bar out a single Christian believer, of whatever name; and so on Communion days he would simply announce the table open for all who love the Lord and would partake in faith. Naturally enough, this stand provoked the opposition of Baptist brethren who held the opposite view; and for two years the controversy was sharp in the Long Island Baptist Association, and resulted in the dropping of the Lee Avenue Baptist church from the roll. Sympathy and aid came from Christians of other denominations; and had not the terrible financial crash of 1873 interfered, the new edifice would have been completed without a dollar of indebtedness. Mr. Smith and his people, cut off from expected resources, worked bravely, however, against the many difficulties, and their church was at last finished, with seats for nine hundred and sixty people, and standing room for two or three hundred more.

Although much occupied with the pastoral duties of attending a large church, Mr. Smith has found time to write an occasional article for a religious periodical, and a treatise or pamphlet on some topic of practical religion. His "Haren the Hermit," published when he was pastor in Philadelphia, had a very favorable reception, both here and in England. His "Gilead," an allegory after the style of "Pilgrim's Progress," also published in Philadelphia, had an extensive sale. His "Open Door," a work on the Communion question, was published in this city in 1871, and was at once taken up by the press, religious and secular, both for praise and for censure, and a very large number of copies were sold.

As a speaker Mr. Smith is one of the most sympathetic of American orators. He is not given to rhetorical display, but is earnest in feeling, powerfully moving

the hearer by appeals to his convictions, both of intellect and sentiment.

He has many friends, and probably owes his recent election to Congress to that fact. The incident of preaching a sermon against the system of prison labor is said to have made him the candidate of the hatters in the fall of 1879 for State Senator, but he withdrew from the contest. The hatters, however, put him in the field for Congress last fall, and the Independent Republicans and the regular Democrats indorsed the nomination, which proved a successful one at the polls.

As a Representative we shall expect him to act in the independent manner which has characterized his pulpit course—to do for the country as far as he may what his generous spirit and practical intellect shall suggest as for the public good.

PHRENOLOGICAL COMMENTATOR.—No. III.

A GOD IS.

Hebrews xi. 6: "*He that cometh unto God must believe that He is.*"

PHRENOLOGY is the only *science* that can and does prove the existence of God. Other sciences can furnish data from which a proof of the existence of God may be approached, but without faith in Revelation can not be made conclusive. Phrenology is conclusive to any rational mind—even to that of the unregenerate. She is therefore the very handmaid of religion, and not her foe, as many suppose. She should be the first and continuous study of a preacher of the Gospel.

Every philosophy attempts a religion, just as surely as every religion has a philosophy. The average religion derived from the average creed of the Church has a philosophy of heathenism instead of a Biblical psychology. The yet to be produced true philosophy or psychology of Phrenology will be the first and only philosophy able to produce

a religion consistent with Revelation. It will do so because so near the source of creation in man. The definite argument for God's existence from Phrenology runs in this way:

Every thing, individual, or person, of us and without us, has in us organs by which we recognize it or him, or have relations thereto; and, *vice versa*, every organ we have has its objects of use and relationship.

As has been well said by a writer: "No man of science upon earth denies the harmonies which pervade the world; no man who values his reputation would stake it upon the assertion that the eye would have been evolved had there been no antecedent light, or the ear had there been no antecedent sound, or the wing of bird had there been no atmosphere to sustain. In fact, it is a first principle in all modern science, that what we call conditions shall precede the evolution of all organs."

Allowing the word "Evolution," to adapt myself to the present ignorance, I think the position above quoted is indubitable, and is simply an amplification and illustration of my own statement of the argument.

Now, man has seven distinct moral *and* religious faculties. I do not use morality and religion as synonymous—so do not say "or religious." I labor among a people who are characterized by being what Phrenology teaches as possible, religious but very immoral. I mean from two stand-points of phrenal divorce: with "Adoration" large, and "Spirituality, Marvelousness, or Faith" small; and from *formalism*—the result of cultivating the "semi-intellectual" organs, especially "Ideality" as a religious organ. Imagination has nothing to do with religion, some authorities to the contrary, as imagination is not a religious faculty at all, and religion has a set of religious organs complete in itself, with a sense-perception of God to start with, just as the science of matter has a sense-perception of it to start with.

I hold that man has seven distinct moral and religious faculties—but ten organs supplying means to those faculties—as the will is fourfold. We have talked so much of "the five senses," all of which are universally recognized as in the body, that being ignorant through an unscriptural philosophy of the existence of the Spirit we have slighted—or left wholly to philosophy—the scientific fact of a spirit as well as soul, and a sense-perception peculiar to each. We have three kinds of sense and seven senses. Or the man-house, so to speak, has five doors and windows, a looking-glass, and a skylight.

The skylight, as is proper both from its use and with its direction, is in the very crown of the head; the organ of "Spirituality," etc. This is the sense-of-Deity organ. It furnishes material for the action of "Adoration" in all true worship. When material is furnished by "Ideality," "Amativeness," or other organ, idolatry in various grades of sinfulness may

follow. "Whatsoever," says phrenological Paul, "is not of *Faith* is sin"! "Faith," from one of Paul's two definitions of faith, is the phrenological definition of "Spirituality" or "Marvelousness"!

So "Faith" is the organ set apart to see God. "Veneration," which I use interchangeably with "Adoration," is the organ set apart to venerate or adore God—or as we say generally, worship God. Now as every individual or person has organs, and every organ we have has its definite objects of use and relationship, so there must be a God, because we universally—we phrenologists—confess that we have such organs. The organs could not have created God! Not as much as the eye could have created light! And that is absurd.

Now I am met by two objections: "No man hath seen God at any time; the only begotten Son which is in the bosom of the Father, he hath declared (Him)" is true but *partial* Scripture, so in this argument is false. And second the materialist denies the sight of Spirit. Both are right and both are wrong; for "all error is half truth."

These two points—the existence of God, and the necessity of matter being present in order to supply vision to man in his present state—being admitted, the question resolves itself into this double form: It is not a question "of God or no God," but "of all the gods who is the true One"; and is there a God in body—or formed matter—so we can see Him?

The first question simplifies the whole discussion, as history will settle it. There have been and are recognized to be three claimants to being God: Fetich, the Devil, and God. The fact of either establishes the fact of the organ. It is a universal fact, so veneration exists in all men. But "Fetich" is best defined by "What is it?" It is the animal adoration of the "Mysterious," and by its very definition is ruled out of the discussion. Such a question is not a scientific datum, and phrenologically shows the deadness and non-use of the organ of "Faith," and the excitability of Ideality, etc. A

corollary is—Fetichism and Formalism are twins! (See Rev. xvii. 5).

Shamanism, or the worship of the Devil, can be disposed of briefly thus: Idolatry is the worship of the devil; Mythology is the history of idolatry. No intelligent man will hold to adoration of anything or individual lower than man. But that of man is debatable. All the great religions of time have demanded God-made man, in order to intelligent worship; and the cry of the Materialist for faith in nothing but what and whom he can see is scientific, phrenological, and Biblical, as well as historical in its justice and propriety. But this comes under the second point; I only use it here to clear the statement of partiality. The settlement of who is God of all the claimants is proper first. I like Elijah's method. Of all the gods who is Jehovah? "If Baal be God, serve him; if Jehovah be God, serve Him." We have not now his test of fire; but we have Christ's test of a good man: "By their fruits ye shall know them." By the fruits of the Gods ye shall know them. It is indisputable that the fruit of Jehovah is Christianity and all the Judaic and Christian ages. History unfalteringly cries, "Jehovah. He is God"!

Now, did any God become man save Jehovah? God says: "The *man* that is my fellow." Past claimants, those anterior to the Christian era, have passed from the stage. A grave-yard is a poor place for an argument. There are three great claimants: Mohammedanism, Papacy (Greek and Roman), and Protestantism. The first has a contestant in Mahomet, the second in Christ's unwitting Mother, but in the last Christ is supreme and sole Prophet, Priest, and King. No one can disprove our civilization, the best of the ages, the outgrowth of Protestantism. All are failures or foes to light, truth, and liberty except it; and of it the sole and supreme Christ—Jehovah in flesh—is.

Now two things are needed: did Christ resurrected reach a condition of

spiritual materialization, or *vice versa*, so that he fulfills the conditions necessary for the exercise of the organ of faith sight, and is it a matter of experience?

His last words were: "I will be with you all days even unto the end of time." There are two prepositions for "with" in Greek. He uses the one indicating *personal* actual presence. Again, Paul urges in the proper rendering of 1 Cor. i. 7: "See that ye come behind in no gift, looking for a *revelation* of our Lord Jesus Christ." He is then, undoubtedly, the revelational Person of the Trinity and of the Spirit-world.

I sincerely and intelligently claim that by grace I have several times had this organ of Spirituality so stimulated as to have this faith-sense conscious of the existence of the Christ in word, sight, and touch. The Church could give thousands of instances. It is the cause of every revival and of all true conversion and sanctification. I deem that this organ, as it deals with God and spirit, must have all of spirit, soul, and body cognizance combined in it; just as the whole includes the part, and it is not to be solely represented as the "eye of faith"! It follows therefore that Phrenology demonstrates: "God is," so confessed by all times and peoples, so by all worshiped, and so experience shows.

TRINIDAD, COLO.

ALEX. M. DARLEY.

SIR WALTER SCOTT'S HEAD. — The casts of the great Scottish novelist's head show an extraordinary height from the ear upward, and on that account their authenticity has been much questioned. In the *Phrenological Magazine* Mr. L. N. Fowler thus alludes to this matter:

"When Mr. Bray speaks of Sir Walter Scott's head being '7 inches in height to Veneration,' he does not mean 7 inches measured as you measure with a tape, but 7 inches of perpendicular height, measured with the calipers, from the opening of the ear. Thus measured, ordinary heads vary from 5½ to 6 inches. Your measurements over the head from ear to ear is correct for ordinary heads, from 14 to 15 inches being a fair measurement. But Sir Walter Scott's head, thus measured, was 17 inches—a measurement which you will rarely find equaled."

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER V.—*Continued.*

STRUCTURE OF HUMAN CEREBRUM AND CEREBELLUM.

CONTINUING our examination of the parts of the encephalon presented by its inferior surface, we notice behind of Varolius. The old anatomist Chaussier gave it the name of *mesocephale*, or middle brain, because he thought that its

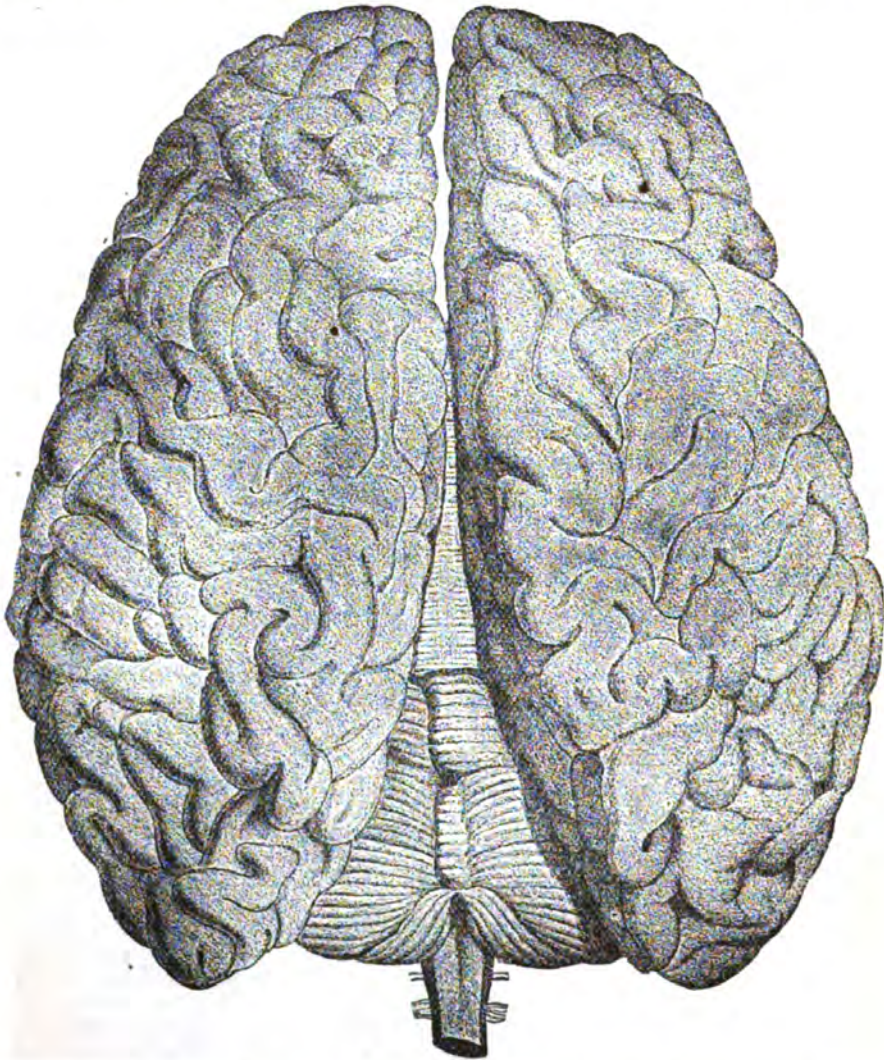


Fig. 197.—VIEW OF BRAIN FROM ABOVE—SHOWING CEREBELLUM AND CORPUS CALLOSUM.

the mammary tubercles, a broad quadrilateral surface, b, slightly depressed at the center to accommodate an arterial vessel. This body has borne for a long time the name of *pons varolii*, or bridge

object was to unite the different parts of the brain. Gall gave it the name of commissure of the cerebellum. At the posterior margin of this commissure, and upon the borders of the groove b, is seen

the abductor nerve of the eye, or the nerve of the sixth pair, f. Behind the pons is seen an irregular body expanded at its upper extremity, where it presents four prominences. It is the *medulla oblongata*, showing at the center a groove having a depth of from two to

from the *mesocephale*. These pyramids cross each other, but one can not see well their crossing, only after having raised with care the membrane which envelopes the spinal column; that done, if one separate carefully with the blade of a scalpel the two borders of the pyramids, the

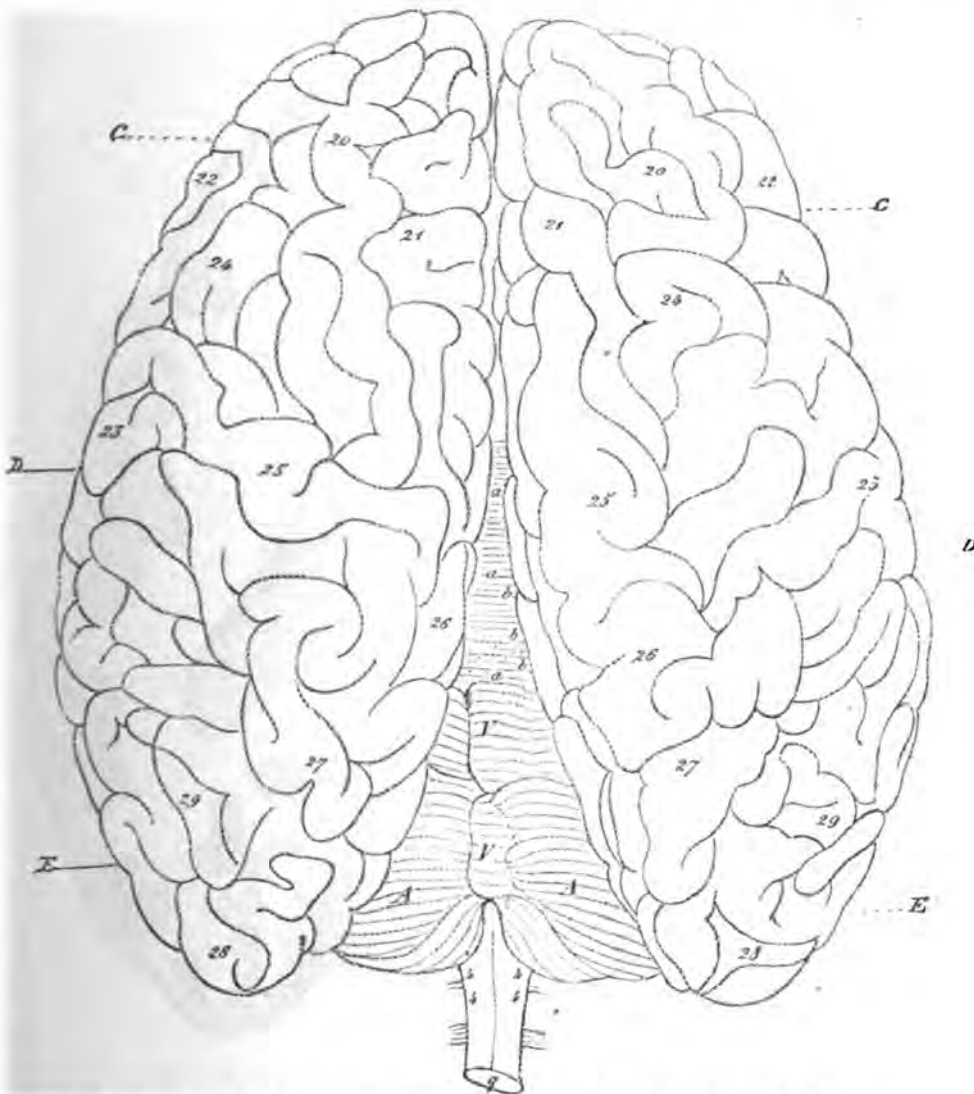


Fig. 198.—VIEW OF BRAIN FROM ABOVE—SHOWING CEREBELLUM AND CORPUS CALLOSUM. OUTLINE.

three lines. The intermediate reliefs, 2, 2, bear the name of pyramids; they are larger above than below where they become incorporated with the spinal marrow at twelve or fifteen lines distance

crossing or decussation is made perfectly manifest.

The French anatomist, Pourfour Petit, described with much care the decussation of the pyramids. Gall also insisted

upon the decussation, and demonstrated it beyond a cavil. Outside the pyramids are the olivary bodies or lateral eminences, 3, 3. Vieussens was the first anatomist to describe these. Their greatest extent is from top to bottom, while they are a little less elevated than the pyramids, from which they are separated by a

or hard part of the auditory nerve; the posterior, e, or soft part of the auditory—the labyrinth nerve; the distribution, form, and consistence of these two nerves differ evidently. Behind this bundle one sees another which immediately adjoins it at the base, r, d; it is also composed of two bundles, one ante-

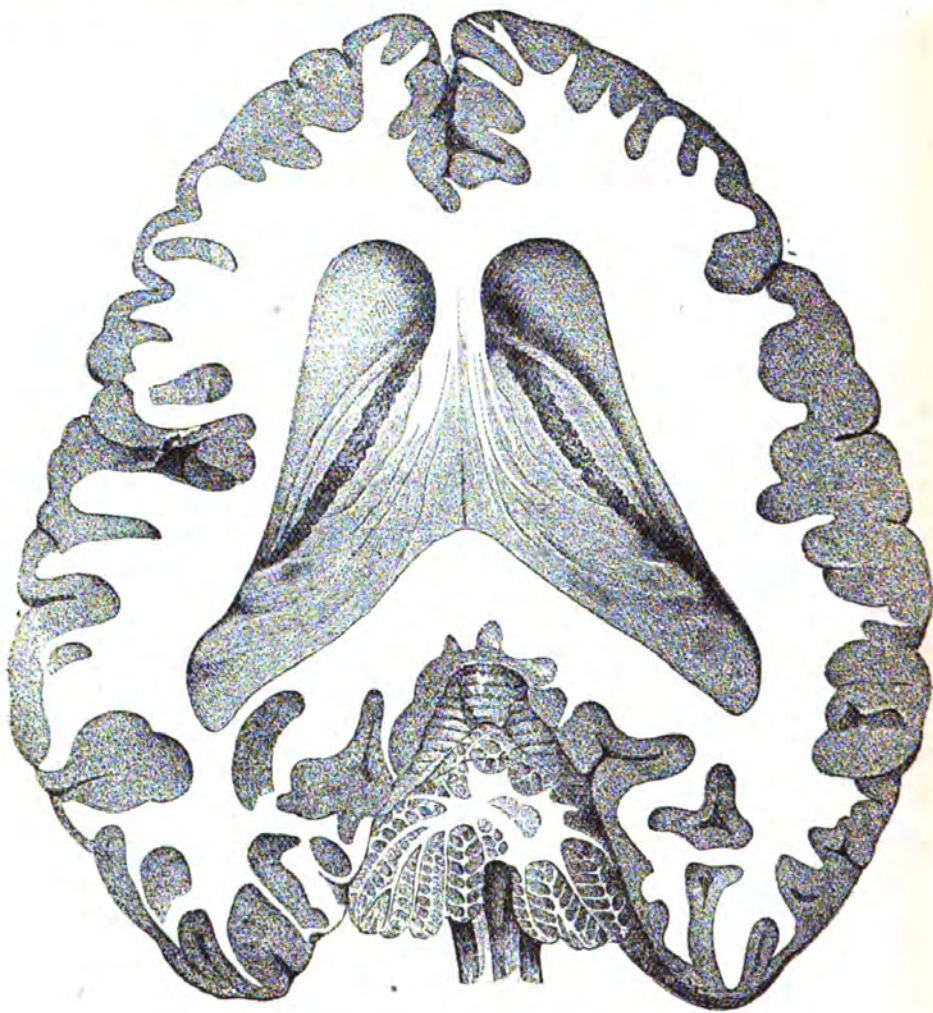


Fig. 199.—HORIZONTAL SECTION OF HUMAN BRAIN, SHOWING VENTRICLES, ETC.

channel whence arise the roots of the hypoglossal or ninth pair of nerves between the great commissure and the olivary eminences; and at a little distance is to be seen a small flattened bundle which one can divide into two distinct pairs: the anterior, g, the spinal

*rior, r, the other posterior, d. The first is the glosso-pharyngeal nerve; the second the *vagus* or nerve of the eighth pair. Outside of the olivaries, and five or six lines from them, we notice a long filament proceeding from above downward, a, a, a, developing by several roots;

it is the spinal or accessory nerve of Willis.

Figures 4, 5, 6, 7, 8, 9, indicate the lower surface of the cerebellum and the different lobules which enter into its structure. Considered in a general way, this part of the cerebro-nervous system presents two great masses on the right and left of the

inclosed in the skull, and which can be seen without recourse to dissection. If we separate slightly from above the two cerebral hemispheres (after having placed the brain upon its lower surface) we perceive a whitish layer, a, a, a (Figs. 197, 198), which appears to unite the hemispheres; this whitish layer was called by Chaussier

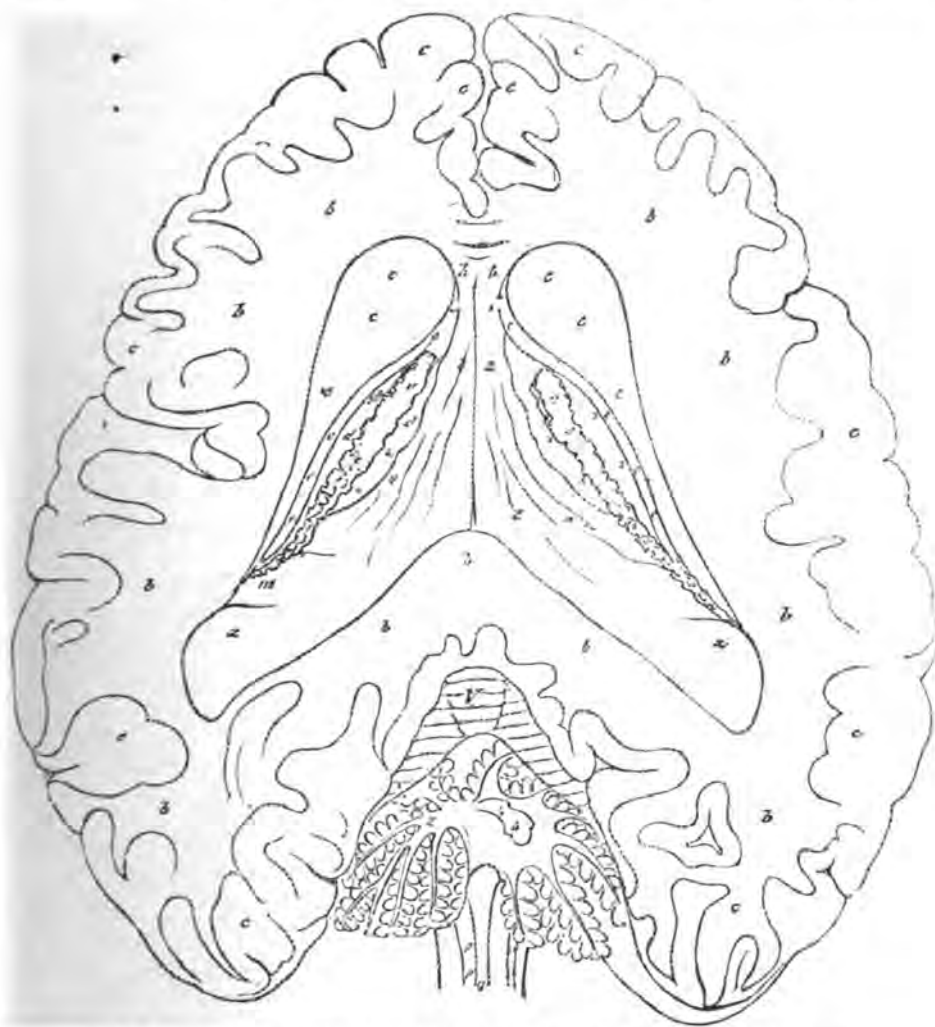


Fig. 200.—HORIZONTAL SECTION OF HUMAN BRAIN, SHOWING VENTRICLES, ETC. OUTLINE.

spinal cavity, each of which is divided into several lobules composed of thin layers; the whole of the lower surface of the cerebellum lies in the lower occipital fossa.

Let us pass now to the examination of the other parts of the nervous mass

the *meso-lobe*. Now, this part of the brain is generally known as the *corpus callosum*, or hard body. Its surface is smooth, and its length ordinarily a little short of three inches; between this and the hemispheres there is a deep recess, b, b; as the middle part, a, a, a, of this body is a little more

expanded than the remainder, the anatomists have given it the name of *raphé*. Sometimes upon the borders of this ex-

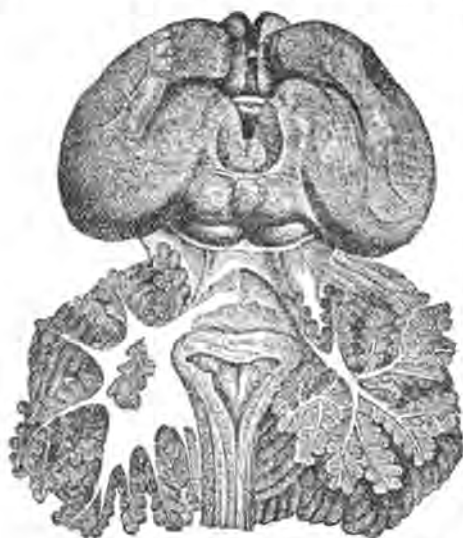


Fig. 201.—CEREBELLUM IN SECTION WITH ADJACENT GANGLIA.

panded part, a light depression is seen, resulting from the presence of an artery called the artery of the corpus callosum. The lower surface of this great commissure constitutes the vault of the cavities termed ventricles, which are seen only after the removal of the corpus callosum.

The left hemisphere of the brain as represented by Figs. 199, 200, has been cut away in such a manner as to show these ventricles. Their more prominent characteristics are two oblong bodies, rounded and broader in front than behind, *c, c, c*. These are the *corpora-striata*, so named because in section they present an alternative mixture of gray and white substance. Inside these are two other eminences, of which the larger extremity is behind, *d, d, d*. These two prominences have a whitish aspect; their interior surface is flattened, and they are slightly separated, and the interval or opening

between them is what is called the third ventricle. These swellings have the name of optic *thalami* or *couches*, in all the works of anatomy. Between the *corpora striata* and the optic *thalami*, there is a layer of white matter, *e, e, e*, the *tania semicircularis*, or semicircular band.

It is noticeable that these two layers present very nearly a V shape, and are more separated at their base, *f, f, f*, than at their summit, *g, g, g, g*, where they appear to be united; they are covered at the point *h, h*, by a thin portion which we have removed, and laid over at the place of the antero-inferior part of the corpus callosum, which has been cut away. At the two extremities of the fissure formed by the optic *thalami* two cords of whitish matter, termed by the anatomists anterior commissures, *i, i, i, i*, and the posterior commissure, *k, k, k, k*. At the extremity, *l, l*, is an opening communicating with the pituitary stem. At the opposite end, *m*, is another opening communicating with the fourth ventricle.

Further back, outside of the semicircular band, and in the deepest part of the

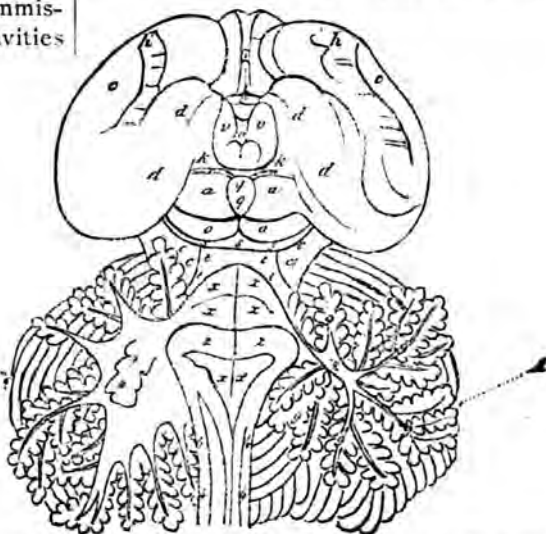


Fig. 202.—CEREBELLUM IN SECTION WITH ADJACENT GANGLIA. OUTLINE.

lateral ventricle, is a curved body, *m, m, m*, called *pes hyppocampi*, of which the interior part, *n, n*, has been named, on account of its striped character, *corpus fimbriatum*, or fringed body. If we di-

vide the cerebellum into two parts at the middle, and separate them right and left, we shall perceive the upper surface of the corpus callosum, Figs. 201, 202. On that surface lie the prominences known under the name of quadrigeminal bodies, a, a, o, o. These are formed exteriorly of a layer of whitish matter, and interiorly of a grayish substance, mixed with a rosy tint. The anterior, a, a, are larger than the posterior, o, o. We shall see further on the difference these bodies show in form, volume, and number in different animals. In man the anterior are overlain by the pineal gland, q, q, which is three to four lines in length, and two wide. This name is a misnomer, since the body is not a gland, and its form bears no resemblance to the fruit of the pine-tree. It is secured to its place by two filaments which pass upward toward the optic thalami. Below, and at its base, there is a small layer of nervous tissue which passes in front, then bends so as to return finally to the point of union of the anterior quadrigeminals. Divided lengthwise, the pineal body reveals a cavity opening downward. The consistence and color of this body vary very much,

Behind the quadrigeminal bodies we notice a narrow white stripe situated transversely, s, s, s, s. This is situated upon a white fibrous appendix having four to five lines breadth, t, t, t, t. The space between this layer, the cerebellum and



Fig. 203.—CEREBELLUM. UPPER SURFACE.

the medulla oblongata, constitutes what is called the fourth ventricle. Figs. 203, 204, represent the cerebellum as seen by its upper surface. In the mass it presents a rounded form, the middle portion, V, V, *vermis cerebelli*, being more salient than the lateral regions, Y, Y, Y, Y, Y, Y, which never present an equal development, one side being always larger than the other. The simplest examination of the cerebellum suffices to discover that its structure differs much from that of the cerebrum—it being composed of layers of which the number differs much. Some of the older anatomists sought to construct a theory of disease or sanity based upon the number of the layers, but experience has not sustained them.

The two principal masses or hemispheres of the cerebellum are separated by two hollows or grooves; one placed anteriorly—1, 1, 1, 1, shows a semi-circular form; it corresponds

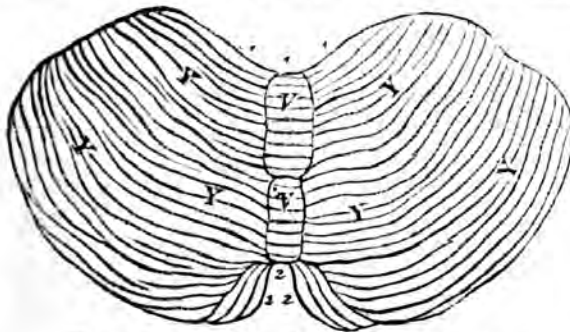


Fig. 204.—CEREBELLUM. UPPER SURFACE. OUTLINE.

and generally, but not always, little granules are found in its interior. Alterations or modifications are presented by this gland which are regarded, in some cases, as indications of disease in the cerebro-nervous system.

to the pons varolii, and to the spinal prolongation; the posterior—2, 2, is related to the internal ridge of the occipital bone. If each lobe of the cerebellum is cut perpendicularly in its center, as shown in Fig. 201, we find a

considerable number of white parts disposed in such a way as to resemble the branches and foliage of a tree. These markings appear to result from the association or inter-union of three nervous bundles already noticed; (1) that which proceeds from below and goes to form the anterior surface of the pons varolii, or great commissure of the cerebellum; (2) that which goes to make up, in large part at least, the quadrigeminal tubercles; (3) that which descends and unites with the spinal column in the posterior pyramid. The appearance resulting from the blending of these is known in all

works of anatomy as *arbor vite*, or tree of life.

If, instead of making an incision at the center, we make it at the junction of the interior third of the hemisphere with its two external thirds, we find a portion composed of gray substance (Fig. 202, 4, 4) which is the dentated body of Vicq d'Azir, or ganglion-of-the-cerebellum of Gall and Spurzheim. This section shows the relation of the medullary matter there to the medulla oblongata. A horizontal section of the cerebellum makes it to appear as if entirely constituted of gray substance.

SOME OF OUR RED BRETHREN.

IT appears to be a question in the minds of very many of the American people, whether the red man has the capacity for attaining unto a better life than that of a roaming savage; or whether he has any claims of humanity upon the superior race. Now, the sooner the public becomes acquainted with the true condition and capabilities of the aborigines, the sooner the so-called "Indian problem" will be solved; for it is hard to make a successful effort at genuine reformation in advance of an enlightened public opinion. The general estimate placed upon this unfortunate race has been based too largely, we think, upon the "History of the Murders of Early Settlers by the Savages," and upon the current literature of "Border Life," in which they are treated of as "red-skin devils," incapable of anything better than treachery and inhuman cruelty.

If the Indian is not human, not susceptible of culture, why not devise a speedier, cheaper, and more humane plan for his extermination than that of guarding him with soldiers, supplying him with bad whisky, and just enough rations to keep him idle and worthless: and suffering him to die by degrees with loathsome disease? If he *is human* and capable of being civilized, why not drop him as a hobby of political gambling, treat him as a man, furnish the necessary means for educating him in common English, in industrial pursuits, and in cleanliness and morals?

The accompanying portraits of two representative red men of Wyoming are

sent to the PHRENOLOGICAL JOURNAL that its readers who are not familiar with Indian physiognomy may be assisted toward forming a judgment based upon scientific principles as to whether such people really possess the inherent power to become civilized and enlightened.

Washakie is the head chief of the Shoshone or Snake Indians of this Territory, a band of about twelve hundred and fifty. His picture by no means does him justice, for he always wears a smile when in company with his friends, and appears much more amiable than represented. He evidently looked upon the photographic camera with suspicion. He regards railroads with superstitious awe, and could never be induced to board a train of cars, though he has been repeatedly urged to make a trip to Washington. That he enjoys a fair reputation, may be inferred from the fact that the military post and post-office, formerly known as Camp Brown, has been christened Fort Washakie; and a railroad station was also named in honor of this chief.

Wa-sha-kie signifies, in their language, "kills on the run"; and the Sioux, who formerly raided into his dominions, will probably acknowledge the name as applicable to its possessor. Six years ago a band of these marauders made a swoop upon the Agency, shot the herd boy, and were making off with the horses, when Washakie discovered them. He mounted his horse, and, yelling to his men to follow, dashed in among the murderers, who were intent upon getting away with the

stock, and killed and wounded several of them, single-handed, with his revolver.

He is an adherent to the Mormon faith, and occasionally makes a pilgrimage to Salt Lake, the Mecca of Mormonism. He practices polygamy, and rules the harem with considerable firmness, although his two wives appear quite happy and contented. He recently lost two wives and several of his eighteen children. A mother-in-law who became somewhat intractable, he promptly de-

He is social, respectful, and dignified in his conversation and dealings with white men, unless under the influence of liquor; he then becomes, at times, dictatorial and insolent.

Last summer Maj. Patten, then agent, made requisition on the chief for teams and teamsters to bring in their annuities from the railroad. It happened that Washakie had just returned from a visit to some of his white friends (?) where he had obtained a supply of "fire-water."



WASHAKIE.

spatched for "the happy hunting grounds." He will not suffer his men to abuse their women in his presence. At a Sun dance, a few years ago, a Shoshone ordered his squaw to go home and attend to some household duties. Being interested in the dance, she dallied, and he commenced beating her. Washakie ordered him to stop. He replied, "My wife must obey me," and struck her again. The autocratic chief enforced his dictum by deliberately shooting the offender on the spot.

He therefore told the Major that his men should not use their horses for freighting, that it would unfit them for the buffalo hunt. The agent replied that the department required them to do their own freighting, and that he must furnish the teams. "Patten, you're too fast," said the chief, striking him. Receiving a blow in return, he attempted to draw his revolver on the agent. Thus through the influence of whisky, a tragedy was nearly enacted. Drunken rows ending in murder are of common occurrence among

these people, as all who know anything about Indian life can testify.

Washakie has this season fenced about twenty-five acres of land and constructed irrigating ditches without any assistance from white men; and for the first time has saved hay for wintering his stock. Had this chief enjoyed the advantages of a civilized education, with favorable surroundings, might he not have become an enterprising and even influential citizen?

Prominent among the leaders of the

man's road, and learn the ways of earning an honest living. A number of them have laid claims to homesteads, fenced garden patches, and some of them built corrals for their cows. According to the treaty stipulations, they are entitled to school buildings and schools, but no buildings have yet been furnished them, though they had repeatedly asked for them, and their children have shown themselves apt at learning.

Sharp Nose, like Washakie, is a polyg-



FRIDAY.

Arapahos are Black Coal, Sharp Nose, and Friday; of the last a very exact likeness is given. The Northern tribe, of which Black Coal is the leading spirit, numbers about one thousand. These Indians have only been about five years off the war-path. Previous to that they carried on a kind of running warfare with roving bands of Sioux and Cheyennes, and made raids upon white settlers and emigrants. These chiefs say they are sick and tired of such a life; that they desire henceforward to travel the white

amist. He is said to be one of the best scouts and guides in the Rocky Mountain country. Black Coal has but one wife, and seems to be a kind husband and an affectionate father. He manifests an anxiety that all his people, and especially the children, should learn the ways of civilization as fast as possible.

Friday, the interpreter for the Arapahos, is about sixty years old, and has not a white hair in his head. A singular event of his early life has been of great advantage to him and his tribe. At the

age of seven he and a playmate were rambling through the woods in search of birds' nests, when the Indians moved camp without missing them, and the boys were lost. A trapper named Fitzpatrick, on his way to St. Louis with his furs, came across the wanderers, captured Friday and took him along. At St. Louis he was put into a Roman Catholic school, where he learned to read. Seven years after this the trapper came across the tribe and inquired if they had lost a boy seven years before. A bargain was soon struck between the parties, in which the parents of the stolen child agreed to deliver seven horses for his ransom. On his return to St. Louis, Fitzpatrick had an interview with Friday, but finding that the boy was not willing to accompany him back to the tribe, he resorted to deception to kidnap him. He prevailed on the boy to take a short ride with him

which proved, however, a rather long one, for he kept on till the tribe were found. The boy was delivered to the rejoicing parents, and the trapper received in return the horses agreed upon.

Friday says he felt glad on first meeting again with his own people; but when the thought of exchanging the better surroundings that he had enjoyed for a home for life in the filthy lodge, it overcame him and he wept bitterly. He soon, however, became accustomed to his former habits, and so he has wandered all these years with his tribe. Since the treaty with the tribe he has been under pay as a Government interpreter. He has lately taken a homestead, has a splendid garden, and a good corral. He is surrounded with his children and grandchildren, among the latter being Hayes, Grant, and Garfield, three very bright lads.

E. BALLOU.

OCCUPATION CONSERVATIVE OF SANITY.

A CURIOUS story has been going the rounds of the English newspapers of an exhibition in the show-windows of one of the leading jewelers of Vienna. The object of attraction is a brooch magnificently studded with gems, in the middle of whose chasing is inclosed the most singular of centers—four common, old, bent, and corroded pins. This brooch is the property of the Countess Lavetskofy. On the pins is founded a history, of course. Seven years ago Count Robert Lavetskofy, as the story runs, was arrested at Warsaw for an alleged insult to the Russian Government. The real author of the insult, which consisted of some careless words spoken at a social gathering, was his wife. He accepted the accusation, however, and was sent to prison.

In one of these lightless dungeons in which many an unfortunate subject of the Czars has been confined, the martyr for his wife's loose tongue spent six years. He had only one amusement, only one occupation beside his thoughts. After

he had been searched and thrown into a cell, he had found in his coat four pins. These he pulled out and threw on the floor; then in the darkness he hunted for them. Having found them, perhaps after hours and even days, he scattered them again. And so the game went on for six weary years. "But for them," he writes in his memoirs, "I would have gone mad. They provided me with a purpose. So long as I had them to search for, I had something to do. When the decree for my liberation as an exile was brought to me, the jailer found me on my knees hunting for one which had escaped me for two days. They saved my wife's husband from lunacy. My wife, therefore, could not desire a prouder ornament."

Here is a lesson for all to profit from. By occupation man may be saved from insanity. And within a short time it has been discovered that in the treatment of the insane, employment of some kind will help toward the improvement or cure of the majority.

DOES GOLD GROW?

DR. DRAPER has given his testimony to the belief that eventually the dreams of the old Alchemists, of converting the baser metals into gold, may be at some time realized, inasmuch as there are forty elementary metals out of sixty elementary substances. He says emphatically: "It requires some degree of moral courage to present the facts as they actually are, and stem the derision of the conceited and ignorant; *but the metals will one day be transmuted into one another, and the dreams of the Alchemists all realized.*"

It is refreshing always to hear an honest, outspoken conviction uttered, and it is encouraging also, to learn that no earnest endeavor will be totally without results in this world. I have always had a tender leaning toward those patient, pious old philosophers, the Alchymists, who delved into the secrets of nature with untiring zeal, despite of peril and persecution — feared by the ignorant populace, and denounced by a priesthood often scarcely less ignorant, who stigmatized them as Sorcerers in league with the powers of darkness.

Could one of these ancient sages arise from his grave and enter a modern laboratory with all its wonderful improvements, and work again at forge and crucible, with the old faith, frugality, and patient observation, trust in God and trust in himself, we should not have merely the Midas touch transforming to gold, but we should be meshed in golden tracery, in fillets of amber, showers of gold, and hail-storms of diamonds.

Montgomery Martin, in his work upon Australia, says: "How gold is produced, where it originates, is a mystery. Many of the miners are strongly impressed with the idea that it *grows*, or comes up in yearly crops in Australia. This idea has probably arisen from the observation that some deserted *holes* on being tried again have yielded large returns. One at Forest Creek, when driven a foot or two further than when neglected, was

found to contain, almost in a heap, 20 lbs. weight of gold in *nuggets*. Another hole in the same locality, which miners had abandoned at twenty-one feet deep without seeing a speck, was worked eighteen inches deeper by a fresh party, and a heap weighing 18 lbs. was obtained. Some miners affirm that one or more volcanoes burst forth, and sent out showers of gold instead of cinders, and in confirmation of this theory, they point out the *shot-like* appearance of nuggets, many of which have evidently undergone the action of fire.

"Some suppose that the precious metal is a sort of crystallization, or *growth* in crystalline formation, acting, of course, under regular but unknown laws, and that these places are at this moment producing gold."

This reminds me of a conversation had with Mr. Peal, brother of the distinguished artist of that name, and at that time Superintendent of the United States Mint at Philadelphia. While lecturing in that city I was invited by Mr. Peal to visit the institution. I was not surprised to find in one occupying a position of such trust, a gentleman, scientific and observing; but I found more—he was a quiet enthusiast; and when, in the course of our interview, I expressed my veneration for the old pioneers of science, the Alchemists, his response was so cordially sympathetic that I became interested to know his grounds for belief in them, which I will give in due time.

I shall never forget the strange delight I experienced in lifting the ladle of liquid gold and pouring it aloft—a mass that globuled and rolled upon itself with serpent-like fascination, beautiful exceedingly; translucent opals and diamonds; changing rainbows, and dying dolphins. While thus amusing myself, a square-built, hardy-looking man had entered the place, and laughingly enjoyed my admiration. He had that off-hand, self-sustained manner that characterized the early California gold diggers; men of

enterprise and culture, a sort of revival of the gentlemen of the times of Queen Elizabeth, who came to these shores partly for the love of adventure, and partly in search of gold.

He carried in his hand a bag, which looked insignificant till he dropped it upon a table with a slam that made itself felt. He went on to say :

"I dug this gold in California, and, sir, I want this identical gold, and no other, made into coin; I want a portion made into a bar with no alloy, to bear the date and year of the smelting. I dug it with my own hands, and have a kind of affection for it."

Mr. Peal promised that his wishes should be faithfully regarded. His own gold and no other should be returned to him. After he left I expressed some apprehension that this might be an impossibility, but Mr. Peal assured me that it could be done, and pointed to several small crucibles on the furnace which were then bubbling with gold.

After this followed a discussion upon the possible production of this metal, and I spoke of a specimen brought from the shores of the Pacific, which contained an exquisite form of the long California acorn. It had exactly the appearance of a mould such as artists use for the multiplying of their designs.

How came this impression there? Was the gold in a liquid, boiling state into which the acorn fell, and consumed itself, leaving its impress behind? or was it a chemical compound formed around an acorn which had casually fallen from a tree?—were questions propounded in my suggestive ignorance, to which Mr. Peal replied, with the wisdom of a philosopher and man of science, and just enough of the poet to make him catholic in his faith and large in his receptiveness, in nearly if not quite the following words:

"In her vast subterranean laboratory, Nature combines, filters, evolves; separating simples from compounds, and producing those beautiful results which to us seem mysterious and marvelous, but which will eventually be better under-

stood, and found to consist of the simplest relations. Here, in her secret recesses, chemical heat is evolved, which disrupts mountains and disintegrates rocks, into the seams of which she injects her auriferous treasures. Sometimes this may fall in golden showers; sometimes in golden jets; sometimes in rolling golden lava, into which if any substance, an acorn for instance, chance to fall, its impression is left in the cooling metal.

"I have more than once taken from the crucible more gold than had been put into it, and I have tried, but in vain, to reproduce the effect, or to learn by careful analysis the chemical properties required."

It would thus seem by the language of Mr. Peal, Dr. Draper, and others, that the search for the philosopher's-stone is not yet an exploded endeavor, and the mystic subjection of all matter to legitimate, spiritualistic power is not altogether an extinct belief, as may be gathered from the spiritualistic tendencies of the age acting as a counterpoise to the more rigid scientific materialism of the period. It is thus that a balance is preserved in the search for exact ideas.

Nor is the class of devout mystical believers entirely confined to the past, and it is not a little curious to see habits of thought, which the spirit of the age has superseded, sometimes make their appearance hundreds of years later, in some one of the posterity of a family, just as the black eyes of a remote ancestor are sometimes reproduced in a family where both father and mother are blue-eyed.

It was my fortune to be partially acquainted with Mrs. Mather, the inventor of the sub-marine telescope, whose husband was a lineal descendant of the renowned Cotton Mather, author of the "Magnalia," and an unflinching believer in the occult, and most especially in witchcraft, as did King James, Sir Matthew Hale, and other learned men of the period. Her husband was a marvelous product of Yankeedom, and only to be accounted for on the basis of heredity; a modern Jacob Boehm unproductive of

the infinite suggestiveness of the wonderful Shoemaker of Gorliz.

Mrs. Mather came to me, she said, in consequence of a dream in which her dead husband directed her to find a woman, whom he went on to describe, who had the power, under instruction of superior spirits, to transmute the baser metals into gold. She went to hear me lecture, and declared I was the person described in her dream. The prospect was tempting: the precious metal much to be desired, and not a little needed, but I was more interested in the history of Mr. Mather than in any prospective wealth to accrue to myself.

That Mr. Mather lived quietly in the exercise of his fancies and prophecies, must be imputed to his living in this nineteenth, rather than in the thirteenth century, when he would, most assuredly, have been burned for a Sorcerer; and that he thus lived and thus peacefully passed away was due, also, to the patient, untiring devotion of his devoted wife, who was in the highest degree practical and the most conceivable opposite of himself.

He had a room in his house from floor to ceiling, including both, hung with white linen. Upon the table, covered in like manner, were seven silver candlesticks in which burned candles of pure white wax. After fastings and prayers, arrayed in snowy linen, he entered this chamber sacred to purity and divine communings. Here he passed years of his life, ignoring all human claims, and engaged in abstruse speculations. He was often heard to speak in a loud voice, not in supplication, but in adjuring command.

In one of these periods, he came from his room radiant with smiles, and described a vision in which he had seen the great ocean of the setting sun; there were mines of gold, and rivers flowing over golden sands. He said gold grew, and by chemical tests could be made. All this was twenty or more years before the great discovery of the precious metal on the Pacific slope.

Mrs. Mather brought me several folio volumes upon astrology, once the favorite property of Cotton Mather. She was

greatly chagrined at my want of sympathy with her enterprise, and indeed I do not regard it as any merit that I did not co-operate with her, and examine more fully into it. But of one thing I was not unimpressed, and that was the affection amounting to idolatry of this plain matter-of-fact woman for her unearthly husband.

At one time he opened the door of this room and called loudly, "Martha, Martha;" when she came he said, "Take pen and ink and write down what I shall tell you."

She obeyed, and he gave her the day, year, and hour on which he said he would be called out of the world. He then returned to his visions.

Mrs. Mather made a copy of the prophecy, placing the date a year in advance, and like a quaint housewife cut an opening in the paper lining of a trunk, into which she slipped the original. Subsequently, when he asked for the paper, she gave him the false date, which he read without comment. She was ill at ease as the predicted period approached. He was in his ordinary health, even stronger than usual, bright and cheery, talking with his family, when he suddenly fell from his chair in a dead swoon. *It was the hour of the true date.* He never recovered consciousness, and soon expired.

Now here was a man akin in many modes of thought to Jacob Boehm, and Emanuel Swedenborg, both of whom predicted the day of their death. Mrs. Mather believed her husband divinely inspired—a saint and a prophet, which was the more beautiful because the stress of supporting the family, and the inconveniences arising from poverty often pressed heavily upon her. Silas Wright procured the passage of a bill through Congress awarding her ten thousand dollars for her invention, which was a timely relief.

There is no doubt we shall have an age of gold, when diamonds and rubies will be less esteemed than the rose and the lily; but no test will give us finer gold than the affection of this devoted wife.

ELIZABETH OAKES SMITH.

PLANT LIFE.

THE divine mystery of life writes some of its most wonderful histories upon the "herb of the field." Over the meadows, in the woods, and by the brooks; in the fresh air and the warm sunlight, on every hand, are chapters abounding in beautiful illustrations, asking to be read and studied.

Solomon, the sage of Scripture, explored the fields of plant life, "from the cedar tree which is in Lebanon, to the hyssop that springeth out of the wall." The roadside ditches of New England abound in a delicate wild flower of the same family which Solomon's historian has preserved in the sacred page, and the golden hyssop still clings to crevices of the stones in the water-courses of Palestine. Here also in New England, in the same localities, in the early autumn will be found the wild vervain, allied to the verbena, with which the Greeks crowned their victors in the national games; and thus with the history of its own origin and life, the wayside weed also preserves incidents of both sacred and classic history.

The word Botany is from the Greek, and signifies an herb or grass. Whoever, then, studies a plant, studies botany. As the entire animal kingdom, including man, obtains all its nutriment, primarily or in a secondary form, from plant products, it is also a very important study. Its object-lessons are the loveliest in nature, and are found on

the sunny hillsides, embalmed by long cultivation; they are etched on the tall trees, and painted on the velvet mosses at their roots. They brighten the out-of-the-way places of the earth and the



THE VEGETATION OF NATURE.

deep sea. Minute plants consisting of a single cell are supposed to cause the "red snow" of Greenland; and around the Geysers and other hot springs exist forms of vegetable growth. But these

last are among the exceptional wonders of plant life.

Warmth, light, air, and moisture, with congenial soil, are the requisites for vegetation in its most perfect development. The plant in its natural state is always true to its own habits and preserves its own identity. The Amaryllis is at the present time found growing on the plains of Palestine in as rich profusion as when our Saviour taught his disciples lessons from its beauties: "Consider the lilies, how they grow; they toil not, neither do they spin, yet Solomon in all his glory was not arrayed like one of these." If he, who "spake as never man spake," taught his disciples, who were to be the teachers of the world, from the flower of the field, we may be quite sure that the teachings of the plant are not exhausted.

The Bible and the writings of Homer contain the only intimations of botanical knowledge in the early ages, if we except the poem on agriculture by Hesiod, who flourished probably in the time of Homer. Floral emblems were in early use, being found on very ancient sculptures. The lotus of the Nile occupies a prominent place in the ornamentation of ancient Egyptian structures, and was highly venerated by that olden nation.

The magi of the East possessed some knowledge of the properties of plants, and how to extract their poisons and perfumes; but they held their attainments with jealous care, and not for the good of mankind. Pythagoras, after extensive travel through Egypt and the countries of the East, composed a treatise on plants, the earliest known work of the kind. Aristotle, under the patronage of his royal pupil, Alexander, was the next philosopher of antiquity who wrote of the floral world. With the early Romans agriculture was the employment of the patricians. Cincinnatus was called from the plow to the dictatorship of the Roman republic. Crowns of evergreen of different kinds were the sole reward of the victors in the national games of Greece, where kings and conquerors contended for the prizes.

After Aristotle, other philosophers studied plant properties, and recorded the results of their researches; and Pliny, who perished during the eruption of Mt. Vesuvius, A.D. 79, relates that two kings fought for the honor of the discovery of the Greek valerian. Certain families of plants were early consecrated to various specific uses by the classic nations. A near relation of our common onion, the asphodel, was planted by the Greeks around the tombs containing the cinerary urns, or ashes of the dead, from a belief that their souls were nourished by the roots.

The field, the forest, and the wild; the pathway of the country road, as well as the domains of culture and refinement, must be explored in pursuit of botanical knowledge. Spread out everywhere in nature are numberless invitations and inducements to healthful and beautiful study.

The basis of all plants is membrane and fiber, and the vital organs are termed the *tissues*. The cellular tissue, the great circulatory organ, is common to all plants, and entirely composes some of the lower families. This tissue is formed of minute cells, adhering together by a slight membrane, and the food of the plant must be fluid, in order to make—or filter—its way through this membrane, no openings in which have been discovered. Here probably the fluid takes the gaseous form. The woody tissue gives to the plant firmness and strength. This tissue forms the manufactured fibers of the flax—the linen of commerce. Linen cloth has been in use through the historic era. Linen is from an old Celtic word, signifying *lin*—a thread. The beautiful lace bark of the West Indies and the delicate Chinese rice-paper are plant tissues.

Before the manufacture of writing material, the Egyptians wrote on rolls of linen, but at a very early date they made use of the cellular tissue of the papyrus for that purpose. Our word *paper* is from the name of this plant. The papyrus was a sedge or grassy plant found growing in the ditches and stagnant pools. Thin plates of its cellular tissue

were moistened and pressed together, adhering by its own gluten, and in this manner very large sheets were formed. Besides Egypt, Greece and Rome used papyrus for writing until the invention of parchment. Egypt continued its use until the seventh century, A.D. The little ark of bulrushes was probably made of papyrus, and to this day the Nile is navigated in rude boats or baskets made of the fibers of its river plants.

The vascular tissues are spiral fibers, for the transmission of air, and the lactiferous tissues contain the assimilated and nutrient sap. In botany, instead of *digestion*, the word *assimilation* is used. The plant does not digest the sunlight, air, and moisture; it assimilates it, or makes it like itself, and changes mineral substances into the vegetable formations. In different genera, or families, the arrangement and form of these tissues vary, but the mysterious principle of life is discernible in them all.

The Charads are a low order of flowerless plants found in stagnant waters. They produce spores instead of seeds, and are destitute of the spiral vessels which abound in plants of the higher orders, being composed of cellular tissue and ducts only, yet in this extremely simple organization, under the microscope the vital flow is very plainly discernible, and if any part of the plant is injured, the life current instantly ceases its ac-

tion. The masses of green slimy matter, so unpleasantly familiar to the eye, seen on the surface of ponds and ditches, and often on the stagnant water by country roadsides, are minute plants, known by the general name of *Confervæ*. If a small portion be detached and floated in a drop of clear water, the microscope will then reveal many delicate and exceedingly beautiful plants. Their species are numbered by hundreds, and many of them are reproduced and their growth perfected in a single day.

But we need not, unless we desire it, call in the microscope to aid our botanical studies. Even without its aid much may be learned of the beautiful alphabet of botanical science. "The blade, the ear, and after that the full corn in the ear," abound with instructions which, if gathered, will prove a well-spring of life-long pleasure of the purest type.

From the Arbutus, hidden under the February snows, whence its waxen buds breathed the first sweet message of hope to the desponding and decimated pilgrim band, in the birth-year of New England, even to the last Gentian of November, bearing on its fringed perianth the name of Gentius, a king of ancient Illyria, each season has its floral teachers from the Source of all Good. They are laden with legends from all lands, and their beauties and lessons are ours to share and to learn.

ANNIE E. COLE.

OUR GIRLS.

A WORD TO MOTHERS.

A THRILL of sympathy goes through my heart as I listen to the plaintive song, entitled "Oh, where is my wandering boy to-night?" and in fancy I can see the sad, pale-faced mother, with hands clasped in anguish, restlessly pacing the floor to and fro, while ever and anon she pauses at the door or window to listen for the footsteps that come not. Oh, it is cruel for that wayward boy, the idol of her heart, to grieve her so. But,

whenever I listen to that sad song, I think that, very appropriately, sometimes the refrain might be changed to "Oh, where is my girl to-night?" Mothers, where are your girls to-night? You weep and wring your hands when you think your boy is going astray, but does no thought of anxiety come to your heart as you think of the beautiful young daughter who, a few hours since, left her home? She told you that she was going

to spend the night with a schoolmate or friend, and you saw her depart, unattended, with no question as to the reason of these oft-repeated visits. (And here let me add one word in regard to what is becoming so common among even quite young girls, the exchange of night visits with each other. It has often seemed very strange that mothers, who have the credit of possessing good common sense, will allow their young daughters to spend the night with their schoolmates so frequently. It seems to me a dangerous custom, and one that sometimes results in much injury to the hitherto innocent child, for there the seeds of impurity are sown upon the tender soil that shall spring up and bring forth poisoned fruit). Mothers, if you were to go with me now to the corners of some of the fashionable streets, would you be surprised if, among the gay, chattering maidens there, you should recognize your own daughter? Would you be more surprised if a little later you should see her accept the arm of a showily-dressed young man and pass into a saloon, where, with a whole band of boys and girls (for they are little else), she partakes of refreshments, even of wine, and joins in the light banter and silly gossip that is passed around? I do not think this an overdrawn picture, for there are thousands of young girls to-night who thus stand upon the brink of ruin. Why do we see so few *children* nowadays? Our streets are thronged with young *men* and *women* of twelve to fifteen years of age, daintily dressed according to fashion's latest decree. But a *real* girl or boy is a rare sight. "But," some may say, "would you have us go back to fifty or a hundred years ago? This is a progressive age, and our children must keep up with the spirit of advancement." No, I would not, if I could, throw one single impediment before the chariot-wheels of progress. I would have our children advance with the throng, but I would not hurry them so fast upon the onward march that they will lose all the gathering of the golden blossoms of childhood in the haste to put into their hands

the fruit of maturer years. I would have the grand procession of human genius and invention move on from one triumph to another; but foremost in the ranks would I see the queen of health and virtue, with her banner of purity floating on high in the breeze of heaven, and close behind her moving chariot would I see our girls and maidens in the unsullied bloom of innocence. I would see them so sheltered and protected by her presence as to put to shame the hand that would dare attempt to lay their honor in the dust, and silence the voice that dare speak lightly of womanhood. I would have the world look on and say, "Behold a nation over whom floats the banner of purity and holiness, whose youths and maidens are strong and vigorous for the on-coming battles of life; whose cities and towns are guarded by the stern sentinels of Duty and Health, and consequently whose streets are seldom visited by the fierce sword of an outraged nature. I would keep the dear little girls under the shelter of the home tree and the mother's wing just as long as possible. I would not do this by a stern, unyielding necessity that would make them long to break from restraint, but I would feather the nest well with kind, loving words. I would have the network of affection woven so closely around them that all the surroundings of after-life could not break it. I would have the sweet mother-face the last upon which the child should look before closing its eyes in slumber. No hired nurse should be allowed the holy duty of soothing to rest that child-spirit.

I often think that a great influence is exerted upon the after-life by the simple, earnest, bedside prayer, the loving smile, or the gentle rebuke of the mother. All along the shores of the river of Time are many wrecks; beautiful vessels, freighted with fond hopes and lofty ambitions, have stranded on the rocks and gone down, while, with a firm and skillful hand at the helm, they might have steered away from the rocks out into the deep waters of a grand and useful life. Perhaps I am

at fault, but it seems to me that in almost every case of youth-wreck there is some fault in the training; something in the influence exerted upon the early life of the boy or girl that has sent them away from their homes to seek enjoyment out amid the buffeting waves of a world that cares little for such frail barks so long as the great ship of wealth and prosperity glides swiftly along.

Parents, if you would not lay up for yourselves a harvest of bitter woe and shame, be careful what seed you sow. Seek to draw the heart of your child to you in a loving, trusting confidence, that shall bring all its little burdens to you for help, and then, when the greater struggles of life come on, you will not complain that your children do not come to you for advice and assistance. Far better might you lose many dollars per day than to lose one single opportunity of preparing that young heart to combat bravely and successfully against the temptations that will surely beset them sooner or later. Let them early understand the laws of their natures, both spiritual and physical, and the results that must follow infringement upon these laws. Let great care be exercised in the selection of tutors and governesses. No man or

woman ought ever to be allowed to mould the tender character of youth who has not first moulded his own by the standard of truth and purity, whose education goes down deep below the surface, reaching even to the foundation of his existence and the laws that govern his being. He should possess, and instill through all his teachings, a repugnance to vice in every form; he should be capable of understanding and adapting himself to the varied dispositions under his care, so as best to reach the heart and understanding. He should be a thoroughly good and pure man, and then may he train the young in the ways of goodness and purity.

But while there are so many more able advisers than I in the field, it seems as if I can do little, yet I wish I might say one word to rouse parents from the indifference with which many of them regard the children intrusted to them ere they find out too late that not wholly have they done their duty when they have heaped upon them riches and indulgences, but that there are soul-longings and heart-cravings to be satisfied, if not at home, perhaps somewhere else where the tempter waits to lure and destroy them.

MRS. ETTIE H. DAVIS.

LUCRETIA MOTT,

THE QUAKER PHILANTHROPIST.

AMONG the remarkable women who have died within the past decade, not one acquired a higher eminence than Lucretia Mott. This venerable Quaker had peculiarities of disposition, but they were not offensive; on the contrary, they were attractive, being in great part expressions of an earnestness and strength ever leaning toward rectitude of conduct and scrupulous integrity. Her organization was finely balanced; of prompt receptivity and ready intuition, it was delicate and refined, and hence she was intellectually inclined to quiet, contemplative ways, and to seek in the home and social circle for the means of mental

gratification. Her strong sympathies, and, perhaps, her deep sense of duty and moral obligation, however, were the impelling forces which led her to speak out in behalf of truth and justice even as a school-girl, and the extraordinary talent she exhibited in the discussion of great social and political questions then, was not suffered by her friends to remain hidden away in the recesses of domestic life.

Her head was unusually large, and the brain of a very high quality, its activity being well sustained by excellent recuperative power, which was maintained by habits of scrupulous temperance and

regularity. Hence she was enabled to be a leader among leaders, whether men or women, and to remain a vigorous and unremitting worker in the higher sphere of humanitarian effort until past eighty years of age.

She was born in January, 1793, on the Island of Nantucket. Her parents, whose name was Coffin, were descended on both

Her interest in both the anti-slavery cause and that of woman's work and wages dates back to her school-days, long before any organized effort was made in either cause, and she was one of their few agitators who set in motion organized effort in behalf of each cause. In 1818 she became a recognized minister in the Society of Friends. Years



sides from a long line of Quaker ancestry. She received her education partly in Boston, partly in the Friends' Boarding School, in Dutchess County, N. Y., and herself began teaching at the early age of fifteen. In 1809 she removed with her parents to Philadelphia, which was from that time forth her home, and there was married to James Mott in 1811.

afterward her eloquent speech, her clear and cogent reasoning and powerful appeals to the conscience, became known to a continually widening public as she pleaded for the freedom of the slave, and later for fuller opportunities and equal justice to her sex. In 1827, when the separation of the Society of Friends into two distinct religious bodies occurred,

she identified herself with the Hicksite or Unitarian branch. But whatever question may have been raised as to her religious creed, there never was or could be any as to the beautiful and practical Christianity of her life.

In 1833 she was one of those who took part in the first anti-slavery convention, which was held in Philadelphia, and which organized the American Anti-Slavery Society. The next year she was one of the organizers of the Philadelphia Female Anti-Slavery Society, and among its most active executive members. She addressed many meetings in the succeeding years, not only throughout the North, but in many of the slave States, and was several times among those who were attacked by mobs assembled in the interests of slavery. A well-authenticated anecdote is told of her on one of these occasions. She bade one of her friends, who had his hands full in protecting the ladies of his own party, to go on his way without giving attention to her. "But who will protect you?" he answered. "This gentleman will," she replied, laying her hand lightly on the arm of one of the ringleaders of the mob who were crowding to assault them. The man looked at her for a moment, as if struck dumb, but justified her bold confidence and ready wit by taking her under his care, and guiding her out of the violent crowd.

In 1840 she and several other women were sent as delegates by the Pennsylvania Society to a World's Anti-Slavery Convention held in London. Massachusetts also had included several women in its delegation. The refusal of the convention to admit these delegates to seats, and the indignation aroused by such action, caused the publication of the first English and French woman's rights journals, and the calling of the first Woman's Convention in America. It was held in Seneca Falls, N. Y., in 1848, and James Mott, the husband of Lucretia Mott, presided. The husband and wife were as one throughout life on all questions of humane effort. Mr. Mott died

about fifteen years ago. He was very tall and muscular, while Mrs. Mott was short and seemingly slight in figure; and in the simple dove-colored Quaker dress, with the crossed white muslin kerchief at the neck, and the prim cap, she made a very pleasing picture. There were born to this well-associated couple five children, three of whom are living.

After the anti-slavery movement, the education and employment of her own sex claimed her strongest interest. She was one of the first to move actively in the promotion of the medical education of women, and for the founding of the Woman's Medical College of Pennsylvania. Her cordial sympathy and co-operation never failed its professors, students, or trustees, and her sweet face and cordial greetings were among the greatest attractions of its annual receptions on the evening of commencement day.

Notwithstanding the frequent demands of the public upon her time, she in no way neglected her home. She was fond of housekeeping, and conducted her domestic affairs in the old Quaker fashion, and her four daughters were carefully instructed in the duties of the household. "It was the custom of Mrs. Mott and her family to breakfast in winter not later than seven, and in summer as early as half-past six o'clock. In the long summer mornings, notwithstanding her age, she liked to get up an hour or two before the rest of the family, and gather the vegetables or fruit for the day. . . . She spoke in public because she was conscious of a power which impelled her to do so. Like the noble Methodist woman in 'Adam Bede,' it was 'as if speech came to her without will of her own, and words were given to her that came out as the tears come, because our hearts are full, and we can't help it.' This was the secret of her eloquence. Of all the prominent American women of this century, there is probably not one so little associated with that which is disagreeable in publicity, and yet there is none who has been more prominently before the public."

THE YOUNG FOLKS OF CHERRY AVENUE.

CHAPTER VII.

TAL AND TRUMAN IN CONSULTATION—
MISS JULIA MAKES A SPEECH.

[The reader will find the first six chapters of this attractive story in Volume 70, being the Numbers of the PHRENOLOGICAL JOURNAL from January to June of last year.—*Ed.*]

“HOLLO, Tal, wait for me.”

Tal was walking briskly along, for it was near school-time; he liked to be in his seat before the bell rang, so that he could look over the contents of his little desk, and see that everything was right, and perhaps have a little chat with Miss Grace Clem, too. He was a peculiar boy in some things. No one was more fond of fun than he, and no boy in the school did more to make it; but he didn't like hurly-burly fun, or confusion. He'd stop playing at recess to go into the school-room a minute or so before the bell rang, because he wanted to be out of the rush which always followed that call to resume serious work. And when the order for dismissal was given, he would usually wait until the majority of his school-fellows had scrambled out; then out he would run, and nimbly make his way to the front. He didn't like to be *crowded*, and would say he “didn't see the use of being in such a great hurry to do a thing when there was plenty of time.” Hearing the call, Tal “slowed up a little,” as a railway engineer would say, and Truman Burr soon joined him. Truman had not got entirely over the injury which he brought upon himself by pulling the fence down, as he limped some.

“Jiminy, yer in a hurry. ‘Taint so late,” said that worthy.

“No, it isn't very late, but I thought I might as well walk fast as to go slow. I like to walk fast, don't you?”

“Huh! huh! huh! Ye're allers on hand, and that's the reason yer gits such good marks. I guess,” said Truman, in a

tone that was half admiration and half sneer.

“Well, isn't it better to be early than late, anyway? A fellow who comes in late disturbs the school, and is really put back someway in his lessons. Anyhow, I don't feel right at all if I'm ever late—can't get over it nearly all day.”

This bit of psychological discussion was probably too deep for Truman's intelligence, for, with his half-Indian grunt, he asked:

“Hear 'bout the lecturer last night?”

“Yes. Horry was there, and told us about it at breakfast this morning. Were you there?”

“Bet I was. Everybody was there. All the big-bugs. Guess ole Dr. Whipple felt putty much took down by what Wellin' said of him. You'd orter seen the way the people laughed. It was jest too good!”

“Horry said it was very interesting. I liked the lecture I heard last Saturday very much, and I'm going to learn something about Phrenology. Horry's going to buy some books and study 'em, and I can do it, too.”

“Huh! huh! huh! You'd do big things, I reckon.”

“It's very useful to everybody,” rejoined Tal, warmly. “Don't you remember what Miss Julia Clem said t'other day about how her father became an artist because a phrenologist told him he could make a good one?”

“I jest wonder what kind of a duck I'll be when I grow up.”

“If you'll study Phrenology, Tru, you'll learn a good deal about yourself, and how to live, and what to do,” urged Tal.

“Look here, now,” cried Truman, taking his companion's arm, “s'pose you read them books, and learn all 'bout it, an' jest 'xamine my cocynut, an' tell me what you think of it. I guess that'll do for me. Pop sez I aint fit for nothin' but eatin'.”

"There's a good deal in you, Tru, and I believe if it could be brought out you'd make a smart man. There's—"

"Huh! huh! huh! now yer gassin'," broke in Truman, with one of his rough jerks upon Tal's arm which almost threw the boy down.

"There, Tru, please to be not quite so rough. I'm not so big as you, you know. But I was going to say that there's Joe Winkle; papa says that if he'd had good instruction when he was

and turned, with a defiant face, toward the merry party, but Tal whispered, in an undertone, "Never mind 'em, Tru," and then, in a good-natured tone, called out:

"Yes, we're consultin', girls, on the state of the country; don't you think we'd ought to be sent to Congress?"

"Why, yes; ha! ha! ha!" laughed Sophie. "Aint it too funny for anything! Tal and Truman Burr going to Congress!" All the girls laughed at this sally.



TAL AND TRUMAN BURR IN CONSULTATION.

young he'd have made a very smart man."

"Well, I guess I'm a good deal better in some things than most people s'pose, an' if I only had a chance—"

"Just see those two boys, Tal Manley and that Truman Burr, in such familiar conversation," cried a shrill voice, which was followed by a peal of laughter from four or five girls, who were standing together on the porch of a modest dwelling, a short distance from the school.

The boys looked around. There were Milly, Sophie, Adah Bang, and others.

Truman hastily let go of Tal's arm,

"Come along, Tru," said Tal. "I want to tell you before school begins about what papa said of Joe Winkle. He just became a drinker because he got into the habit of going out nights with young men and spending his time in saloons. Poor fellow, he didn't have any one to tell him how to use the time right, because his mother was dead, and his father didn't give him any attention, scarcely."

"Huh! that's fun, you'd better believe it. Who wants ter be readin' and studyin' books all the time. Jest let me have some money, and I'll show yer how ter

make it spin. I'd go ter the the-a-ter, and I'd play billiards all I wanted ter. Guess yer wouldn't catch me long in this old one-horse place. I'm goin' ter see the world's soon's I'm a little bigger, you can bet."

"Well, if that's what you're going to do, Tru, I'm sorry for you. Don't you remember the song we sang the other day in school?—

'Now which will you choose? to be thrifty and snug
And to be right side up with your dish;
Or to go with your eyes like the eyes of a bug,
And your shoes like the mouth of a fish?' "

"I swow, you'd make a good Methody parson, Tal, ye've got a meller voice, and can preach like a reg'lar. Hi! I aint goin' in yet. Let's have some fun afore the bell rings. Tag—who says for tag?" And, turning to two or three boys near the school door, Truman let Tal pass into the building alone. He had no sooner shown himself in the school-room when—

"Oh, Tal, I want to speak to you," cried a girlish voice; "come here a minute." The boy went over to Trudie Baker, who was sitting in her place.

"You know that school closes next week on Thursday?"

"Yes, of course," replied Tal. "And we're going to have some exercises?"

"Yes, Miss Julia expects to have our minister and doctor here, and papa, and Mr. Kemble, and ever so many others. Well, we want to make up a little play of some kind, and won't you help?"

"I don't know—will if I can."

"That's real nice! Now, some of the girls are talking about getting up a sort of charade, and Miss Julia thinks it will be good. We're to take characters. One's to be 'Anger,' another 'Pride,' another 'Vanity,' another 'Fun,' another 'Fear,' another 'Kindness,' and so on. And they're all to speak a little piece and act it off. Now, won't that be interesting?"

"Yes, I guess it will."

"And you'll take a part, won't you? I think you'd do real nicely as 'Fun.'"

"All right, I guess I will. But who's a-going to make up the words?"

"Oh, Miss Julia and Miss Grace 'll help about that."

"All right, Trudie, go ahead,

'And you will just see,
If I can't be,
The funniest fellow in high-diddle-dee,' "

sang Tal, as he made his way to his own seat.

The bell rang, and in a few minutes the routine of the school hours had begun. Before the great doors were rolled to, to separate the departments, Miss Julia made a little speech on

MANNERS,

as follows: "This morning I had occasion to make a call down in Factory lane—I wanted to see a poor woman who lives there. When I knocked at the door a little boy, not more than seven years old, opened it for me, and made a bow, with a pleasant 'Good-morning, ma'am.' I asked if Mrs. Woodlake lived there, and he replied, 'Yes, ma'am, she's my mother; will you please to come in?' and led the way into a small room, where he showed me a chair, and asked me to sit down, and he would tell his mother who was in the back room. He was so courteous and gentle that I was very much struck by his conduct; for I have never seen a girl or boy more polite than that little boy. When his mother came in she greeted me, and then said to him, 'Roderick, my son, will you go and take care of your little sister, now? You know I must go out soon, and you will see to her while I am gone.' 'Yes, mamma,' he answered, and, with a bow and 'Good-morning, ma'am,' to me, he skipped out of the room. A few minutes afterward I heard him singing cheerily, as if trying to amuse that little sister. Now, some children—yes, most children—have to be told to be courteous and accommodating to their elders. They have to be told to speak to a visitor, to bring a chair for him, and to show any little attention. I have often been in the homes of people who had everything nice and comfortable, and seen little girls sitting in the cushioned chair of father or mother, and

so taken up with a story-book or paper that they did not pay any attention to their mamma or me; did not greet us when we came into the room, but kept on reading as if they were alone. Is it not pleasant, when mother or father or an elder sister comes into a room where you are, to jump up and offer the comfortable chair you have been occupying? Isn't it pleasant, boys, to offer to carry a parcel for a lady of your acquaintance who may pass you on the street when you are at play? Do not the warm thanks and good opinion you are sure to win by little courtesies more than pay you for them? Think, now, how little time and trouble they cost! To be studious, to recite your lessons well, to be good-natured and merry as a bird, are excellent things, and I admire them greatly; but I find a good many of you who have all these are apt to be forgetful of good manners, and are rude and careless to those who have the right to ex-

pect kind and polite attentions from you. Some boys and girls live in beautiful homes, and have nothing to do but study and amuse themselves—are not expected to work in any way; but if they are kind, cheerful, and polite to all at home, their parents feel more than paid for all the care and money they bestow upon them. The words 'lady' and 'gentleman' mean a great deal, and it is little things, little acts, little services, little kindnesses which make a girl ladylike, and a boy gentlemanly. I want you all to be ladylike and gentlemanly, and to try to be so here as well as anywhere else. Dr. Wel-ling told you, last Saturday afternoon, that some were polite naturally, and it was easy for them to learn good manners, while with others it was more or less difficult; but I am sure, if you try, any one of you can improve in behavior, and your friends will be so pleased by your trying that they will help you along."

CLARE.

TWO BROOKS.

FROM THE SWEDISH.

Two brooks did once contend for highest rank,
The one flowed calm adown its flowery bank,
The other roared and spread, and splashing wide,
Went crashing down the mountain's dizzy side.
"Farewell," he said, "my brother, fare thee well,
Thy duller soul must in the valley dwell."

The calmer brook gathered his strength till he
Became at last a strong and mighty sea;
The other's fearful leaps his strength so try
That he begins of weariness to die.
Ashamed he hides, and worn out, sinks to rest
Within his mighty brother's calmer breast.

Not by impulsive leaps the goal is gained,
Not by exhausted strength the prize attained;
Thought's river, flowing calmly, deep and still,
May reach at last what knowledge shore she will;
Wisdom's white pearls hide in her depths serene,
And Truth's high stars are in her crystal seen.

So we some dull path walk, patient and late,
To reach some golden morn Fame's shining gate,
And those who mock our slow-grown soul despise,
On its soft green may rest their weary eyes.

L. M.

SKETCHES OF LIFE IN SOUTH CAROLINA.—No. 2.

THE most luxurious section of luxury-loving South Carolina is that part known to the natives as the "low country," and extending from Winyaw Bay to the mouth of the Savannah River, which separates this State from Georgia. The former aristocracy of the low country were, for the most part, descendants of

French *émigrés*—the nobility expatriated during the first republic and its attendant reign of terror. Some of them are scions of English cavaliers, faithful adherents of Charles Stuart, whose loans to the royal exchequer the "merry monarch" liquidated by the bestowal of large bodies of land in Carolina. Many of

these people were wealthy before the war, exercising a princely hospitality in their delightful homes under the balsamy pines and solemnly beautiful live-oaks. Still more anciently-settled parts of the country were colonized by Huguenots from France, and Dutch people from the Netherlands, who had imbibed the Protestant doctrines of the Reformation. Religiousness still forms a leading characteristic of these people. The care of their churches and pastors; the fostering of their sectarian papers, periodicals, and books; attendance on public worship, family prayers, Bible readings, singing of hymns—these constitute prime interests in their every-day life. It is their inheritance, faithfully transmitted from father to son, parent to child; on which they believe their present secular, as well as their future and eternal, interests depend. One old religious custom they keep up is “camp-meeting.” This, as in the North, is an assembling together of people, mainly of the Methodist denomination, in encampments, for purposes of a religious nature. October is the time for them, the weather being nearly always delightful in that month. These camp-meetings have quite a remote date, having been resorted to when the country was thinly settled and poorly supplied with preachers or ministerial teaching. The place of rendezvous is selected with a view to its supply of water and wood, its accessibility, and its dry, elevated situation; elevated only in being a little higher than the surrounding flat country. Around a large square are grouped the “tents,” as they are called, but really rough temporary shanties. In the center of the square is the “stand” and arbor. The latter consists of a lattice-work of green boughs, the former a larger shingled roof, or shelter, capable of accommodating from a thousand to fifteen hundred people. At the upper end of the stand is the pulpit, a high wooden box, and in front of it a slightly railed-in inclosure, called the “altar.” The seats are sometimes only logs, raised slightly above the ground on blocks, or rough

benches, with backs to them. The whole space under the stand, as well as the dirt floor of the tents, is covered with pine-straw, to make it clean and warm. Interspersed about the grove are small stands for lightwood knot fires, consisting of four posts, on which rests a framework, covered with earth, on which bright blazes are kindled at nightfall. The entrance to the tents is by a narrow passage extending along the front, on which opens two large rooms—one for the men, the other for the women. There is a long, narrow dining-room, and a small back room, sacred to the tent-holder's family. The sleeping-rooms are furnished with rudely-constructed bedsteads of boards, supplied with mattresses, pillows, sheets, blankets, and quilts; a washstand, towels, basin, soap, with plenty of pegs to hang things on. The cooking arrangements are of the simplest. Near the back of the tent a small shed is built, and under this a log-heap fire furnishes the motive power for boiling and broiling, the principal culinary operations performed on the grounds. Here great pots of coffee send forth fragrant odors, and rice and hominy are prepared for breakfast and dinner. Over these log-heap fires meats are roasted or barbecued on Saturday.

The tent-holders usually move in and fix up on Wednesday. The following day the crowd begins to come, and, with their horses, are entertained at the expense of the tent-holders. A great abundance of cooked provision is brought along—huge boxes containing baker's bread, rolls, crackers, rusks, biscuit, cakes of all description, pies, tarts, baked meats, canned fruits, preserves, pickles, jellies, tea, parched and ground coffee, cold boiled ham, and cooked fowls. A very systematic programme of arrangements is made as soon as the business of moving and unpacking is completed.

The “preacher's tent” is headquarters and the location of the governing power. From it goes forth some enthusiastic brother at peep of day, to “blow the horn” for the people to rise and prepare

for prayer, announced by the "second horn-blowing" at sunrise. Breakfast is on the *tapis* next, and the "first service" under way between nine and ten. The "second service" begins at eleven. At one of these gatherings which came under my observation, there was no doxology or benediction after any service until the last morning. There were two sermons in the afternoon, and one at night. But this latter was varied and lengthened indefinitely by singing, prayers, exhortations, and exercises of a purely emotional character. At very early "candle-lighting" the night service began, lasting often till two o'clock in the morning. The scene then was quaint, striking, novel. The semi-darkness of the surrounding pine woods, solemnly beautiful under the stars; the crimson glare of the lightwood knots on the fire-stands, the eager crowd of people under the vast, dimly-lighted shelter or stand, hanging breathless on the speaker's words; then, when he closed, the clarion voice of some sweet singer in Israel would peal forth a stirring strain of music, that seemed actually to *move* the people, already wrought up to a state of high nervous tension. Penitents thronged to the "mourners' bench," others hurried forward to "seek a higher measure of grace," and sanctified souls thronged the straw-strewn altar to counsel and encourage those who were "seeking the Lord." When one of these made a profession there were loud shouts and clapping of hands, and "hallelujahs." Preachers and people "got happy," and laughed the "holy laugh," and shouted with a strange feeling of elation and triumph, such as he might have felt who wrote :

"I rode on the sky,
Freely justified I,
Nor did envy Elijah his seat;
But my soul mounted higher,
In a chariot of fire,
And the moon it was under my feet."

Upon these triumphal songs broke the cries and groans of "mourners," melting prayers rising in their behalf, emphasized by the amens of ten preachers. The following is an abstract of a discourse delivered by a darkey to a colored congregation, conducting services in humble imitation on the outskirts of the white people's encampment. His text was, "And Zaccheus clomb de tree." "Oh, my dying fellar-sinners, you must come up from 'mong de wicked! You must climb de tree ob faith, and take hold on Jesus. Mak use ob de means ob grace, my bredren. See how dat little man, Zaccheus, done. He was mighty small pusion—couldn't see Jesus nohow; big crowd all round, no place fur to stand on. What he do? Why he jest went and *clomb* dat sycamo' tree, 'cause he was bound fur to see de Lord. How you reckon he git up dat tree? You speck he wait for some lazy nigger to bring him a ladder? No, no, my bredren, he wasn't dat sort ob a coon. You tink he wait to be *boosted*? Not him! You don't hear him say to nobody, 'Gib me a lif.' No, sir; he jest clomb right straight up dat tree *hissself*, like a possum, by his own hands and feet, and de grace ob God."

Above is not an exaggerated specimen of the style of our unlettered colored brethren, who, though unable to read the Scriptures, feel called upon to bear testimony.

VIRGINIA DU R. COVINGTON.

HANS IN A FIX.

VEN I lays myself down in my lonely ped-room,
Unt dries vor to sleep werry soundt,
De dreams—O, how into my het tey vill come,
Till I vish I was unter ter groundt!
Somedimes, ven I eats von pig supper, I dreams
Dat my shtomac is fult full of shtones,
Und out in mine shleep, like a brickbat, I
schreems,
Und kick off ter ped-glose, unt groans!

Den dero, ash I lay mit der ped-glose all off,
I kits myself all over vrose;
In the morning I vakes mit te headaches unt
cough,
Unt I'm zick vrom mine het to mln does.
O vat shall be dun yer a poor man like me?
Vat for do I lif such a life?
Some say dere's a cure vor drouples of me:
Dinks I'll dry it, und kit me von vife.

—Exchange.



THE PHYSICAL BENEFITS OF RELIGION.

THAT the religion of Jesus Christ was intended to and does promote the moral welfare of mankind, I suppose none will deny. At the same time, perhaps, comparatively very few ever stop to think of the fact that it is also especially beneficial to man's physical nature. The masses regard it as designed by its great Author to benefit the soul, but not the body—as having a direct bearing on the life that is to come, the future life, but not on the animal life that now is; on the moral, but not on the sensorial, except so far as to shape it, not prolong it; to regulate it, but not to extend it.

That it is chiefly designed to benefit our race in a moral point of view, we most unhesitatingly believe; but that it ceases in its salutary effects at this point, we as firmly deny. We hold that the idea, that the religion of Jesus Christ tends directly to prolong man's physical being here, is supported by both philosophy and revelation. And it is only necessary, we think, to consider the close connection subsisting between the mind and the body to be assured of this fact. Every intelligent physician knows that mental and moral disturbances frequently produce corresponding physical derangement of the nervous system, thereby laying the foundation of some disease that may ultimately terminate in death.

It is because of this mysterious but obvious law of our being, that intense love,

hatred, fear, or any other sudden, vehement mental emotion, will frequently so interrupt and derange the vital equilibrium as to superinduce aggravated forms of diseases that may utterly defy the most intelligently directed skill.

It not unfrequently happens that individuals distinguished for vigor of thought and intensity of feeling are troubled with an unbalanced circulation, directly caused by the undue cerebral action or excitement. If such persons chance to have a frail body, which is often the case, the restless activity of the mind tends to increase the general debility, until, perhaps, in some great emergency of mental effort, intensified by the responsibilities of the hour, the system gives way and the individual fills an early tomb. Nor is there anything very strange or remarkable in such cases. Such instances of the physical being wrecked by the mental are not unlikely, nor are they more strange than a powerful steam-engine in a frail vessel, shaking and wrenching it to pieces, perchance, before its voyage is half completed.

That the mind has a direct and powerful influence on the health of the body is constantly demonstrated by the everyday occurrences of human life. Many a business man has been suddenly prostrated by a general derangement of the system, attended with a violent nervous headache in consequence of a protested

note. The fluctuations of trade, the shifting rates of exchange, the fall of stocks, or the failure of debtors, may not only produce a momentary functional derangement of the vital forces, but congestion, paralysis, insanity, or even death. There are others who have the fountains of life dried up by a burning fever of ambition to soar above their fellows. It is therefore no very great wonder that such of this class who find themselves doomed to constant disappointment, generally break down in health, and if life itself is not destroyed, their usefulness at least is ended. Such persons are in some measure like an untamed bird pent up within the narrow confines of a cage, dashing furiously from side to side, until bleeding and exhausted it falls a victim to its own restlessness. Many die of over-care and anxiety. Some from violent spasmodic emotions of fear, joy, anger, or sorrow. Thousands every year go down to their graves from diseases brought on directly by dejection, by a morbid abnormal state of the mind. Gloom and melancholy often do their terrible work of destruction upon the animal system, as effectually as would arsenic or prussic acid. Whatever be the cause, a morbid condition of the mind is always injurious to health. It is because of this fact that even imaginary evils are often as fatal to life and happiness, as real ones. The cause of many a person's death, could it be traced back through the various stages and progress of the disease that slew him, to its incipency, would be found to have commenced in an idea.

That an unnatural excitement, especially such as results from fear or anxiety, is a deadly foe to man's health and longevity, has long since been incontrovertibly established. Every intelligent physician knows, that when a community is visited by some terrible pestilence, how the current of thoughts and feelings, as they naturally rush in one general direction, acts with startling and terrible effect on the very springs of life, thereby laying the foundation of the very thing they fear.

I have read somewhere of a soldier who, for a certain misdemeanor, was court-martialed and sentenced to be shot. His commander, however, purposed to save his life, yet resolved he should go through the forms of an execution, in ignorance of the mercy that he intended to show him. The time named for his death having arrived, a number of soldiers were drawn up before him; and although their muskets were only loaded with blank cartridges, yet when, at the word of command, they fired, the poor man fell and instantly expired, although he was unharmed 'save by the thought that pierced him through. Physically unharmed, but mentally killed.

Some years since, a curious account was published in a London medical journal, of the effect and influence of the mind, under certain circumstances, in producing disease. It stated that four Russians, who had been condemned to death for political offenses, were, under the direction of distinguished members of the medical profession, placed in beds on which persons had died of Asiatic cholera. They were not, however, aware of their exposure in this instance, and not one of them took the disease. Subsequently they were informed that they must occupy beds upon which cholera patients had died. In this case the beds were new, and had not been occupied by any one, and yet three of the four exhibited the disease and died.

It is by the recognition of this principle of our nature that we are to account for the well-known fact that, if persons who are sick believe that they will not recover, it is almost impossible to raise them up, however slight their illness. On the other hand, a firm persuasion of recovery strengthens and invigorates the restorative powers of the system, better than medicine. It is owing to this fact, so well understood by the medical profession, that the intelligent physician seeks to stimulate his patients with hope, and for this purpose generally conceals from them his own painful ap-

prehensions of their approaching dissolution.

Now, is it not plain from all this, that whatever tends to tranquillize the mind, to promote calmness and serenity, peace and contentment, must, from the very nature of our being, also tend directly to promote the health of the body? This obvious fact being admitted, and which can not be successfully denied, it clearly follows that the Christian religion, which so pre-eminently secures these results, is directly and positively promotive of health and longevity. A Christian may be stricken down by disease as well as others, but with a heart all full of sunshine and joy, and with a conscience void of offense before God and man, and a countenance all radiant with the light of a better world, he stands two chances for recovery, where, if his feelings and emotions were the reverse of all this, he would stand but one. It is in the light of this important principle of our physical and mental being, that many passages of Revelation receive their most rational and impressive solution. The Scriptures abound with promises of long life to the righteous, while they also declare that the wicked shall not live out half their days. That "godliness is profitable unto all things, having promise of the life that now is, and of that which is to come."

While we would not for a moment attempt to disguise the fact that many Christians die in early life, and that many of the wicked live to an advanced age, we nevertheless most firmly believe that, in case of sickness, other circumstances being equal, the advantages are decidedly with the good. Dr. D. M. Reese, in his treatise on health, in speaking of joy and hope, says: "These two affections contribute more to the preservation of health and life than all the medicines which can be administered." While the mind itself is not susceptible of disease, being immaterial, it nevertheless has a mysterious and wonderful influence over the vital energies of the physical through the brain and nervous system.

The mental and vital harmony so essential to health and a protracted earthly

existence, is not unfrequently rendered irregular and even disastrous by the intense anxiety and alarm arising from a guilty conscience. Such cases are not unlike the accumulated, pent-up forces of an overcharged steam boiler, which is torn to fragments, that these forces may find their equilibrium. A sour, morose, and irritable spirit, that generally arises from a derangement of the moral powers, as naturally tends to the derangement of the vital laboratories of our physical nature, as chemical action tends to change more or less the properties of matter. Hence, says Solomon: "Let thine heart keep my commandments; for length of days and long life and peace shall they add to thee."

J. J. SMITH.

NEW TREATMENT FOR VARICOSE VEINS.—According to the London *Lancet*, Dr. Linon, of Verviers, has used perchloride of iron locally with great success during the last three years in the treatment of varices. The strength of the solution is about two and a half drachms to eight ounces of water. Compresses of flannel are steeped in the water, then wrung out, and applied by means of a flannel bandage, which is only moderately tightened. This application is to be kept on twenty-four hours, and on removing it the surgeon is much surprised to find that the venous dilatations have almost entirely disappeared. The applications are to be renewed for seven or eight days successively, after which time the bandage is to be kept on, without any further wetting, until it gets loose. It is then to be wetted again with the solution, and applied until the varices have disappeared, which generally takes place after eight days or a fortnight, according to the size of the swelling. This simple method has removed, in a few days, enormous varices, which were accompanied by violent pain, with black spots on the surface, and have restored the use of the limbs. By the unsuccessful application of dry bandages only, Dr. Linon has been able to show that it is not compression, but really the local action of the iron which is efficacious.

THE THERAPEUTICAL ACTION OF COLD.

[The following excellent summary of treatment of diseases traumatic or otherwise by the application of cold, is taken from an article by W. H. Thomson, M.D., Professor of Therapeutics and Materia Medica in the University of the City of New York, recently published in the *Scientific American*.—*Ed.*]

PHYSICALLY, cold is the absence of heat. Therapeutically, it is a positive agent, and has five actions:

1. Tonic.
2. Styptic.
3. Antiphlogistic.
4. Anæsthetic.
5. Antipyretic.

In the first three cold acts only upon the vaso-motor system as a pure irritant neurotic. In the last two it acts simply on physical principles.

COLD AS A TONIC.

We have said that cold, when it acts as a tonic, is an irritant. Every irritant produces a shock and causes an expenditure of the energy of the part irritated. The energy of the part irritated therefore becomes depressed; but this depression differs from that produced by a simple sedative, in that it is followed—provided the shock is not so great as to cause exhaustion—by a *reaction* to or beyond the condition in which the part was prior to the irritation. Thus, cold, as an irritant, affects the vaso-motor system and produces a shock which is followed by a reaction. In other words, this system is exercised, and all moderate exercise tends to strengthen the organ called into action, and permanently to improve its nutrition. Cold, then, is a vascular tonic, and may be used generally or locally. When the circulation is feeble and there is loss of muscular power, the general use of cold will arouse the heart, restore arterial tone, and thereby improve the nutrition of the whole body. For this purpose either the dip, shower, or sponge bath may be used, according to the strength of the patient, taking care never to cause exhaustion by its too fre-

quent or too protracted use. A thorough reaction, as indicated by a glow of the skin, should always follow the bath, and never a sensation of lassitude or fatigue. When the irritant effect produced by the cold water alone is not sufficient, salt or some mild rubefacient may be added. If the patient is too feeble to bear even the sponge bath, simple exposure of the surface of the body to cold air will often prove beneficial. In all cases reaction may be assisted by friction with a rough towel.

A cold douche to the nape of the neck is indicated in the following conditions:

1. When, after sunstroke, the arteries of the head remain dilated, and there is headache and dizziness on exertion or exposure to the sun.
2. In all cases in which headache is confined to one side, and is attended by dilatation of one temporal artery and suffusion of one eye.
3. In false croup, or the crowing respiration of children.
4. In tinnitus aurium, when the throbbing is synchronous with the beating of the heart, and the tympanic arteries are distended, the cold douche to the nape of the neck may afford relief.

Sponging the chest of a phthical patient with cold water lessens the susceptibility to cold.

Local applications of cold water are useful in promoting absorption of inflammatory effusions and exudations in the subacute and chronic stages; also in restoring the balance of the circulation in the liver and spleen when enlarged in malarial poisoning.

The hip or sitz bath is useful in hemorrhoids, prolapse of the rectum, and congestion of the pelvic viscera.

COLD AS A STYPTIC.

As a styptic, cold acts by constricting the arteries through its influence on the vaso-motor. It is preferable to astringent drugs or other hæmostatics, because it obviates the necessity of applying irritant

substances to the bleeding part. Nor need the cold always be applied directly to the seat of the hemorrhage; for it will also affect distinct parts in accordance with the laws of the vaso-motor system, the most important of which are the following:

First.—An impression on the afferent nerves of a given part will cause a variation in the caliber of the arteries of that part.

Second.—An impression on the afferent nerves of a given part will cause a variation in the arteries of all organs situated directly beneath that part.

Third.—In the case of organs which are in pairs and perfectly symmetrical, as the eye, ears, hands, and feet (the lungs, kidneys, and testicles are not), variations in the caliber of the arteries of one will cause a similar variation in the other.

Fourth.—Variations in the caliber of the arteries of certain parts are accompanied by corresponding changes in the arteries of certain other parts, and these particular associations are to be determined by experiment; for example, the relation between the circulation of the feet and that of the pelvic viscera and the pharynx, and the relation of the circulation at the nape of the neck to that of the head and face.

The following instances will suffice to illustrate the application of these laws in the use of cold:

1. Cold water applied directly to a bleeding surface.
2. Ice-bags to the epigastrium to check hæmatemesis (vomiting of blood).
3. Holding any cold body in one hand to arrest hemorrhage in the other.
4. Cold foot baths to arrest metrorrhagia.

In post-partum hemorrhage the best means of applying cold is by ether spray, for the sudden and intense impression produced causes effectual contraction of the uterus without chilling the patient. If ether spray is not available, cold water should be poured upon the abdomen from a height of two or three feet, the shock of the falling water materially as-

sisting the action of the cold. Either of the above measures may be used for hæmoptysis.

COLD AS AN ANTIPHLOGISTIC.

As an antiphlogistic, cold may be used to arrest an acute inflammation, unless suppuration has occurred, or to prevent inflammation when threatened. This it does by causing a protracted constriction of the arteries, thereby preventing the active congestion essential to all acute inflammation. It should be invariably applied as dry cold, directly to the part affected, in sufficient intensity to relieve pain, and continued so long as the exciting cause exists. If, before the tendency to inflammation has entirely disappeared, a neuralgic pain occurs, it is a sign that the vaso-motor nerves have become exhausted, and the use of cold must at once be discontinued, or gangrene will result; moreover, the patient will feel more comfortable without than with the cold applications. This neuralgic pain is continuous, and, if the injured part be one of the extremities, it extends from the part injured toward the trunk. Inflammatory pain, on the other hand, is local throbbing, accompanied by local heat, and is relieved by more thorough application of cold.

In fractures, or other severe injuries near the joints, the injured parts should be surrounded with pounded ice placed in pigs' bladders or rubber bags, two or three layers of perfectly dry muslin being placed between the skin and bags, lest the parts should be chilled too suddenly. A bottle filled with ice-water makes a good antiphlogistic splint for injuries of the hand. Inflammation of the eyes may be controlled, and its spread from one eye to the other prevented, by means of cold applications. Ice bags should be applied to the head and spine in epidemic cerebro-spinal meningitis. Cold applications will control the spread of erysipelas, and are the best means for relieving febrile headache. Headache from uterine trouble is best relieved by moist warmth. Cold should

not be used antiphlogistically in any acute inflammation of internal organs, except peritonitis with vomiting, and meningitis.

COLD AS AN ANÆSTHETIC.

The use of cold as an anæsthetic depends upon its physical property of freezing tissue and deadening sensation without injuring vitality. It is most useful in operations where no great thickness of tissue is involved, as in opening abscesses, amputation of fingers, Cæsarean section, and ovariectomy. In all cases the action of the cold should be secured as rapidly as possible. Apply ether spray to the part alone which is to be operated upon. Anæsthesia is complete as soon as the skin becomes white and glistening.

COLD AS AN ANTIPYRETIC.

When the abnormal elevation of the bodily temperature is due to insufficient radiation of heat, as in some nervous disorders, it is not generally in itself dangerous; for it has been known to reach 123° Fah., and remain there for several weeks. But if, as in fevers, the rise of temperature depends upon excessive chemical changes, then the heat itself is injurious, causing arrest of gland secretion, as well as extensive destruction of tissue. In every fever there is a certain point beyond which, if the temperature rises, certain structural changes will take place. The glands become affected with cloudy swelling, and fatty degeneration ensues, and the muscles affected in the same manner become remarkably brittle.

The point at which these changes occur differs in each fever. In scarlet fever it is 105° Fah.; in typhoid fever, 106° Fah.; in relapsing fever, from 107° to 108° Fah.; and in erysipelas still higher. Beyond this dangerous point in each fever the temperature should not be allowed to rise, but must be lowered by the use of cold, the result of which is simply the abstraction of heat. This may be effected by immersion in a cold bath or by the cold pack. Place the patient in a bath of 75° Fah., and gradually cool the water down to 65° or 60° Fah.—never

lower, and at the same time use cold affusions to the head continuously. At first the temperature will rise slightly, owing to the blood being driven from the surface of the body into the viscera, which are always a little warmer than the skin; but the bath should be continued until the temperature is reduced to 100° Fah., provided the fall is gradual—that is, one degree in six, five, four, or three minutes. If it falls one degree in two and a half minutes, stop the bath when the temperature has reached 101° Fah.; for in most cases a further reduction of one degree will occur after the bath is discontinued. If the fall in temperature during the bath be one degree in *two* minutes, the patient should be taken out at once, whatever the actual temperature may be, for in such cases there is danger of the subsequent fall becoming uncontrollable, reaching perhaps 97° Fah., and the patient passing into collapse. Should this at any time occur, wrap the patient in hot blankets, apply hot saucers to the epigastrium, and give stimulants.

When, for any reason, the bath is impracticable, the cold pack may be used, always, however, with the same precautions as in the use of the cold bath. First wrap the patient in a sheet wrung out of water at an ordinary temperature, say 70° Fah., and then lay on other sheets wrung out of ice water. The cold bath or pack should be repeated often enough to keep the temperature below the point of danger for that particular disease. If necessary, use one every hour. If, however, two or three a day are sufficient, one should be so timed as to be given just before the highest rise of the fever-heat—that is, usually between two and three o'clock in the afternoon.

“A SIMPLE, easy, and effectual cure of stammering” is said to be, simply at every syllable pronounced to tap at the same time with the finger; by so doing “the most inveterate stammerer will be surprised to find that he can pronounce quite fluently.”

THE AGUE.

ONCE upon an evening bleary,
 While I sat me dreaming, dreary,
 In the sunshine, thinking over
 Things that passed in days of yore,
 While I nodded, nearly sleeping,
 Gently came a something creeping,
 Creeping upward from the floor.
 "'Tis a cooling breeze," I muttered,
 "From the regions 'neath the floor ;
 Only this, and nothing more."

Ah ! distinctly I remember—
 It was in that wet September,
 When the earth, and every member
 Of creation that it bore,
 Had for weeks and months been soaking
 In the meanest, most provoking,
 Foggy rain that, without joking,
 We had ever seen before ;
 So I knew it must be very
 Cold and damp beneath the floor—
 Very cold beneath the floor.

So I sat me, nearly napping,
 In the sunshine, stretching, gaping,
 With a feeling quite delighted
 With the breezes 'neath the door,
 Till I felt me growing colder,
 And the stretching waxing bolder,
 And myself now feeling older,
 Older than I felt before ;
 Feeling that my joints were stiffer
 Than they were in days of yore,
 Stiffer than they'd been before.

All along my back the creeping
 Soon gave place to rustling, leaping ;
 As if countless frozen demons
 Had concluded to explore
 All the cavities—the varmints—
 'Twixt me and my nether garments,

Through my boots into the floor ;
 Then I found myself a-shaking ;
 Gently shaking more and more,
 Every moment more and more.

'Twas the ague ; and it shook me
 Into heavy clothes, and took me
 Shaking to the kitchen, every
 Place where there was warmth in store ;
 Shaking till the china rattled,
 Shaking till the morals battled ;
 Shaking, and with all my warming,
 Feeling colder than before ;
 Shaking till it had exhausted
 All its powers to shake me more,
 Till it could not shake me more.

Then it rested till the morrow,
 When it came with all the horror
 That it had the face to borrow,
 Shaking, shaking as before.
 And from that day in September—
 Day which I shall long remember—
 It has made diurnal visits,
 Shaking, shaking ; oh, so sore !
 Shaking off my boots, and shaking
 Me to bed, if nothing more,
 Fully this, if nothing more.

And to-day, the swallows flitting
 Round my cottage see me sitting
 Moodily within the sunshine,
 Just inside my silent door,
 Waiting for the ague, seeming
 Like a man forever dreaming ;
 And the sunlight on me streaming
 Casts no shadow on the floor,
 For I am too thin and sallow
 To make shadows on the floor,
 Naught of shadow any more.

—ANON.

ANTHROPOMETRY IN ITS APPLICATION TO CHILDREN.

ANTHROPOMETRY is that department of science which relates to observations of the size and weight of young and old of mankind, with the view to obtaining results which shall be taken as standards for our guidance in ordering our habits of nutrition, training, labor, etc. Quetelet, Galton, Roberts, De Launay, and Bowditch are among the authorities in this class of investigations,—they, like most others, giving more particular attention to the physical and mental state of children with respect to age. The course usually pursued is to weigh and measure a large number of children, as those in a school or factory, and to give the height reached by the greatest number of a certain age as the average for that age. Thus, 1,943 children between 10 and 11 years old were found to measure from 42 to 59 inches in height, and as more (331) measured from

50 to 51 inches than grouped themselves under any other measurement, that height has been accepted as the average for that age. But the great range of 17 inches alone shows the unreliability of the height for age test, not to mention the inexactness of assuming the height shown by 331 children as the average of 1,943 children, while the figures themselves show 816 to be below the mean and 796 to be above the mean. Height is but one important *datum* to be taken into account in judging a person's fitness for mechanical work.

According to the London *Lancet*, Dr. Percy Boulton, of the Samaritan Hospital, London, has been engaged in weighing and measuring children, and the result of his studies, as published in that authority, have a high degree of interest to us who give attention to sanitary matters. Setting himself to discover the average rate of growth per year, and the normal corresponding height, Dr. Boulton has made a large number of independent observations, measuring the same children in successive years, excluding giants and dwarfs and selecting the children of well-to-do parents. This, he reasonably thought, was the best method of ascertaining a typical standard for healthy children, brought up under favorable circumstances. The annual rate of growth was thus ascertained to be different for each child—to vary between 2 and 3 inches per year. Any individual variation from the individual rate is abnormal if exceeding $\frac{1}{4}$ inch per year. But whatever the rate of growth, whether 2, $2\frac{1}{2}$, or 3 inches annually, the weight for height should in each case be the same; and between 3 and 4 feet the increase in weight should be 2 pounds per inch, and between 4 and 5 feet $2\frac{1}{2}$ pounds per inch. At 3 feet high a child should weigh 36 pounds; at 4 feet, 60 pounds; at 5 feet, 90 pounds. As the rate of growth and the increase of weight properly corresponding to it are thus known, the following table approximates to a statement of a law as to the weight normally corresponding to heights rising by steps of 1 inch:

Feet.	Inches.	Pounds.	Feet.	Inches.	Pounds.
3	0	36	4	1	62½
3	1	38	4	2	65
3	2	40	4	3	67½
3	3	42	4	4	70
3	4	44	4	5	72½
3	5	46	4	6	75
3	6	48	4	7	77½
3	7	50	4	8	80
3	8	52	4	9	82½
3	9	54	4	10	85
3	10	56	4	11	88½
3	11	58	5	0	90
4	0	60			

These figures are above the previous standards, both as to height and weight, but, like them, they are applicable to both boys and girls. Above 5 feet, and about 12 years, there is an appreciable difference between the sexes in these respects, as girls cease growing sooner than boys. Observations of weight or of height are, it will be rightly inferred, useless alone.

This table shows that rate of growth should be regular, and the rate of any given child being ascertained, there is thus furnished a tolerable basis for an estimate as to its proper future size. The healthy child that grows 2 inches a year passes 5 feet at 15 years, and will thus probably be of short stature, say 5 feet 6 inches if a man, and 5 feet 1 inch if a woman. The healthy child growing $2\frac{1}{2}$ inches a year is 3 feet 2 inches at 3 years, and passes 5 feet at 13 to 14 years. Such a child will be a medium-sized adult, say 5 feet 8 inches if a man, or 5 feet 3 inches if a woman. The quick-growing healthy child that increases in height 3 inches per year passes 5 feet at 10 or 11, and will make a tall man of 5 feet 10 inches, or tall woman of 5 feet 5 inches. These rates of growth Dr. Boulton likens to three railroad trains traveling at, say, 10, 20, and 30 miles an hour. The fastest train of course covers the most ground in a given time, subject somewhat to the exact point when puberty first puts on the brake and finally stops progress.

When a child's rate of growth varies more than a quarter of an inch annually, or when his weight does not correspond

to his height within a margin of safety, fixed by Dr. Boulton at 7 pounds, a sign is given which no careful parent or physician should venture to neglect. A growth below the characteristic rate is indicative—if there are no other pathological symptoms—of arrested development, and a growth above that rate points to a tax on the system above the powers of most children. And arrest of growth, or loss of weight, also points to specific disease; in consumption, especially, loss of weight always precedes cough, although the cough nearly always is the first symptom to attract attention. The value of these figures to preventive medicine must thus be plain, but the point may well be emphasized by a single illus-

tration. In 1875 the children in a certain institution did not grow 2 inches in that year. There was no special cause of alarm and no obtrusive symptoms of disease; ordinarily the fact would not have been noticed. However, the authorities were not satisfied, the children's dietary and sanitary conditions were more carefully attended to, and the next year the average growth in height was over 2 inches, and the increase in weight was 6¼ pounds.

Thus, while it still remains true that a man can not by taking thought add a cubit to his stature, it is not too much to say that he can, if he will take the trouble, materially affect the development of his child.

HOMŒOPATHY IN THE UNITED STATES..

FROM the report of the Bureau of Statistics made to the American Institute of Homœopathy the present year, it appears there are 6,000 homœopathic physicians registered in the United States. There are 23 State societies, of which 17 are incorporated by their respective States. There are 92 local or county societies and 7 clubs, partly professional and partly social. Of the 38 homœopathic hospitals in this country, 30 report 1,682 beds, which provided, in the last year, for 14,959 patients, with a mortality of 367—about 2½ per cent. The cost of building 25 of these hospitals has been \$1,549,175, and they are mostly supported by contributions and paying patients. Of the 29 homœopathic dispensaries, 25 report having treated, in the last year, 117,564 patients, with 272,772 prescriptions, at a cost of \$10,639.19, or about 4 cents for each prescription. Eleven homœopathic medical colleges are established, and instructed, last year, 1,192 students, of whom 387 were graduated. The total number of graduates from these colleges is 4,922. The cost of establishing 5 of these colleges has been \$230,000; the cost of the others is not given. There are 16 homœopathic journals pub-

lished in this country, quarterly, monthly, and semi-monthly, with an annual total of 8,784 pages, and an aggregate of 23,450 copies. In addition there are national medical societies, medical schools for special subjects, a publication society, and a very prosperous life insurance company, called the New York Homœopathic Mutual. Evidently the time for pooh-poohing at Homœopathy has passed.

WHOLE-MEAL BREAD.—Dr. B.W. Richardson, the eminent English physician, presided a few weeks ago at a large meeting held to advocate the use of what is technically known in England as "whole-meal bread," and in America as brown or Graham bread. One of the speakers maintained that the bread in common use was *forty per cent. deficient* in sustaining qualities. An entire grain of wheat contained everything that was required for nourishing purposes, and yet the better half of it was wasted, and this half was a much healthier food. Children fed on white bread were very liable to suffer from rickety bones, consumption, and bad teeth, because their food did not nourish them properly.

BREAD WITHOUT YEAST.—A great many recipes have appeared in this department of our work for the preparation of bread without yeast. But fresh readers send us fresh requests for advice on the subject. We might refer inquirers to the "Hygienic Home Cook-Book" generally for recipes, but a good and easy method of making rye and Indian bread has come under our notice, which we place here: Mix rye and Indian meal in equal proportions into a soft dough, with cold water in hot weather, but warm water in

cold weather. Mix and knead with the hands until it is light, and lay it softly, so as not to press out the air confined in it, in deep tin pans. Now smooth over the top with the moistened hand so as to give it a neat appearance. Let stand overnight, then bake in an oven, hot at first, but gradually cooling. If the mixture could be made late enough in the evening to be allowed to remain in the oven overnight, it would make a very nice breakfast bread, such as would please any palate.

NOTES IN SCIENCE AND AGRICULTURE.

Movement of Storms.—Prof. Elias Loomis, of Yale, at the last meeting at the National Academy of Science, gave a report of his investigations respecting the "causes which determine the progressive movement of storms," the principal results of the investigation being as follows:

(1). The lowest latitude in which a cyclone center has been formed near the West India Islands is 10° , and the lowest latitude in the neighborhood of Southern Asia is 6° . Violent squalls and fresh gales of wind have, however, been encountered directly under the equator. (2). The ordinary course of tropical hurricanes is toward the west-north-west. In a few cases they seem to have advanced toward a point a little south of west, and in a few cases their course has been almost exactly toward the north. (3). Tropical hurricanes are invariably accompanied by a violent fall of rain. This rainfall is never less than 5 inches in 24 hours for a portion of the track, and frequently it exceeds 10 inches in 24 hours. (4). Tropical storms are generally preceded by a northerly wind, and after the passage of the low center the wind generally veers to the south-east at stations near the center, and the southerly wind, which follows the low center, is generally stronger than the northerly wind which preceded it.

"This fact appears to suggest the explanation of the origin of the cyclone and the direction of its progressive movement. The prevalent direction of the wind in the neighborhood of the West India Islands is from the north-east. Occasionally a strong wind sets in from a southerly quarter. The interference of these winds with each other gives rise to a gyration, and a fall of rain sometimes results. When rain commences, the latent heat which is liberated causes an inflow of wind from all quarters, by which the rainfall is increased; and since the winds are deflected by the rotation of the earth, an area of low pressure is produced and the force of the winds will be maintained as long as the rainfall continues. The effect of this strong

wind from the south is to transport the low center in a northerly direction, and by the combined action of the south wind and the normal wind from the north-east the center of low pressure is usually carried in a direction between the north and the west."

The Current of Rivers.—A very slight declivity suffices to give the running motion to water. Three inches per mile in a smooth, straight channel gives a velocity of about three miles an hour. The Ganges, which gathers the waters of the Himalaya Mountains, the loftiest in the world, is, at 100 miles from its mouth, only 300 feet above the level of the sea, and to fall 300 feet, in its long course, the water requires more than a month. The great river Magdalena, in South America, running for 1,000 miles between two ridges of the Andes, falls only 500 feet in all that distance. Above the distance of 1,000 miles, it is seen descending in rapids and cataracts from the mountains. The gigantic Rio de la Plata has so gentle a descent to the ocean that, in Paraguay, 1,500 miles from its mouth, large ships are seen which have sailed against the current all the way by the force of the wind alone—that is to say, which, on the beautiful inclined plane of the stream, have been gradually lifted by the soft wind, and even against the current, to an elevation greater than our loftiest spires.

Rule Farming.—It is very difficult, says the *Boston Journal of Chemistry*, to conduct the management of a farm so as to be able to follow fixed methods, or to be guided by principles. It is amusing to watch the course of some retired merchants or business men, who buy farms and suppose they can work by methods as exact as the rule in a well-conducted business. They soon find that all their rigid rules and precise proceedings fail to work as well as they do in commercial affairs. Almost every rule in farming must be flexible, as circumstances or conditions are constantly changing, and hence the industry is vexatious and discouraging to men trained to exact methods. Lord Palmerston, the

great English statesman, could conduct the affairs of a kingdom, but he could not turn his hand to successful farming. Late in life he bought a farm, and, after devoting considerable time to it, he remarked in despair: "I can find no guiding principles in this business. It is all a rule of thumb." He did not understand that nature in some of her moods is capricious, and that farming is greatly influenced in its results by this caprice. Drought, extreme wet, high winds, low temperature and high temperature are important factors in agriculture; and success depends greatly upon these influences, which can not be controlled. After a farmer has learned all that can be learned regarding the tilling of his soil, the planting of seeds, the care of his crops, there remains to be learned patience, foresight, and constant vigilance. There is no vocation or industry which demands the exercise of more hope and patience than farming, and any attempt to reduce the labor to rules, so that work will run in grooves, must prove abortive. We must watch the seasons, and prepare as well as we can for adverse influences. Crops should be planted upon upland and lowland, so as to guard against entire loss, when seasons are unduly wet or dry; the different natures and capabilities of soil must be understood; and when failures occur, as they will under the best management, there must be no yielding to despondency.

Barren Land Reclaimed.—A few years since a resident of New York State bought a tract of over four hundred acres of mining land in Juniata County, Pa., about one hundred and forty-four miles from Philadelphia. Upon examination it proved worthless for mining. It appeared altogether useless, most of the land being steep and stony and covered with forest, and therefore unavailable for agricultural purposes. Notwithstanding all the natural obstacles, to-day it blossoms like a rose. Fifteen thousand and five hundred peach-trees, ten thousand quince-trees, and nine thousand Siberian crab-apple-trees, are to be found upon its once unpromising acres. It is probable that most of the fruit will be canned and dried, instead of shipping to market. Many a farmer has upon his land portions of just such seemingly useless soil, that could be turned to proportionately profitable purposes.

Indulgence of the Appetite in DIFFERENT CLASSES.—Dr. Gaetan Delaunay, in a recent essay on biology, addressed to the French Academy of Sciences, devotes a chapter to the study of *gourmandise* or gluttony, which, in the opinion of the scientific writer, is more commonly observable in men in proportion as they are lower down in the scale of civilization. High intellectual development and immoderate love of eating and drinking are rarely to be met with in the same person, those who are most addicted to gluttony being savages, negroes, idiots—all, in short, whose brains lie dormant. In Eu-

ropean countries, he remarks that, as a rule, the poor are more given to gluttony than the rich, the peasant than the tradesman, the women than the men, children and old persons than adults, the weak than the strong, fanatics than free-thinkers, etc. According to the learned doctor, the profession or calling in modern French society most remarkable for vivacity at the dinner-table is the clerical profession. First on the list of good feeders he places prelates and priests; secondly, diplomatists; thirdly, magistrates; fourthly, superior State functionaries, such as State councillors and others of similar rank; fifthly, bankers and financial men; sixthly, independent persons, who live on their income in idleness; and lastly, artists and literary men. Dr. Delaunay's theory is, in a word, that the more refined the intellect, the more mind is engaged or the brain works, the less disposition there is for eating; and following up this theory he points out, we presume from personal observation, that among artistic classes musicians, whom he considers are the least intelligent, are the most fond of good cheer, and in the category of singers, tenors are greater eaters than baritones. With regard to gentlemen of the brush and chisel, it is the painters who are more addicted to inordinate eating than sculptors, painters of what is called *genre* being more *gourmand* than landscape painters. Women, this young laureate of the Academy tells us, are more greedy than men; milliners, adds the doctor—who seems to enjoy the privilege of penetrating into all the dining-rooms of France—being decidedly greater feeders than dress-makers.

Health of College Girls.—A writer on the health of women who pursue advanced courses of mental training, says that at the colleges where they are educated, young ladies' amusements are much more varied than in early days. Among them may be mentioned romping in the gymnasium, on the grounds, and in the woods; croquet, boating, archery, coasting, snow-balling, botanizing, geologizing, zoologizing, and walks, long and short, besides the quieter amusements indoors.

In reply to the frequent assertion that the discipline is too severe, and that many girls ruin their health by hard study, it is stated that no death has occurred in the Mount Holyoke Seminary, for twelve years. The following table shows the comparative longevity of graduates from that institution, and from several colleges for young men. In each case they include a period of thirty years, and the war mortality is, of course, excluded:

	Grad.	Died.	Per ct
Mount Holyoke Seminary	1,213	129	10.39
Amherst	1,199	135	11.26
Bowdoin	1,012	120	11.85
Brown	972	120	12.34
Dartmouth	1,639	276	16.83
Harvard	2,326	268	11.52
Williams	1,215	123	10.12
Yale	2,883	387	13.42

Growth of American Cities.—The present census shows a striking increase during the last decade in the population of a number of Western cities, of which the inhabitants thereof may justly feel proud. Thus, Cleveland has grown from 92,000 in 1870 to 158,000 in 1880; Indianapolis, from 48,000 to 77,000; Milwaukee, from 90,000 to 130,000; and Detroit, from 79,000 to upward of 100,000. In several cities the number of inhabitants has more than doubled in ten years. Thus the population of Minneapolis has increased from 18,000 in 1870 to 45,000 in 1880; of St. Paul, from 20,000 to 42,000; and of Kansas City, from 32,000 to 65,000. St. Joseph, Mo., has run up from 19,000 to 35,000. But the most remarkable growth has been in Denver, Col.: its population in 1870 was 4,700, it is now 34,000.

M. Pellet of the French Academy has determined the value of different substances in manures for beets to be in the following order: (1) phosphoric acid, (2) magnesia, (3) lime, (4) potash, (5) soda, (6) nitrogen.

The Cape Cod Ship Canal.—This new project for the improvement of the com-

mercial interests of New England is expected to be completed in two years. It will run through the town of Sandwich, a little below old Plymouth and will strike Buzzard's Bay at a distance of about eight miles. Its estimated cost is a little less than ten millions of dollars. It will accommodate a commerce of over 100 millions annually, and will save, in shipwrecks, expense of navigation, and insurance, more than a million. Three hundred and eighty men are already at work, and the force will soon be increased to twelve hundred. It is estimated that six thousand tons of shipping and twenty-five lives are sacrificed each year in rounding Cape Cod, besides the loss of time.

Cement for Leather.—One who has tried everything, says that after an experience of fifteen years he has found nothing to equal the following as a cement for leather belting: Common glue and isinglass, equal parts, soaked for ten hours in just enough water to cover them. Bring gradually to a boiling heat and add pure tannin until the whole becomes ropy or appears like the white of eggs. Buff off the surfaces to be joined, apply this cement, and clamp firmly.



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H. S. DRAYTON, A.M., Editor. N. SIZER, Associate.

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THE MODERN PESSIMIST.

ONE of our exchanges says, "Pessimism is fashionable. To be hopeful for the future is the mark of a shallow, non-reflecting mind; to be content with the present, that of a vulgar and unæsthetic; to despair of improvement is to be philosophically clear-sighted after the manner of Heraclitus, and to villify all present conditions whatsoever

is the best method of proving one's loftiness of aim, purity of aspiration, and grandeur of idealism."

The writer of this makes allusion to sentiments that are very prevalent in the circles of cultivated society, and which indicate an unhappy moral condition there. The world has not gone backward; man has not deteriorated. On the contrary, the average for mind and body, for character and capacity, for power and resources, is higher than it ever was before.

Men to-day have a deeper insight into the fundamental causes of physical and moral prosperity. Else, how is it that the community is teeming with industrial enterprises, in each of which appliances for the economical use of human labor are employed which were unknown a century ago? and how is it that so many instrumentalities are in exercise for protecting the helpless and weak, for curing the sick, for restraining the vicious and disorderly, for correcting abuses of a pub-

lic and private nature? Men are more kindly disposed toward one another than they were a hundred years ago; there is less of prejudice, bigotry, egotism, and selfishness. It must be so, else what mean the numerous and rapidly increasing institutions of philanthropy and benevolence?

But the pessimist looks upon all these things with a jaundiced eye. His field of view takes in only their unpleasant side. The prison, the asylum, the hospital to him represent only the vicious and diseased phases of human nature, and he will have it that they exhibit an increasing tendency toward vice and disease; that the burden which the strong and virtuous must bear in supporting the weak and restraining the vicious will ever increase. He consults the statistics of crime and pauperism, disease and death, and makes them the text for gloomy reflection and discouraging predictions. The growth of population, the increase of wealth, business activity, social amenities, are practically disregarded in his calculations.

Can we suggest a reason for this one-sidedness?

We think that it is in part due to the philosophical teaching of the day. The "advanced thought" which gives tone to many of our literary and scientific publications, is marked by a lack of warm and generous sentiment. It is rationalistic even to extremes—repelling the cheerful rays of faith and hope as unreal and vulgar relics of an ancient superstition, and setting up gloomy portents in their place for its disciples to worship. Having no future, no "life beyond" in their scheme the champions of this "advanced thought" descant in long and measured terms concerning the unsatisfactory nat-

ure of life, and in chilling rhetoric declare that men are miserable, brutal, and degraded by reason of their very constitution—because they can not be otherwise.

The fact is, the "advanced thinker" is a veiled *fatalist*. However adroitly he may reason, you can detect the fatalistic thread. He boasts of devotion to truth, whereas his voice and pen are enlisted in behalf of that specious sort of falsehood which consists in offering a part for the whole, and making it the sole premise for his argument.

The pessimist seems to be at war with the higher impulses of the mind, or at least to regard them as fanciful and not deserving a place in the serious operations of thought; hence his survey of life can not be otherwise than imperfect, one-sided, and sad. Let none who would aspire to a noble usefulness, or approximate to a grand ideal of manhood or womanhood appeal to the pessimist for counsel lest they be chilled into a condition of despondency, and partake of his notion that the world is a delusion, and life not worth living.

A SIDE VIEW OF HOLIDAY ENJOYMENT.

WE like holidays, especially those of Christmas-tide. In this we are by no means in the minority, for moral and physical reasons which are so obvious that it would be wasting space to mention them with anything like particularity here. The underlying *motive* of a holiday is the withdrawal of one's self from the customary routine of thought and action, and giving attention to matters which refresh, recuperate, and please mind and body. With the masses the holiday is regarded as a season of enjoyment. The clerk can then absent him-

self from the warehouse; the mechanic can lay aside his tools; the working-girl can snap her finger at the shop, for law and custom give them the day, to be used as they will.

Holidays are based upon a great principle of nature: the necessity of change to human well-being. They interrupt the course of thought and action, which with society at large tends toward monotony and onesidedness, and introduce new and fresh ideas; new feelings and incentives to the tedium-worn spirit. In this way holidays have a very important part in the civilization of the day.

To be sure, a great many people employ their holidays improperly, even by indulging in practices which are entirely at variance with their true purpose, and so convert what is intended for benefit into an instrumentality for evil; but we think that in the aggregate the effect of holidays upon society is beneficial. There is one important respect, however, in which harm is done, and in a quarter where it can be least afforded by the community. Holidays, especially those of Christmas and New Year's day, impose no small amount of labor upon some persons. The family gatherings, the gifts, the church festivals, the benevolent fairs, suppers, etc., all compel some persons to work hard and continuously, and in far too many cases the very ones who are looked to for their counsel and aid in these affairs have scarcely physical strength enough to perform as they should the duties and exactions of their every-day life. These persons, usually women, are willing and zealous, and they accept the responsibilities heaped upon them because their hearts are in sympathy with their work, and they go on day after day bearing the extra burden, per-

haps to the successful end of the festival, or whatever it is, and then with the removal of the excitement attending its course they sink into a state of weakness which may last for months.

How many invalids there are among us whose advice and guidance seem indispensable to the proper ordering of affairs in the home and in the social circle! The reader can at once recall some in his or her neighborhood. Their services are so valuable and so ready that we forget to consider their invalidism when we have need of them; and forget also how much we contribute to keep them invalids and sufferers. We have known women, confirmed invalids, whose devotion in church-work appeared to impart strength and endurance to brain and hand, yet their lives, we believe, were shortened by the efforts which they were permitted to make only too often, because they knew so well what to do, and were so *willing*. In many families a weak wife and mother often tasks her strength beyond all reasonable limits in holiday preparations, and we believe that a large proportion of the sickness and mortality among married women is due to overstraining at such times. The holiday, instead of bringing its proportion of change and relaxation, to them brings an unreasonable increase of care and labor. Husband, children, in their vigorous appreciation of the enjoyments of the day, little think of the weariness they have cost the wife and mother, and still less think of their injustice in exacting the service which is added to an already tired body. For our own part, we could not enjoy an occasion which we knew owed its array of good things to unfair demands upon the time and strength of a woman.

PUBLIC SERVANTS OR PARTISAN OFFICIALS.

THAT was a grandly able speech which Mr. Conkling made in Cooper Union on the opening of the campaign last fall in New York City, and we quoted a few paragraphs from it in concluding the sketch of him published on the first pages of the last Number. An opinion which is definitely and finely expressed in one of those paragraphs we can not accept. It is that the candidate of a party, if elected, should represent the party in his official relations. This view of the duty of an office-holder savors too much of partisanship, we think, and not sufficiently of that chivalric patriotism which is usually shown by Mr. Conkling in his treatment of national questions.

When a man enters upon an important public station he assumes an express obligation to execute the laws and serve the community to the best of his ability. It is not a matter of party right or privilege, but a matter of plain duty and personal honor. He is not to view his official work through a party spy-glass, but to follow a course of which justice and impartiality shall be chief characteristics. The party official is an unsatisfactory servant, and usually leaves his place at the end of his term in a loose, disorderly condition, and amid complaints of those who pay the expenses of government, the taxpayers.

We can conceive of a man being a good Republican or a good Democrat, and doing official work well; but so far as experience goes during the past half century, the history of our civil affairs presents so few of such instances, that we should not expect a scrupulous discharge of duty from any party man elected to

office. We regard Mr. Hayes' administration of the Presidency as worthy of high respect, indeed as a most successful term, and not long since, in expressing this belief, we were met by the objection that Mr. Hayes had been untrue to his party or to the party that made him its candidate. Earnestness, purity, fidelity, truth in high public service were deemed of little account in comparison with loyalty to the party.

?

WHAT is the matter with General Grant? Will some one tell us? Editors, publishers, politicians, capitalists, etc., have been urging one proposition or another with which his name is prominently connected. This one wishes him to be made a permanent member of the President's Cabinet; another wishes him appointed somehow a life Senator; another would have him given an office specially created over the army with the title Captain-General or something like it; another is anxious to make up a fund of two or three hundred thousand dollars for his benefit. What is the matter with General Grant? He was President of the United States for eight years, and since the expiration of his second term has been a cosmopolite, traveling in all parts of the world, and everywhere feasted and praised and presented in a style passing description. Now he is with us once more, and the American people don't seem to know what to do with him. Can it be that he does not know what to do with himself?

THE INSTITUTE.—In the Supplement published with this Number the reader will find an account of the exercises at the close or Commencement of the Phrenological Institute. As usual, the declarations of the students are in themselves a sufficient reason for the existence of such an educational undertaking, and a warrant for earnest effort in behalf of its perpetuity.

Our Mentorial Bureau.

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

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.

DRYING FRUITS AND VEGETABLES.—

G. P. H.—In reply to a question asked by an English subscriber on this subject, we would say that there are several processes in use for drying fruits, and their principle is substantially the same. The fruit or vegetable is cut in thin slices, and then exposed to hot air. The dryers in common use are made of wood or thin metal, somewhat after the form of a vegetable or provision safe, with closed sides and adjustable shelves which may be drawn out. The sliced fruit or vegetable is laid upon these shelves, then they are pushed into the dryer and the doors closed so as to keep the heat within. A fire-pit or pan is beneath the tiers of shelving, or in some cases attached to one side of the dryer and the fire is kept up till the drying is complete. The Alden dryer is one form which is popular. The saving by artificial heat in drying fruit is said to be ten per cent. or more. You can obtain information on the subject of dryers from the publishers of the *Country Gentleman*, of Albany, N. Y., or from the *Rural New-Yorker*, or the *American Agriculturist*, of this city.

SPECIAL.—Some of our readers address us in letters making inquiries in regard to particular subjects, without having read the suggestions at the head of this department. Our space is here limited, so that we can give to each inquirer but a few lines, therefore it must not be expected that we shall consider more than superficially, if we consider them at all, questions involving elaborate examination. We have now some letters in each of which from six to ten

questions are asked. We do not promise to answer more than one at a time. Our design is to answer such questions which have a *general* application, as we can not make this column a vehicle for private counsel.

Be definite, friends, in putting your interrogatives. Don't require too much of us. Do not expect the contents of a folio volume in half a dozen lines of minion type. A large proportion of the questions which are sent to us would take days of our time to answer fairly, that is, to suit ourselves and the inquirer. Of course, all such we are compelled to treat either very superficially or pass them without notice.

GOLD AND SILVER IN THE UNITED STATES TREASURY.—G. F. B.—We have been unable to reach this question until now. The late Report of the Treasurer of the United States fully answered it; perhaps some of our readers and the inquirer have not read that. The total amount of gold coin and bullion on the first of December last was \$140,125,953, the silver being \$77,757,316, of which \$47,084,459 was in standard dollars.

WHEAT AND CHEAT.—C. C. M.—

Wheat will not turn to cheat, for the simple reason that they are two entirely different things—the latter being a kind of grass, and not by any means diseased or changed wheat. Wheat may rust or be blighted, but it can not lose its character as a vegetable production, so much as to be converted into something else.

LUNGS AND AIR.—A. G.—The lung tissue is very strong and tenacious, and in fair health can not be burst by mere respiratory effort; it is quite possible for one to injure himself in other respects by extravagant breathing efforts, but such a course is exceedingly rare. We have never known a case of hernia or rupture being produced by such efforts. Strong physical exertion, straining in pushing, which makes an exertion excessive, is a frequent cause of abdominal rupture. We think it is not beneficial for any one to try the lungs by holding the breath.

HOW AN ELEPHANT WALKS.—J. K. H.—*Question*: Does not the elephant bend his hind leg at the knee joint forward, and throw the foot back the same as the fore-leg?

Answer: Yes. In this particular the elephant differs from nearly all other quadrupeds, his hind legs having the same crook or joint as the fore.

"RAISED" BREAD.—*Question:* In the PHRENOLOGICAL JOURNAL for June, 1880, page 331, it is stated that carbonate of soda is injurious to the organization of man, etc., etc. I presume it means soda when used clearly, and in the form of soda. Now I am concerned in this statement because I have made our own bread by the unfermented process for upwards of twelve years, sometimes grinding our own wheat. To make bread in this way I use carbonate of soda, with muriatic or tartaric acid, and am well aware of their mutual destruction when in contact, leaving a residuum of common salts, as they generate carbonic acid gas. Said paragraph asserts the injurious consequences of its use, etc., whereas all scientific men that I know urge its general use, stating that unfermented bread made in this way is the purest, therefore best, to be had. This diametrically conflicts with your paragraph "How and what about it?" I have sent my bread to London, had it tested, and been thanked by scientific men for its purity and splendid quality. It is baked in an American stove. Yours is the first intimation I have had of serious consequences, and I want to hear more about it for my own and family's sake. J. A. B., England.

Answer: In our opinion the difference between "fermented" or "raised" bread is not as great with regard to healthfulness as our correspondent thinks. The raising material is the same in both cases—carbonic acid; and unless the management of the raising is so nice that the acid and alkali neutralize each other, there is formed other residua besides common salt, which are injurious. Now salt itself is in no sense dietetical, but a foreign irritant, disturbing the action of the stomach and impairing the integrity of the blood. The evil, then, as we would term it, in raised bread, is the presence of common salt, while that of fermented bread, as you know, is the destruction of the sugar—one of the proximate elements of the grain. Many scientific gentlemen regard salt as an alimentary article, and such would approve your bread, which we do not doubt is greatly superior in every respect to baker's stuff. You probably mean bi-carbonate of soda, not the carbonate, as it is the bi-carbonate which has so vigorous an affinity for hydrochloric acid or tartaric acid. We use bread that is simply made of middlings, or Graham flour mixed with water, and being baked in a hot oven it is beautifully raised, and even "lighter" than fermented bread. A little milk added to the water is an agreeable addition. As for salt, we find that nature has supplied quite enough of alkali in an organized form in the

grain for our purposes, and we do not care to swallow it in a chemical form.

CHEAP DICTIONARY.—I.—You should readily find among the numerous editions of Webster and Worcester the volume suited to your purposes. Besides these standard word-books of the language, there are others which are convenient, trustworthy, and cheap. One recently published, called "The American Popular Dictionary," is very compact in form, yet contains all the useful words of the language and a great amount of necessary information on science, history, law, business, etc. The price is but a dollar.

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.

OLIVER EVANS, THE FIRST LOCOMOTIVE BUILDER.—The history of railroads, great motors in the march of civilization, has yet to be written. More important in their influence on the advancement and prosperity of the world than any combinations, plans, or projects of princes or potentates backed by the bayonets of mercenary soldiers, these bands of iron for the last few years have been rapidly girding the earth, until they have become the pioneers of civilization; leading the advance guard of enterprise successfully toward the accomplishment of universal, national, and individual prosperity and good-will.

To one imbued with the fierce fever of progression that characterizes the present time, the rapid advance and the important improvements in the construction of railroads may not seem to be worthy of much notice. Much less interesting it may seem to such a one to linger over the biographies of the originators and conceivers or the improvers of our great railroad system. Engrossed as everybody is in the crowding duties that belong to their present, it seems but time mispent to linger over the chronicles of past achievements; and so in the hurry of to-day's advancement that of yesterday is forgotten, or its intimate connections with our present progress materially overlooked. Satisfied with the consciousness of progression, we are forgetful of the slow, tedious steps that were taken by those who preceded us in reaching the height which we now consider so easy of attainment.

With the lightning subservient to our commands, to bear thought electrically to all parts of the globe; with steam harnessed to our cars and obedient to our guidance, on land or sea; we are apt to forget the tedious stages that have

marked the development of these discoveries and inventions of our race. Still more are we inclined to forget and ignore the claims to enduring fame of those who, through poverty and neglect, through derision and contumely, persisted in pursuing their once-called "chimerical fantasies" until their labors were crowned with complete success. Among this number stands pre-eminently the subject of this article.

Oliver Evans was a native of Pennsylvania. As early as 1784 he conceived the idea of a high-pressure steam engine and its application to transporting carriages upon common roads; for his first conception did not embrace either wooden or iron tracks. His attempts to interest the people of Philadelphia in his theory were fruitless. They regarded him as a man but little better than insane, who was pursuing a phantom of his imagination in the shape of a new motive power. Undismayed by the rebuffs and repulses of his contemporaries, he commenced in 1799 the construction of his conceived locomotive, and completed it in 1800. Owing to unavoidable delays, he did not get it ready for public exhibition until the winter of 1803-4. He had said that he could propel a carriage by steam along the streets of Philadelphia, and so long as his conception was but a theory, his contemporaries were content to pay no further attention to him than to pronounce him crazed; but when the announcements were made by him through handbills, as if defiantly, that his machine was finished, and that upon such a day it would move, as he had predicted, curiosity was on the tip-toe to witness the public exhibition of a brain-cracked inventor's failure and disgrace. Friends who had avoided him for years as a man out of his senses, now besought him to spare himself the mortification of a failure in public, by abandoning his advertised attempt to propel his vehicle. But their beseechings were in vain. "Come and see," was his answer, as that of a man who, confiding in his own powers, was willing to stake all his claims to reputation or sanity upon the result; and they came.

At least twenty thousand assembled upon the day appointed for the experiment as spectators. In Broad Street he laid down some planks for a short distance, on which to make the momentous experiment. A few yards only did he expect to propel his machine, as that would establish the correctness of the principle. Mounting the machine, which looked about as much like the modern locomotive as a common cooking-stove may do, he let on steam. Slowly but surely the ungainly thing started. Slowly but surely the smiles on the faces of the spectators, but wanting a halt in its progress to burst into a perfect hurricane of derision, change to wonder and astonishment. A few planks were crossed. His blood was up; and putting on a full head of

steam, he continued his course down the street, with the twenty thousand disappointed, yet now admiring and enthusiastic, people following in his wake, swinging their hats, cheering and shouting, not as they had come to do, over his failure, but over his complete success. It was indeed a proud moment, and who shall say, even if posterity fails to do him justice, that in the feeling of that victorious hour, he was not for his long labor amply repaid? *It was the first trip of the first locomotive in the world, and to OLIVER EVANS belongs all the credit of its conception and projection.*

It would be supposed that after this he would have had no difficulty in making converts to his plans. Not so. From 1804 to 1809 he seems to have made many efforts to enlist public favor in behalf of railroads, but in vain. He proposed to build a railroad from Philadelphia to New York, and offered to invest twenty-five thousand dollars, his entire fortune, in the undertaking; but he and his scheme were in advance of the age in which he lived, as he himself seems to have thought when he made the following prophecy, that has so literally come to pass:

"The present generation will use canals; the next will prefer railroads with horses; but their more enlightened successors will employ my steam carriages on railways, as the perfection of the art of conveyance."

How complete has been the fulfillment of the prediction!

The name of the first locomotive run in the streets of Philadelphia was the *Oreuter Amphibolus*. The distance it traversed the streets, after leaving its short tramway of planks, was one mile and a half, or to the banks of the Schuylkill; it was then placed on a boat, to which a wheel was attached at the stern, and made to propel the boat to the mouth of the river and thence to the Delaware front of the city, a distance of sixteen miles.

Evans took out a patent for his machine in 1794, and sent one Joseph S. Sampson to England with drawings and specifications. These were exhibited extensively to different English engineers, among whom were Vivian and Trevithick, who, copying these drawings and specifications of Evans, *without credit*, obtained in 1802 a patent of the English Government therefor, to whom, very unjustly, the English still attribute the first invention of locomotive carriages, which of right belongs solely to Oliver Evans. Evans died finally, poor and neglected, while they acquired, by dint of their stolen discovery, opulence and fame. "But time at last sets all things even," and will yet place the glory where it so rightfully belongs. H. W. HOLLEY.

MALARIAL DISEASES.—The editorial in the December Number of the PHRENOLOGICAL

utters some very important truths which the profession is very slow to comprehend. The doctors as well as the masses will become convinced some day that the only way in which to have good health is in living healthfully; and that there is no vital force outside the living organism that can remove diseased conditions from it; that the vitality which is inherent in all living organisms, that vital principle which brought us into being, is the only force that can remove diseased conditions from it. The "kingdom of heaven" is within us, not without. The force that removes disease is not found in extraneous substances, such as drugs, but is found in the vital organism. If we can obtain the conditions necessary for health, we shall remain in health; but if our surroundings are unhealthful, if we have to breathe air or drink water contaminated with impurities, this vital force is called upon to resist the action of these impurities and eliminate them from the system. This action is what is popularly termed "disease," and the disease is named according to the character of the poison introduced.

I suspect that city physicians term and treat all diseases arising from sewer gas and impure air as "malaria," and prescribe the usual remedy, "quinine," in some form or other without finding out the causes of the disease and removing them. I also suspect that those parties who "returned from the country and contracted malaria," were very probably poisoned by breathing air from rooms that had been closed up in their absence and not ventilated perfectly. Sewer gas and other impurities were allowed to accumulate during their vacation in the country, and some part of the house may not have been aired properly on their return. If so, the trouble itself would suggest a remedy.

L. JONES PRICE, M.D.

PERSONAL.

REV. DR. EDWIN H. CHAPIN, one of the most eminent of Universalist clergymen in America, died, Dec. 26th last, at his residence in New York. He was about sixty-six years of age, and had attended to the duties of his ministry until March last, when illness compelled him to withdraw from them. Dr. Chapin was born in one of the oldest New England families, and one distinguished for the number of descendants who had chosen the profession of the clergyman as their calling. He became early a marked man for eloquence in the pulpit and on the lecture platform. His contributions to the moral and religious literature of the day are regarded among the best for popular use, and have been widely circulated.

NEXT to Mr. Marsh, our Minister to Italy, the oldest American representative abroad by con-

secutive years of service, is Mr. Bingham, Minister to Japan, whose appointment dates from May, 1873. Mr. Marsh was appointed in 1861. Changes in our foreign representation are too frequent for dignity and efficiency of service.

MRS. PATTY STICKNEY, of East Brownfield, Me., at the age of ninety-six can walk a mile without fatigue, and sew on fine work without glasses. Is she one of the "weaker" sex?

"GEORGE ELIOT," the world-famous woman-novelist, is dead, having departed this life December 22d. She without doubt was the greatest intellectual power among women that England has produced. "Adam Bede" will long continue to dispute the first rank with novels written by men like Scott, Dickens, and Thackeray, yet that is in some points even inferior to her "Romola." Her maiden name was Evans, and whatever may be said of her anomalous marriages, none, we believe, refuse her the character of a high-minded woman.

A HEAVY SORROW.—Our friend Mr. Thomas Cook, so well known as the excursionist and promoter of moral reforms, has recently been greatly afflicted by the sudden and distressing death of a beloved daughter, Annie Elizabeth Cook. Our earnest sympathy is with him and his family in this trial. Miss Cook was a young lady of fine character and accomplishments. She had traveled much in Europe, Palestine, and Egypt, and so added the experience of a wide observation to the cultivation of school and home. Such a death is a severe bereavement to the community in which she lived, as well as to her family.

WISDOM.

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

BETTER face a coming danger once than be always in fear.

THEY who talk much should be aware of those who listen attentively.

VIOLE stings us even in our pleasures, but virtue consoles us even in our pains.

CIVILIZED mankind is clothed for the most by two plants, one worm, and one quadruped.

CALUMNY would soon starve and die of itself if nobody took it in and gave it lodging.—LEIGHTON.

VICTOR HUGO: The soul helps the body, and at certain moments uplifts it. It is the only bird which sustains its cage.

KINDNESS is the music of good-will to men; and on this harp the smallest fingers may play heaven's sweetest tunes on earth.

HANKIND has been learning for six thousand years, and yet how few have learned that their fellow-beings are as good as themselves.

HABIT is the deepest law of human nature. It is our supreme strength; and also, in certain circumstances, our most miserable weakness.

THOUGH I am always in haste, I am never in a hurry; because I never undertake any more work than I can go through with perfect calmness of spirit.—JOHN WESLEY.

SELF-EASE is pain; the only rest

Is labor for a worthy end,

A toil that gains with what it yields,

And scatters to its own increase,

And hears, while sowing outward fields,

The harvest song of inward peace.

—WHITTIER.

MIRTH.

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

A LAZY boy was complaining that his bed was too short, when his father sternly replied: "That is because you are always too long in it, sir."

FRED was teasing his sister Jessie. At length her patience becoming well tried, she said, "I do wish God would take Freddie and make him over again."

"I know a victim to tobacco," said a lecturer, "who hasn't tasted food for thirty years." "How do you know he hasn't?" asked an auditor. "Because tobacco killed him in 1850," was the reply.

TEACHER: "Suppose that you have two sticks of candy, and your big brother gives you two more; how many have you got then?"

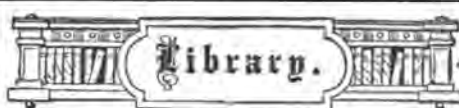
LITTLE BOY (shaking his head): "You don't know him. He ain't that kind of a boy."

"WHAT papers off my writing-desk are you burning there?" cried an author to the servant girl. "Oh, only the paper that's all written over, sir; I hain't touched the clean."

PROFESSOR HUXLEY calls it a "corollifloral dicotyledonous exogen, with a monopetalous corolla and a central placenta." If you are in a hurry, you can call it primrose instead.

"My case is just here," said a citizen to a lawyer the other day; "the plaintiff will swear that I hit him. I will swear that I did not. Now, what can you lawyers make out of that if we go to trial?" "Five dollars apiece," was the prompt reply.

A YOUNGSTER, while warming his hands over the kitchen fire, was remonstrated with by his father, who said, "Go 'way from the stove, the weather is not cold." The little fellow, looking up demurely at his stern parent, replied, "I ain't beatin' the weather, I am warming my hands."



In this department we give short reviews of such New Books as publishers are 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. 312. Cloth. Price \$1.50. Boston: Houghton, Mifflin & Company.

Probably no American author whose topics are grave, and gravely discussed, has a larger public than Mr. Cook. What he says is heard with close attention by a large audience, and is afterward read by tens of thousands of readers through the medium of the press. Naturally, as his topics are live, every-day ones, he was led to consider the Labor question, and then the Social problem urged its claim for a hearing. The volume before us contains Mr. Cook's lectures in Boston before his Monday audience on that problem, with the preludes which he has been in the habit of making on current events, and which, according to our way of thinking, are sometimes better than the lectures which follow.

Mr. Cook is on the side of the poor man in the main, but thinks he must rise by his own effort if he would rise at all. He points out methods by which the working people may help themselves—such as co-operation, education, temperance, cleanliness, economy, etc.; thus taking solid and practical grounds in his reasoning. He handles alcohol with ungloved hands, and so, too, the corruptions which are prevalent in political circles and the lax honor which is seen in commercial life. Mr. Cook's voice is for purity and truth, honor and manhood everywhere, in the Church as well as in the State. We think his Socialism one of the best books of the "Monday Lecture" series, because of its application to the every-day life of our people.

OUTLINES OF UNITED STATES HISTORY. A Handbook of Ready Reference for Students, General Readers, and Teachers. By R. Heber Holbrook, Associate Principal National Normal School, Lebanon, Ohio; author of "School Expositions," etc., etc. 12mo, cloth. Price, 75 cents. Danville, Ind.: "Normal Teacher" Publishing Company.

The fundamental idea of this volume appears to be the arrangement of particular events, especially those of importance, with respect to their relation or bearing upon others, or upon the general condition of a country. It is the result of

several years' experience in teaching, and we think will prove to the student who uses it intelligently a valuable aid in acquiring a substantial knowledge of United States history. The study of history is tedious drudgery to many youth because of their inability to memorize readily the details, especially the dates and names of events. Mr. Holbrook appears to have had such pupils in mind in this work, and has sought to make history be to them what it should be—one of the most agreeable of studies.

THE ORTHOEPIST. A Pronouncing Manual, containing about three thousand five hundred words, including a considerable number of the names of foreign authors, artists, etc., that are often mispronounced. By Alfred Ayres. 16mo, pp. 201. New York: D. Appleton & Company.

How much bad pronunciation we hear every day! Even the pulpit and platform are not free from numerous examples of common words improperly rendered. How many people there are calling themselves educated who pronounce new as if it were spelled noo; blue as if it were bloo; interest as if it were intrest; finance as if it were fynance. Indeed, in glancing through this little manual we are a little startled to find that we have been tripping, too, in our accents and vocalization, and should scarcely have known it had not the book been placed in our hands. The "Orthoepist" bears the marks of very careful preparation, and is by no means the work of one who regards himself as an infallible authority, but simply that of a close student, and observer of the structure of words and vocalization. Printed and bound in a very neat and substantial manner, it forms a very useful adjunct to the study table of all who use language professionally, and will be found serviceable to all who desire to pronounce accurately.

A BAD BOY'S DIARY. 16mo, pp. 276. Price, \$1.00. New York: J. S. Ogilvie & Company.

The frontispiece, which is a supposed portrait of the "bad boy," fairly represents an imp of mischief; the broad head and rogulsh nose impressing us with a sense of his natural tendency to be in everybody's way, and variously to try the patience of father and mother, aunt and sister, on all possible occasions. The "bad boy" commences his story of himself at "ate" years of age, and tells how he wanted a "diry" for his birthday present, "cause all my growed-up sisters keep a diry." He has three sisters "what all kepes their dirys, an' writes into 'em every night after their hair is took oph an' put in the buro drawer, except what is put in crimps." He is constantly getting into scrapes with this or that member of the family, incurring the displeasure of all sometimes by a wholesale act of mischief. Sometimes he falls into the pond

when fishing, gets shot for a burglar, shoots the minister with "an ole thing that was loaded after all," when he was only playing injun; scalps a professor's wig, is joggled off the platform of a car of an express train into a snow-bank, buries a squirrel that couldn't stand the family doctor's medicine in a Christmas work-box belonging to one of his sisters, 'cause it made a lovely "coughin';" frightens the whole town on the 1st of April by a false alarm of fire, blows up a new bridge, and so on through the lively told series; fun enough for one volume, and not altogether without some suggestions for reflection.

PUBLICATIONS RECEIVED.

ELECTRIC LIGHTS is the title of a collection of new songs, of which "*Old Age*," by George Woods, has been received from W. W. Whitney, of Toledo, Ohio. Price 35 cents.

VENOR'S WEATHER ALMANAC AND WEATHER RECORD, 1880-1881. Price 25 cents. The American News Company, New York.

Mr. Henry G. Vennor belongs to the Geological Survey of the New Dominion, and therefore can not be said to discuss meteorological affairs without some basis of experience and culture. He makes up a very interesting almanac, both the predictions for 1881 and the comments on 1880 affording material for useful thought. There are several pages of weather signs, which we have glanced through, and consider worthy the attention of all whose business or calling is affected by conditions of the weather.

ALVA VINE; or, ART vs. DUTY. By Henri Gordon. A new edition in cloth, of this story, which was noticed in a late Number of the PHRENOLOGICAL JOURNAL. Price \$1.00. New York: American News Company.

WHY I OUGHT TO GO TO CHURCH—By Rev. Selah W. Strong—is the title of a little pamphlet containing a strong argument, in eight short chapters, for religious worship, which is peculiarly adapted to the reading of non-churchgoing people. J. S. Ogilvie & Co. are the publishers, 29 Rose street, New York.

The same firm has brought out a series of very beautifully decorated cards for the use of Sunday-schools, and which are sold at low prices.

THE PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH is received. A largely diversified make-up of literary matters, fully up to the standard, make this one of the most interesting and valuable magazines which is now published. It is a positive benefit to any sensible person to read it, more especially if they are willing to profit by its instructions.—*Boston Journal of Commerce.*

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SIR FREDERICK LEIGHTON, R.A.,

THE EMINENT ARTIST.

WE have the opportunity at this time to present our readers with a portrait of the distinguished President of the Royal Society of Art, England. The sketch of his character is by Professor L. N. Fowler, of London. Character is indicated through two channels, first through the development

of the brain by the largeness or smallness of the organs; secondly, through the quality, texture, and tone of the organization. A low tone of organization indicating poor quality may be very marked in development, yet not distinct and elevated in manifestation; while with a fine quality of organization, with an even development of brain, there may be a very distinct manifestation of those faculties called into exercise.

Quality, with an even development, is the peculiar condition of Sir Frederick Leighton. He is peculiarly high-toned, and has much condensed and concentrated strength and power.

There is nothing massive about him. Delicacy and susceptibility appear to be written in every line and feature of his organization. His ears, nose, and mouth all indicate the high aristocratic type. He must have derived the quality of his organization from the maternal side. There is nothing bold, striking, or remarkable in his development, and he would have succeeded equally well in many pursuits if he had given equal attention, especially if exquisite work were to be done. Everything such an organization does must be done most perfectly. There is harmony throughout in bodily powers and in mental development; consequently, harmony and consistency would be characteristic conditions of his life and influence.

He has a very high degree of the nervous system and mental temperament, giving an unusual amount of mental susceptibility and nervous force and strength, thus making him thorough and executive. One leading feature of his character is strength of will and ability to hold his mind to a subject, and to do what he begins.

In a scale of from one to seven, he would rank about two degrees higher in availability of power and in fineness of texture than ordinary men; consequently, whatever he does, he will show that degree of difference in the style and perfecting of his work. He has much reserved force that does not show itself under ordinary circumstances; hence, he frequently does more than he looks as though he could do. His smaller faculties appear quite powerful when charged with nervous energy, and their action is required.

He excels as an artist because all his powers lie in that direction, and his quality of organization is particularly favorable to art and literature. The intellectual powers are fully developed, but the perceptive faculties predominate, disposing him to be distinct and minute in his observations, inclining him to take every little thing into account, and to be as particular in the detail of his work as in the general design. Order, Constructiveness, and Ideality are large, and combined, would give him versatility of design, exquisiteness of taste, scope and freedom of conception, joined to great power to organize, arrange, and execute. He could not leave his work imperfectly done. His mind would be ill at ease to know that the least necessary touch had not been added, and he would think it necessary to add many more touches than a coarser temperament would.

His power of expression is good; in one way or another, he can bring out his ideas, and let others know what he knows. His large perceptive powers, with his Order and strong imagination, enable him to group objects and put much in a little space. There is a full base to his brain, which indicates energy, industry, and even

force of character if necessary. The head is rather broad in Cautiousness and Secretiveness, rendering him somewhat reticent and conservative, yet not unpleasantly so. He has a high sense of character and propriety which, joined to his native reserve, sensitiveness, and refinement, keeps him at a distance, and prevents undue familiarity. Yet, when in the society of his own associates, he is social, companionable, and entertaining. He has an elastic, youthful state of mind, a keen sense of the humorous and ludicrous.

Imitation is large, giving him versatility of manner and ability to copy and imitate.

The great objection to such high-toned development is that it puts a man on too high a plane, and disposes him to finish in too delicate a manner to be appreciated by ordinary minds; and when in society, all feel that he must be approached with caution, and any amount of acquaintance would not put both on a par with each other. The social nature as such does not appear to be particularly strong. He is not very warm, ardent, or emotional in his affections; the intellectual, moral, and æsthetic faculties largely predominating in his character. He enjoys social life more from the intellectual impulse and the distinction it gives, than from enjoyment of the social feelings themselves. He would be a courtly host and an agreeable guest, but his regret at leaving one company would be balanced by his anticipation of another about to be enjoyed.

The President of the Royal Academy was born at Scarborough, on the 3d of December, 1830. He displayed a strong fondness for art when a mere boy, and his parents wisely encouraged

him in its pursuit, giving him every opportunity for its study, even so far as sending him to Rome, when but twelve years of age, where he received the instruction of Filippo Meli; and later he was permitted to enjoy the advantages of the Royal Academy of Berlin. His father, however, did not wish him to make art a profession, but the opinion of Hiram Powers, to whom some of Frederick's drawings were submitted, won the elder Leighton's consent to his son's devoting himself entirely to painting.

He studied in the Academy at Frankfort-on-the-Main a good part of the years 1846, 1847, and 1848, and during the winter of 1848-9, he completed his first picture at Brussels. The following year he spent mainly in the Louvre copying, and attending the school for the study of living models. Next we find him back in Frankfort, a diligent pupil of an eminent master of Vienna, and there he continued at work until 1853. During this time he produced several pictures, among them "The Death of Brunellesco."

From Frankfort young Leighton went to the great center of Italian art, where he had begun his pupilage, and renewed his studies of Roman genius with the enlarged views and quickened appreciation which ten years of almost constant observation and practice in the different schools of European art had impressed his naturally quick mind. At Rome he spent the major part of three winter seasons in study and in painting a picture of "Cimabue," a subject representing the procession of Cimabue, his scholars and principal contemporaries of Florence accompanying that master's picture of the Madonna to the Church of Santa Maria Novella. In 1855 this painting was exhibited at the Royal Academy, and proved a decided success for the young artist, and a surprise to the London public, he being as an artist entirely unknown there. It was purchased by the Queen, and exhibited among the Manchester Art Treasures, and at the International Exhibition.

This picture of "Cimabue" seems to

have made him at once famous at home, but the painter was in no hurry to return to England and bask in the sunshine of success. He made Paris his residence for four years, working as diligently as ever, and profiting by the counsel of eminent artists like Scheffer, Fleury, and others. Returning at length to England, he made London his residence, and in 1856 exhibited at the Academy a picture entitled "The Triumph of Music," which represents Orpheus redeeming his wife from the power of Hades by his musical skill. Since that time Mr. Leighton has been a constant contributor to the Academy, his pictures always taking high rank in the exhibitions from year to year. As he is one of the most industrious of English painters, to give a full list of his productions would occupy a large space here. Some of those, however, which are regarded as possessing more features of merit or interest than others, are the following: "Sunny Hours," exhibited in 1859; "Capri-Paganos," 1861; "The Star of Bethlehem," 1862; "In St. Mark's" and "Widow's Prayer," 1865; "Roman Mother," 1867; "Ariadne abandoned by Theseus," 1868; "Electra at the Tomb of Agamemnon," 1869; "Hercules Wrestling with Death for the Body of Alcestis," 1871; "Weaving the Wreath," 1873; "Moorish Garden: a Dream of Granada," and "Clytemnestra watching from the Battlements of Argos for the Beacon-fires which are to announce the return of Agamemnon," 1874; "Little Fatima," 1875; "Parlo," 1876; "The Music-Lesson," 1877. Most of these and

others of his works have been made known to the art-loving public through the steel-engraver and lithographer.

In St. Michael's Church, Lyndhurst, there is a reredos on which is a group of the Five Foolish Virgins, executed by Mr. Leighton. The material used for this picture was a new mixture of wax, resin, oil of lavender, and copal, in which the pigments were ground. This medium had been tried by another artist with apparent success. Mr. Leighton concluded to employ it in his wall painting, and did so with excellent result.

Mr. Leighton's pencil has been in requisition for the illustration of popular authors: among them "George Eliot's" tale of Florentine life, "Romola." In 1864 he was elected an associate of the Royal Academy, and in 1869 became an Academician. On the death of Sir Francis Grant, President of the Royal Academy, he was chosen his successor, and a few days later received the honor of knighthood.

Mr. Leighton's work as an artist is particularly characterized by its high finish; no other English painter surpassing him, if indeed there be one who equals him, in this respect. His Continental training may be said to have made him a faithful disciple of the attributes of style which are exhibited, for example, by the Venetian school of art. He is happy in the choice of subject, and the refinement of his treatment, which is not exceeded by Millais or Tadema, contributes powerfully to the elevation of English painting and English art in general.

HINTS TO THE ASPIRING.

EVERY month this JOURNAL comes to thousands of eager readers who search its pages for hints, encouragements, suggestions that will enable them to grow better. It has been the beneficent mission of the PHRENOLOGICAL JOURNAL to inspire hope in the minds of the aspiring and hemmed in; to point them a way up and out of the contracted

circle in which circumstances, not of their creation or within their control, have placed them. Forty years or more ago, an expounder of Phrenology connected with the JOURNAL visited the district school of a rural county where we were a pupil, and examined the heads of many of the scholars. With much trepidation we permitted the oracular fingers to feel our

"bumps," and a great many things were said of them, only one of which lingered in memory. "If this girl were sent away from home, or went away from it, she could take good care of herself, and would not be likely to get into trouble." For ten years and more subsequently, when we were in a strange land, lonely, quite friendless, and occupying a position requiring very delicate management, that utterance was the source of strength and support and hope to us. And it proved true.

A friend of ours told us the following with regard to his experience of the benefit Phrenology had been to him: "Twas after the war, and I was out of business, my command having been dissolved (he was captain), and I didn't know what to set myself about, or whether I was good for anything. I had five dollars about me, and decided to go and have my head examined. The phrenologist told me a great many things that I knew were true, and at the close of the examination remarked: 'You have a mouth just like that of Marshal — (one of the first Napoleon's great marshals), and you ought to succeed, and make your mark in the world.' There was encouragement for me. I went right to work to get a situation; got one, and have been doing well ever since."

The careful observer of individuals sees character, not in the contour of the head alone, or in the lines and expressions of the face, but in every movement of the body, in its every attitude, whether it is in motion or at rest. The manner in which the hand grasps a tool or makes a gesture is a revelation of the soul. The gait shows what manner of person each man is; the shape and expression of the hand and the foot are as indicative of individuality to those who can interpret the signs as the lines of the head and face. In fact, summing up the entire character, these must always be taken into account. The head and face show what a man ought to be, or what he might be; and these, taken with the indications furnished by other members of the body, show what he is, infallibly.

To illustrate: Just before the panic of '73 we made the acquaintance of a gentleman of high business position in the metropolis, through whose hands passed millions every year. During the panic he became bankrupt, and it was interesting to note the change this produced in him. The lines of the head remained unchanged, but those of the face soon lost their tension. The mouth, no longer accustomed to command, wore a bewildered and uncertain expression. The gait became unsteady and somewhat shuffling. After a year or two spent in vain attempts to regain a foothold in business, this man turned his attention to the law; after due preparation was admitted to the bar, and is now in good practice. The whole tone and expression of the man is changed. His face is full of purpose, of hope, of energy, his gait is no longer unsteady or shuffling, and the lines of his head have also visibly changed. The whole intellectual region shines with a new and fresh illumination.

Every observing teacher must note how progress and special excellence in study affects his pupils; how it changes their attitudes, their movements, the whole expression not of their faces only, but of their entire bodies. Years ago we had in our classes a girl of fifteen who was a most eager and earnest student, but who from some physical defect could not attain the standard she aimed at. Seeing it was possible for her by perseverance to succeed, we gave her special attention and encouragement, and as indicia of her progress we noted how the expression of her hands as she held her book in class changed. At first they were unsteady, tremulous, irresolute; we were apprehensive continually that her book would drop on the floor, though it never did. As she grew stronger and more hopeful, a steadiness of grasp appeared in her hands, a serenity shone from her eye, a confidence and surety of step were visible in her gait. As we noted these changes, we would say to her, when failure discouraged her: "You are certainly improving, Mary, I can see it every day;

only keep on, and you'll realize all you desire." She did keep on, and became an ornament to her class.

Now the point of this brief article is simply this: If you, reader, have not the kind of face you wish you had, go to work and make it what you want it to be. If your walk isn't what you would like to have it, go to work and make it what you want it to be. If you have ugly hands and feet, make them beautiful by putting a fine expression into them. Louis XIV., the personification of kingly majesty, was discovered, after he was dead, to be a short man. When he was alive he seemed of superior stature. A noble purpose makes ignoble features noble. A high motive lights up the dullest eye with a spark of celestial radiance. Unselfish devotion to worthy ends clothes native ugliness with beauty.

"Soul is form and doth the body make."

We all know faces quite destitute of that comeliness which comes from graceful form and exquisite coloring, which at times are absolutely beautiful because of their expression. When one of Socrates' pupils, angered at personal descriptions of his master, threatened vengeance to the libeler, Socrates checked him by saying, "It is all true that this adversary

says, every bad passion has its index in my face, but I have conquered them all by philosophy." To his pupil the master's face was divine.

The poet sings of a time coming when "every shape and every face shall be heavenly and divine." This will be when intelligence, virtue, love, have driven out every base passion, purified all the dark corners of the soul, ennobled every faculty, and freed the soul from the fetters of ignorance, of passion, of sin. To some this time nearly approaches even in this world. Such bless us by their very presence. An influence goes forth from them which tranquillizes, elevates, strengthens. By no mere chance are they conquerors over self. The peace which fills their hearts and lives is born of war, of long and bitter conflict with adverse powers; of patient cultivation of virtue, truth, probity; of the unquenchable devotion to all which is highest in our nature and in which we resemble the Pattern after which we were created. There is no one so hemmed in by narrow circumstance, so tampered by unfortunate antecedents, that he may not take heart and hope, and make his way from darkness up to light, from bondage to freedom, from ignorance to knowledge, from Satan to God.

L. L. S.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER VI.

THE BRAIN OF QUADRUPEDS—STRUCTURE OF CEREBRUM AND CEREBELLUM.

THE anatomy of the brain of those animals belonging to the principal classes of vertebrates appears to possess so much interest to physiologists and naturalists, that it has been for many years the chief department of investigation for a large number of the learned in Europe and America, and the conclusions which have been reached regarding the structure and functions of different parts are among the most valuable facts of science. In the last century Haller, Vicq

d'Azir, Reil, and Serres were prominent among the promoters of such investigations, and though to-day their achievements may appear insignificant, they contributed greatly to awaken interest among scientists concerning the important bearing of comparative anatomy upon human physiology and pathology, and thus have led to the brilliant discoveries of observers and experimentalists like Müller, Magendie, Sir Chas. Bell, Flourens, J. L. Clarke, Volkmann, Bernard, Valentin, etc.

As in the case of the constitution of the cranium, so in the case of the brain, we shall find remarkable differences when



Fig. 204.—BRAIN OF THE HARE. UPPER SURFACE.

we compare that of man with the brain of quadrupeds. The limits of this work will prevent us from going into minute detail, so that what shall be considered, will be the more important features of the cerebral physiology.

It is a general law of nature that the more complicated an act or phenomenon is, the more complicated are the parts which associate in its production. Man



Fig. 207.—BRAIN OF THE SQUIRREL.

stands at the head of animal life in elaboration of brain structure; next come quadrupeds, then birds, reptiles, fishes, and insects. Among the last named there are

species like the bee and ant, whose nervous structure, according to late observers, is remarkable for its complexity, and if all that is said of their intelligence be true, the law finds no exception in them.

We shall see later on, when we treat of the five senses, that man is the most ad-



Fig. 205.—BRAIN OF THE WEASEL.



Fig. 206.—BRAIN OF THE WEASEL. OUTLINE.

vantageously endowed in them, although several of the animals exhibit a higher development in a special sense—for instance, the elephant, the pig, the wolf, surpass him in smell; the eagle greatly surpasses him in sight, and the seal is far more remarkable than he for acuteness of hearing.

All the vertebrates are provided like man with a nervous mass, inclosed in a bony case known as the cranium, and this mass presents also three distinct parts: cerebrum, cerebellum, and the medulla oblongata. As in man, there are the processes of communication be-

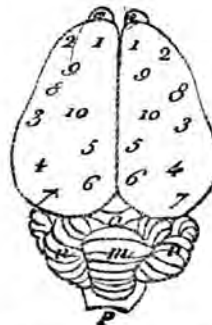


Fig. 208.—BRAIN OF THE SQUIRREL. OUTLINE.

tween these different parts called commissures. In the quadrumana, embracing the ape family, the form of the cerebrum shows a close similarity to the hu-

man, being composed of two hemispheres separated by a fold of dura-mater, while the hemispheres have convolutions whose extent, number, and form vary greatly in the different families and species. The cerebellum is composed of two lobules joined at the center, the layers of substance in them being much less numerous than in man. Then there are

so well marked that they can be relied upon: All the quadrupeds, the mole, the European bat, the hedgehog, and the entire family of the rodents excepted, have a brain provided with convolutions. Notwithstanding that some of the rodents like the hare and squirrel have considerable brain, it being three to four times the size of that of the weasel, it is not convoluted as in the case of the latter. See Figs. 204, 205, 207.

The entire family of the herbivora or ruminants, the ox, cow, sheep, etc., show marked convolutions, but they are developed or arranged more in a transverse order than in a longitudinal. See Fig. 209, which represents the brain of a sheep. In the horse, ass, goat, kid, pig, the disposition of the convolutions is of the same character.

In the family of the carnivora, such as the dog (Fig. 210), badger (Fig. 211), cat (Fig. 212), marten (Fig. 213), weasel (Fig. 205), the convolutions are very distinct and more extended than in the herbivora; they leave, as in the case of the ruminants, well-marked impressions upon the inner surface of the cranium.

It is generally believed that the Author of nature intended, by the disposition of the brain substance in folds or convolutions, to increase the extent of its surface, and so to give it more energy and a wider sphere of action or function without increasing the proportions of the skull.

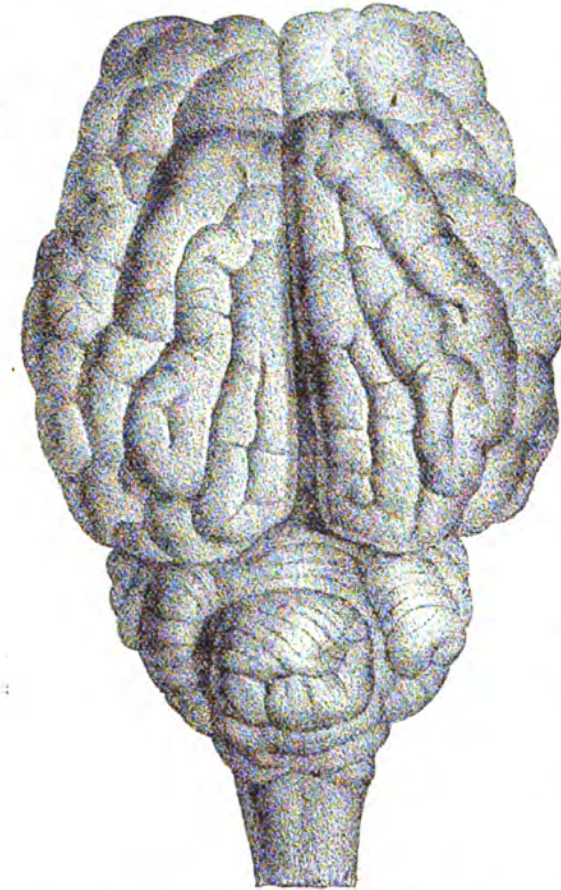


Fig. 209.—BRAIN OF A SHEEP EIGHT YEARS OLD.

a great commissure, four quadrigeminal tubercles, and the pineal gland, while the spinal marrow shows the same general conformation.

In all the quadrupeds, without exception, the brain is composed of two hemispheres, the development of which offers remarkable differences, according to the class, order, genera, and even the species. Here are two differences of organization

We have noticed that in man the cerebellum lies completely under the cerebrum (Fig. 195). In animals a noteworthy difference in this respect is seen. In the higher apes the cerebellum is for the most part covered by the cerebrum, and in a few species of dogs the same condition is true; but in the cat, sheep, hare, squirrel, hedgehog, turkey, mole, the cerebellum is almost entirely uncovered. In the

dog, badger, marten, weasel, the posterior portion of the hemispheres covers more or less of the cerebellum. The variations

appears always constituted of several very distinct parts. Generally in quadrupeds the median region of this part of the



Fig. 210.—BRAIN OF A SETTER DOG, TWO-THIRDS NATURAL SIZE.

of form, volume, and composition of this part of the brain in quadrupeds are apparently without limit; but in animals of the same species we find the same type of form always, however much the volumes may differ.

One fact which should be mentioned is, that the cerebellum of the lower quadru-



Fig. 211.—BRAIN OF FEMALE BADGER, TWO-THIRDS NATURAL SIZE.

nervous system, or that which corresponds to the vermiform process in man (Fig. 214, o, m), is always more conspicuous, more expanded.

The volume of the cerebrum, as compared with that of the cerebellum, varies so much in different classes, and even in



Fig. 212.—BRAIN OF FEMALE CAT.

peds, and generally in birds, never offers a smooth aspect, as is the case with the hemispheres in most of the former, but



Fig. 213.—BRAIN OF FEMALE MARTEN.

individuals of the same species, that it is well-nigh impossible to set an average with respect to the proportion between

them. M. Vimont, after comparing the weights of these parts of the brains belonging to a large number of animals, concluded that he would not be warranted in stating any term as an index of proportion.

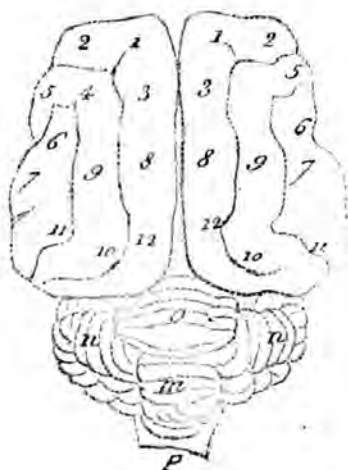


Fig. 214.—OUTLINE OF CAT'S BRAIN.

The cat has a very large cerebellum in comparison with its cerebrum, in some instances the former constituting more than a third of the entire brain mass. In the mole it forms almost one-half; in the squirrel it is also very large, its lobules being distinctly marked on the exte-

rior of the skull, while it is composed of a great number of layers. As a rule the cerebellum of rodents is very much developed relatively to the cerebrum. In many of the carnivore the cerebellum is

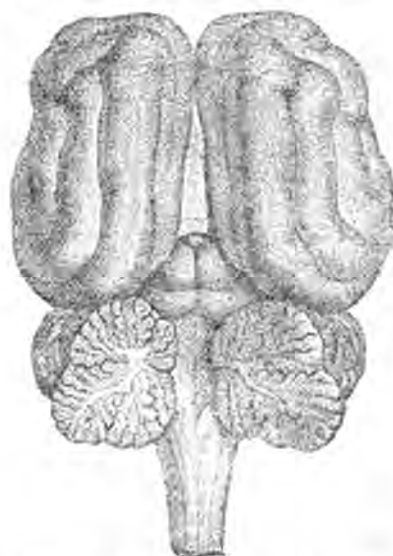


Fig. 215.—BRAIN OF CAT SHOWING CEREBELLAR STRUCTURE.

very large. A vertical section of this organ in quadrupeds reveals the tree-like structure of its substance which is found in man, with the difference of much less elaboration (Fig. 215).

THE ENGIS SKULL.

LOUIS FIGUIER, in his work entitled "Primitive Man," gives an account of finding the bones of human beings in the cave of Engis. This cave was discovered by Schmerling in 1833, and is one of a number called the "Belgian Caves," situated in the neighborhood of Siége. He examined more than forty of these caves in the valley of the Meuse and its tributaries. The deposits found in them are supposed to have been made in the "Stone age," and in the cave of Engis were found the remains of three human beings, among which were two skulls, one of a youth, another of an adult, the latter of which was preserved. This

skull was not complete, the basilar region having mouldered away, as well as the bones of the face. A drawing, representing a side view of this Engis skull, is given on page 80 of the work above alluded to, and it represents, phrenologically, very large Veneration, moderate Benevolence, very large perceptive and small reasoning organs, and a full development of the social group. Prof. Huxley, the English anatomist, in speaking of this skull, says: "It offers no indication of degradation; it presents 'a good average,' and it might just as well be the head of a philosopher as the head of an uncivilized savage." Mr. Figuier, after giving

the views of different men of scientific attainments, in regard to this skull, takes a leap in the dark, and says: "This causes us but little surprise, but it induces not to waste more time in discussing a question altogether in the dark, that is, upon altogether incomplete data."

We are willing to admit that it is unsafe to judge accurately of the intellectual status of a race of human beings that existed in the "Stone age," from the shape of a single human skull; still Phrenology throws a flood of light on a subject that Prof. Huxley considers dark and

inscrutable. To an enlightened phrenologist this skull presents a clue to the character of a race noted for superstition, and a kind of animal instinct, common to man in the savage state. It is wonderful that this skull should have been so well preserved for so long a time. "The Age of Stone" being pre-historic, the time when the "Engis skull" adorned the shoulders of a human being is unknown to us mortals, but it furnishes a study for a disciple of Dr. Gall, and gives clear indications of the character of a race on which history is silent. P. L. BUELL.

"UTOPIAN."

"LINE upon line, precept upon precept," must be my excuse for writing things which have been said and written many times before; for, as many times as they have been repeated, they are still ignored by many.

I come now to the subject direct, and want to inquire if any one ever supposed that Utopia was invented with malice aforethought? I have to confess to such a feeling. It is my opinion that Sir Thomas More looked down the years with a prophet's eye. He knew that if any one of us, feeling the woes of humanity, should propose any plan for their alleviation, some conservative sitting in the corner smoking would desist from his pestiferous occupation long enough to cry "Utopian," and thus quench our enthusiasm as effectually as a pail of water would quench smoking flax.

What a weapon he put into the mouths of the enemies of progress! They need not make now any apparent opposition; they can even profess to be in sympathy with it. Many of them know that open antagonism is not half as dangerous to a cause as a system which aims, first of all, to destroy the hope of its supporters. They well know that a few soldiers *in* an army, but not *of* it, if allowed to work, can more surely defeat its object by undermining the courage of the rank and file than a legion coming against it in the

fury of battle. Let them whisper to one and another, "It's too bad, but we're sure to be defeated;" let them talk of the superior numbers and equipments of the enemy; of their advantages of position; tell of their experience and discipline; say "they are veterans, while we are only raw recruits;" their officers are prudent and cautious, and know all the arts of war, while ours are incautious, rash, hot-headed, and unskilled: let them tell of how many have already become disheartened and dropped out of the ranks or gone over to the enemy; let them say all these things, and how long, think you, that army would have courage to fight?

To be sure, the soldiers who are true may answer that the right is sure to win, and that zeal and courage are worth more than numbers and discipline; but all the while the traitor knows that the zeal and courage have been oozing out through the little wounds he has inflicted, and he replies: "Oh, that's all very well to talk, but facts are facts, numbers are numbers. Wait till it comes to the fight and you'll see." Ten such men allowed to work in any army will defeat it.

Now, practically, that is just what "Utopian" means and does. Not that all who use the word mean to do such mischief or realize that they are doing it. Many, I doubt not, are merely expressing an honest conviction when they meet

your enthusiasm for any plan with "Utopian," "Millennial," "impracticable," "visionary," etc. They are so constituted that any proposition to change the existing order of things invariably puts them on the defensive. The conservative element in their nature is very deep and strong. Their convictions are always the result of a course of reasoning, either by themselves or others. They are afraid of their intuitions, and, as we always do with anything we fear, destroy them if possible.

Such persons once won over to a cause do excellent service by reasoning with others of similar temperament, generally being "able to give to every man that asketh a reason for their hope." But one would suppose that they would learn not to declare every new thing wrong or impossible at first sight. If they reflect that their early opposition and discouragement have retarded many a cause which afterward became dear to them, ought it not to lead them to think that just now they may be holding the same attitude toward other movements?

If we go back to the days before the declaration of American independence, and indeed many days after, and believe what this class of people say, we should be astonished to come down here and find the people singing "America" instead of "God Save the Queen." If we shut our eyes and ears to the present and hear this same class talk as they did forty or even twenty years ago, we should expect them on opening to find our flag floating over groaning millions of slaves.

To hear them talk now, and believe them, is to believe that politically one-half of this people are forever to be slaves and forever carry about with them a symbol of that slavery in the form of petticoat and corset.

It is to believe that poverty, sickness, ignorance, and wickedness represent the natural and inevitable condition of the great mass, while only the exceptions can be "healthy, wealthy, and wise."

If you speak of any change which shall make the former exceptional, while the

latter shall be the rule, "Utopian," with all its supposed synonyms, is showered on your devoted head.

The same is true if a financial system is proposed which does not necessitate a "panic," or "hard times," every few years.

Just so of a national temperance law or plan of transportation which will not allow the railroads to devour five-sixths of the profits on the Western farmer's wheat or of the coal brought from

"Down in the coal-mine
Underneath the ground."

Utopian, Utopian, Utopian, till we wish a zephyr would float, or a breeze steal gently, or a storm sweep, or a blast blow, or a tornado tear from the shores of that blessed country and clear the cobwebs out of their conservative brains.

It seems to me I have made a mistake. Utopia is all right. I take back what I said of its inventor, and apply it to the ones who first made it synonymous with everything "good, but impracticable." That is a paradox. No good thing is impracticable. Nothing that is needed to benefit the world is impracticable; and the reason more good is not done is not because it is impracticable or "*Utopian*," but because our weak faith makes it seem so.

It is true to-day that "If ye have faith as a grain of mustard-seed, ye shall say unto this mountain, Remove hence to yonder place, and it shall remove; and nothing shall be impossible unto you." Hoosac Tunnel is a partial example of this.

The latent useless power hidden for centuries in steam is as *nothing* to the power that lies dormant in human beings waiting for faith to arouse it.

I can not close without alluding to a near relative of this false Utopian idea, because it is almost, if not quite, as pernicious. I refer to the notion that reformers, or "hobby-riders," overestimate the evils of any particular wrong to which they turn their attention. It is not true. Evils can not be overestimated. Speak-

ing on this subject to a cultured and thoughtful woman a few days since, she said, "I apprehend that reformers look at an evil very much as God looks at it." And I apprehend that a person who watches and studies a certain evil can better judge of its hurtfulness than can persons who have given it no attention. Almost inevitably the latter underestimate the effect of wrong, and say, "Things are well enough"—the old cry of "Peace, peace, when there is no peace."

I asked a drunkard's wife if the evils of intemperance had been magnified. Ah, my friends, if you had seen that woman's face! She answered: "They can't be magnified. Words can never *begin* to tell its horrible work. The play of 'Ten Nights in a Bar-room' comes the nearest to delineating it of anything I ever heard or saw; but that falls far short of reality." Yet how many times the temperance lecturer has been accused of over-drawing the picture!

Have the horrors of war been told? Can the miseries caused by opium, tobacco, bad food, dress, and air be too really depicted? Can a system of finance which keeps the masses struggling for a bare existence be too severely characterized? No, no! Evil *is* evil; and I am thankful for an army of hobby-riders to ride over and trample it down in its various forms with the inexorable hoofs of one idea. God is great. He can look at and comprehend evil in all its forms; but we are small and finite. If we realize it in one of its manifestations

and work against that faithfully, we do well.

If we undertake too general a work we shall surely fail. Apropos of this, Dr. Talmage in a recent lecture related the following anecdote: "'Mr. Smith, what do you think of Mr. Jones, your townsman, for President?' 'Well, I don't know; Mr. Jones is a pretty big man in our town, but come to spread him all over the country I'm afraid he'd be pretty thin.'"

So it seems to me that if we undertake to spread ourselves over all the wrongs that need righting we shall be pretty thin. Whatever form of evil appeals most powerfully to our conscience and sympathy is the one we should direct our efforts against. But for mercy's sake let us be as tolerant (not of evil) as we can toward those who are doing a seemingly different work from ours; for even if we can not realize the magnitude of the evils they complain of, we ought to remember that they have studied, and therefore may be supposed to understand them.

We will turn a deaf ear to those who cry "Utopian," or tell us we "make too much fuss over trifling wrongs." We will work to show how good a thing is goodness and how evil a thing is evil. We will not heed those who tell us "Things are well enough." We want better; and

"We'll labor for the better time
With all our might of press and pen;
Believe me, 'tis a truth sublime,
God's world is worthy better men."

C. P. WHITEHEAD.

HAPPINESS.

HAPPINESS may come through a variety of channels. In the long course of man's life it is necessary to find more than one spring from which the crystal stream of pleasure may flow. There is a joy derived from the sublime thoughts of morality, from the study and practice of moral heroism. And these stirring thoughts may frequently be clothed

in simplest language, as when, looking out on approaching night, and sorrowing over opportunities wasted, one exclaims: "I have lost a day." In the grandeur of morality there lies the most exquisite pleasure. Then there is the vast field of intellect to cultivate. The society of the great minds of the past is always present to the intelligent. The acquisition or

development of a new thought is a source of immense pleasure. The sparkle of mind in society as in books is a bewitching kind of happiness. From physical nature may be derived a pleasure as intense and in its place as beneficent as any other. The love of outdoor amusements: rowing, driving, cricket, etc., is the secret of many a happy life. The true policy is to despise none of these, but to partake of all, so that the beautiful harmony which Nature would build up may not be lost forever. We can not understand how men like Schopenhauer can write as they do about life. Most of us have troubles to contend with, but if rightly regulated our lives should be sweetened by a preponderance of pleasure. I believe that in a healthy state of society there could be no pessimists. Health of body and culture of mind, with perfect liberty, should make all men happy; and even where we find sickness and physical suffering we frequently see the most perfect serenity. Indeed, suffering generally educates the philosophical side of our natures, and thus enables us to endure with calmness, as well as to appreciate more fully the more refined pleasures. It is true that as time meas-

ures off our little span of life, we may begin to think:

"All things have altered so,
Nor does it ease my heart to know
That change resides in me."

Yet we fail to see why age should not yield up its treasures as well as youth. Thoughts should then have an eloquence we do not now perceive, and experience should have taught us to discover much more in trivial matters than we see now. The study of philosophy and experience should teach age to look on all these transient affairs of earth with an unimpassioned eye. An able writer has indeed said that "a man without passion is stupid," and we think this comes near the truth. But possessing passion, to know how to regulate it comes alone from the study of philosophy. We think it wise to take a wide circuit of Nature in our journey through this life. The sources of joy are almost without number, and it is folly to neglect any of them. When possessed of that quality of mind which looks with serenity on human affairs, with a joyous disposition, a happy influence can not fail to be spread about, making the atmosphere which surrounds us pure, strong, and bracing. J. D. MAXWELL.

ALFRED H. COLQUITT,

GOVERNOR OF GEORGIA.

AMONG the Southern States, Georgia was the first to indicate an awakening from the terrible depression in every department of industry which was produced by the war, and during the past ten years she has been far in advance of the others in commercial activity and those social and political enterprises which stimulate the growth of people. She has had her share of political excitement, contest, and embarrassment, but it has served to stimulate inquiry among the masses with regard to the causes of the irregularity and confusion in public

affairs, and so promoted measures of reform in official circles. Much remains to be done, however, for Georgia is so situated that she must to some extent sympathize with the movements in the States adjoining her, yet her commercial and agricultural enterprise and advancing political condition must reflect favorably upon them and help along their restoration.

The present Governor, Alfred H. Colquitt, has contributed much toward extricating Georgia from the toils of a burdensome debt, and rendered it practi-

cable to plan methods for the reduction of the rate of taxation, and at the same time advanced the credit of the State abroad.

The portrait before us gives to the physiologist and phrenologist several pointed and prominent impressions. Health in its broadest and best sense

That face is self-poised, full of strength. In it we see endurance, persistency, sincerity, practical ability, directness, clearness of thought, truthfulness, fidelity to friends, courage. We think he is more indebted to his mother's side for the talent, and to his father's side for the expression of face and general character.



ALFRED H. COLQUITT.

seems evinced in the whole make-up. The next thought is power; a third, endurance; and a fourth, balance or harmony. The hair obscures the head to a considerable extent, rendering it difficult to make inferences in respect to some features of the character.

His perceptive organs give fullness across the brow, enabling him to gather knowledge readily, and to master details. The middle of the forehead is full enough to indicate memory, or the power to retain knowledge and recall it when required. He has what might be called

an analytical rather than a philosophical mind; he sifts, criticises, and collates; organizes his knowledge into practical form, and as a physician would read disease at a glance; as a lawyer would seize upon the salient points of his case, and impress the jury directly with the question at issue, and would be more likely to win from a jury than from a court. As a political speaker he would be very interesting and entertaining, pertinent in his facts and forcible in his arguments.

His Language seems to be large, and with his broad base of brain, and his full chest and abundant vitality, which is indicated by the large neck and full cheeks and strong features, he ought to be a very efficient man—a power among men.

His affectionate zeal makes for him friends; people like the man, like to see him succeed, and they would generally run him ahead of his ticket. He has many of the elements of popularity which belonged to Henry Clay. There is in him a certain dash, dignity, self-reliance, promptness, intuition, ready power to adapt himself to his opportunities, and ability to make the best of his circumstances. He has those traits which, in the common parlance of gentlemen, fall under the name of honor. If he give his word, he feels as much bound as if he had given his bond, and even more. If he had given his bond with proper security to back it, he would think the matter would take care of itself, whether he lived or died; but if he had given his personal word to pay a man so much money at a given day, he would do his utmost to fulfill the engagement. With his strong will, energy, and ardor, he is an influential factor wherever his prejudices, or preferences, or purpose, ambition, interests, or honor, lead him to take part.

ALFRED HOLT COLQUITT was born in Walton County, Georgia, April 20, 1824. His grandfather, Henry Colquitt, was a Virginian and settled in Georgia in 1801. His father, Walter T. Colquitt, Judge, Member of Congress, and United States Senator, was one of the ablest and most brilliant public men Georgia ever had. His mother was a Lane of Virginia blood, tracing her family back to colonial days. He graduated at Princeton College in 1844, was admitted to the bar in 1845 at Columbus, under his father's instruction, and began the practice of law in Macon. In 1847 he offered his services for the Mexican war, and was appointed a major. At the battle of Buena Vista he acted as aide to General Taylor. He returned home in 1848 and resumed his professional practice. In 1852, at the age of twenty-six, he was elected to Congress and made a good impression. He declined renomination on account of his wife's death. In 1856 and 1860 he was a delegate to the National Democratic Nominating Conventions, and was a Breckenridge elector.

When the war opened he accepted its issues in the spirit of a true Southron, and was not long in deciding to participate actively in the services of the field. He entered the army as a captain in the 6th Georgia, and won rapid promotion, becoming in turn colonel and brigadier-general. He took part in all the great campaigns in Virginia. At Antietam he performed signal service. At Sharpsburg he won his brigadier's stars. At Ocean Pond or Olustee, Florida, he fought a battle in independent command. This battle was one of the most decisive of the far South. Colquitt won the title of "Hero of Olustee," and exhibited dash, coolness, and fine generalship. Riding a white horse, his handsome face and figure aflame with martial fire, he was a notable object of distinction in the engagement. He then returned to Virginia, and commanded a division at Drewry's Bluff. In the campaigns around Petersburg he won his commission as major-general, but in the confusion incident to the close of the war it did not reach his hands.

For the decade after the war Governor Colquitt led a most useful life to the public. Identifying himself with the great farming interests, he became the leader of agricultural and religious progress in the State. He declined all political office that had emolument connected with it, though he had frequently thrust upon him places of dignity that carry only honor and uncompensated labor. He was delegate to the Seymour Convention in 1868. In 1870 he was on the same day made the recipient of the distinction of President of the State Democratic Convention and President of the State Agricultural Society. For six years the presidency of the Agricultural Society was given to him. In 1872 he was made delegate to the Baltimore Convention. As an agricultural worker he set his face resolutely against practices of an immoral nature. For instance, he was the one man who has had the courage to take publicly a determined stand against racing and gambling at a State Fair, and it was the most successful State Exposition ever held in Georgia.

In 1876 he was nominated by acclamation and elected Governor by the largest majority, 82,000, ever given in the State. His administration of this high office has been beneficial and brilliant. As a finan-

cial success it is unprecedented in the State's history. He came into office finding her credit dragging, a floating debt of \$350,000 embarrassing her yearly, the rate of taxation burdensome and the prospect of an increase of tax burdens to carry the annual expenditures. In his first message to the General Assembly he lined out a comprehensive plan of retrenchment, which was made the basis of legislative reforms, which under his sturdy execution have worked results of a surprising character.

Toward the freedmen Gov. Colquitt has shown a kind and conciliating spirit, which in spite of the effect upon them of social troubles in other States has produced a strong impression, in great part winning their confidence and disarming their prejudices.

In person the Governor is a fine specimen of physical manhood, being erect, symmetrical, and dignified in every movement; his face bears the stamp of kindness and good-nature, and yet is by no means wanting in marks of positiveness, zeal, and purpose.

He has very strong religious views and these pervade his life, toning his thought and conduct, whatever may be the subject to which his attention may be directed.

GEORGIA STATISTICALLY.

IT is appropriate to add to our discussion of the chief officer of Georgia a brief sketch of that State's condition, according to recent statistics furnished a New York newspaper by President Haygood, of Emory College.

In the articles that have appeared in the newspapers, the reports of 1873 have generally been made the basis of comparison. True conclusions can not be reached from 1873 as a starting-point, or from any year before that. The valuations of 1873 were fixed in the spring months, before the panic of September 26th. How that panic "tumbled values," is tolerably well known. The reports for

1879 and 1880 will furnish more reliable data for just conclusions. These years really show what the people of Georgia were worth after recovering from the prostration that followed 1873. The figures in this article are taken mainly from the report for 1880 of the Hon. W. A. Wright, Comptroller-general. Some are taken from earlier reports.

The total of taxable property April 1, 1880, was \$238,934,126, an increase over 1879 of \$14,379,179; that is, an increase of a little over six per cent. of the whole property of the State. The bulk of this property is in real estate, farming lands, the tax-book value of which, as is well

known to those familiar with these subjects, is not the best test of the real status of the productive industries of a State. There were in 1876, of "improved lands," 28,737,539 acres; in 1880, 29,815,595, an increase in four years of 1,078,052 acres of tilled land. That is, during the four years enough land has been "cleared and taken in," as the farmers say, to make one-hundred-acre farms for nearly eleven thousand families. We will see presently who own a good deal of this area.

The increased value of town and city property within the last year indicates not only reaction from the long-continued depression, but substantial progress. In 1877 the value of this property was \$49,007,286; in 1880, \$51,230,730, an increase in one year of \$2,223,444. April 1, 1879, there were in "money and solvent debts," \$26,513,005; April 1, 1880, \$29,295,434. April 1, 1879, "merchandise," as reported, was worth \$12,012,755; April 1, 1880, \$13,989,109.

What does the comptroller's report indicate as to the measure of the active productive capital in Georgia? Here we have a far more reliable test than in the valuation of lands. In 1879 the value of horses, mules, hogs, sheep, cattle, etc., was \$21,017,634; in 1880, \$23,075,764, an increase of \$2,058,130. This is nearly ten per cent. in twelve months. What these tables are every man who travels at large through the State knows from the evidence of his own eyes. Georgia has not been so well "stocked" in work animals and all kinds of cattle in twenty years. The value of plantation and mechanical tools enters largely into the question of the real condition of the people. April 1, 1879, plantation and mechanical tools were worth \$2,910,372; April 1, 1880, \$3,206,285, an increase of \$235,037. The value of cotton and other manufactories "not exempt" from taxation, shows an increase within the year of \$326,845. (The total value of manufactories "exempt" under the act of August 22, 1872, is \$4,138,376).

Comparing 1876 with 1880, we find in

the "number of hands employed between the ages of twelve and sixty-five" a decrease of 7,827. There were in 1879 107,827 hands employed; in 1880, 100,780. Indicating not that fewer people are at work, but that more people do their own work, and farm their own lands. It indicates an increase of small farms carved out of the old plantations; and this increase of small farms is largely explained by the fact that a much larger number of freedmen "own the farms they work."

At this point it is interesting to inquire carefully into the status of the colored people. April 1, 1877, the negroes owned of improved lands 458,998 acres, worth \$1,262,723; April 1, 1880, 586,764 acres, worth \$1,522,173, an increase in acreage in four years of 127,665; increase in value of \$359,450. In 1877 the negroes owned "town and city property" to the amount of \$1,154,122; in 1880, \$1,201,902. Note also their "stock and tools." In 1877 their horses, mules, hogs, cattle, etc., were worth \$1,636,942; in 1880, \$2,054,787. The aggregate value of the property owned by colored people in 1877 was \$4,382,398; in 1880, \$5,764,293, an increase of 581,895. That is, the negroes have increased the total value of their property about ten per cent.; the whole people about six per cent. Had the whole people done as well as the negroes, instead of an increase of something over \$14,000,000, it should have been nearly \$23,000,000.

More and more our colored citizens are anxious to "buy land"; more and more the Georgia landholders—the "old proprietors," if the reader please—are willing to sell it to them. It may be mentioned at this point, that one of the leading land-owners in my county (Newton) said to me a few days ago, that he had sold farms, averaging about one hundred acres each, to nearly thirty negro men, giving them long and easy terms, and only two failed to come to time.

There is every reason to believe that 1881 will show a still larger advance in all the lines of real progress; 1880 was a good year. Large crops brought good

prices, and there is money, aside from debts and necessary expenses, to invest in larger and better productive apparatus. There can be no question about it: the mass of our people were never so comfortable in their lives or in the lives of their fathers. There are not, perhaps, as many rich men; there are hundreds of

thousands of comfortable middle class people. There are fewer "mansions" on the plantations; there are many more sightly and pleasant cottages on the farms. The people—the great mass of people of Georgia—were never so well fed, so well clothed, so well housed as now.

WHO WILL PUT A HAND TO THE WHEEL?

THAT tobacco grew naturally in America, and that it was cultivated, before the discovery of Columbus, far north of the warm sections to which it was indigenous, and used by the Indians from unknown antiquity, are no reasons why we, the enlightened nations of to-day, should continue its culture and use. We did not assume the general habits of the American Indians, and why this odorous, pernicious one should have taken such persistent hold on us, it is difficult to divine.

Tobacco was not kindly received by foreign monarchs when its film first invaded the atmosphere of their kingdoms. King James I. of England issued a "Counterblaste to Tobacco," in which he described its use as "a custom loathsome to the eye, hateful to the nose, harmful to the brain, and dangerous to the lungs." Likening the "fumes thereof to the horrible stygian smoke of the bottomless pit."

The priests and Sultans of Turkey declared smoking a crime; the Popes Innocent XI. and Urban VIII. poured upon it their ecclesiastical censure. Sultan Ammet decreed its punishments by cruel deaths. Russian authorities, early in the seventeenth century, mutilated the noses of all smokers. Yet at present, the Russians, Turks, and Persians are most inveterate smokers; and the weed is cultivated in Germany, Greece, Turkey, and various European countries. Only prohibitory laws prevent its being raised in southern England and Ireland.

Learned and medical men in the inter-

vening time have brought frequent testimony against its use; educators and reformers have spoken derogatorily of the practice of chewing, smoking, and snuffing, denouncing it as useless, poisonous, and degrading; still the annual amount of tobacco raised in the United States is estimated at 270,000,000 pounds.

The air of America to-day is often dank with its clinging, empyreumatical odor. On the streets, in carriages, cars, and drawing-rooms it salutes nostrils and permeates lungs that find every fume of it nauseous, in spite of the fact that association has apparently rendered it unobjectionable to the masses. The fact is pitiable and the remedy unfound. We must take the air, heavy as we find it, for we can not rid it of its present bane; but may we not sweeten it for coming generations? May we not keep the young pure? knowing that, while the practice of using tobacco is prejudicial to persons of all ages, it is hurtful in the greatest degree to systems that have not obtained full maturity. Let us reach out a helping hand to our boys. Those who sell or present children with tobacco are more culpable than they imagine. They implant the germ of a habit which counsel in the other direction would often ward off until ripened judgment inspired them with higher aims.

I have been sadly grieved by seeing mere nurselings, nine or ten years old, with cigars in their little mouths. Why not shield them with a protective pledge?

With a sigh to disturb its sanctity, and warmed by a desire to help other moth-

ers, I draw the curtain aside and disclose a sacred pledge that hangs framed in blue and gilt in my own boudoir. It reads :

"I solemnly promise my dear mother, that by the help of God, and guarded by her prayers, I will never smoke, chew, or use tobacco in any form.

ELLIS P. ODERHOLTZER,
VICKERS ODERHOLTZER.

"Further, That I will never willingly rear, trade in, or distribute the useless and obnoxious weed.

ELLIS P. ODERHOLTZER.
VICKERS ODERHOLTZER."

This pledge is wholly personal and sacred, and I know it will be kept. We have another, recently formed, which we circulate among our young friends, and to which we have already several signers. It is called "The Cambria Station Pledge," and runs :

"We hereby solemnly promise never to chew, smoke, or use tobacco in any form."

Now I have no doubt there are boys all over the country who would like to sign the "Cambria Station Pledge" if they had the opportunity. They will find it a safeguard when they go out from their homes. Though many of them will be strong enough to withstand all temptations, there are others who require sup-

port, and we need to uphold each other in every motion toward purity.

This seems to me the only way we can shake off the incubus and rid ourselves of the smoke and disagreeableness of tobacco. It never brightened one man's intellect or enhanced his beauty. It has beclouded countless minds, induced appetites for stronger intoxicants, soiled many sweet lips, and tainted otherwise pure breaths.

Shall we not awaken anew our interest in the matter, fathers, mothers, and boys, and have a protective pledge in every community, aye, in every home? By making ourselves co-operative and general in this work we could do much personal good and purify the air for coming generations.

My heart is deeply interested in the movement, and I will be glad to communicate with those who may feel a kindred desire and are willing to circulate pledges. Let us see what an army of anti-tobacco boys we can raise this winter to crush out the old unclean habit.

MRS. S. L. ODERHOLTZER.

Cambria Station, Pa.

AN IMPORTANT MOVEMENT.

PHRENOLOGY has for many years been conferring its benefits on humanity in various ways, both directly and indirectly, and its influence has become wide-spread, benefiting science, literature, and art. Society at large has been receiving these benefits as if they were matters of course, and, for the most part, has given little heed to the appeals which have been made in behalf of sustaining it. The profits arising from the publishing of the PHRENOLOGICAL JOURNAL, and from the regular business which its publishers conduct, have been, as a rule, applied to the dissemination of scientific and moral teaching, year after year, so that a larger number of people might become interested in the subject they represent, and, as a result, means have been wanting to undertake many desirable enterprises which the publishers might otherwise have accomplished. Many of the benefited have expressed themselves as thankful; but few have been moved

to do something practical by way of donations or bequests for the purpose of extending a knowledge of Phrenology. We are therefore glad to note two or three recent manifestations of interest and special encouragement. One takes the form of a proposition, as follows :

FOWLER & WELLS:—*Dear Friends:* In reply to yours, offering "Brain and Mind" at cost, to give to clergymen who may wish to read it, I enclose sufficient amount to pay for one hundred copies, which you can distribute in such a manner as may seem best adapted to reach persons of this class who will probably be benefited by it. I am prompted to do this from the belief that a thorough, practical knowledge of human nature, as taught by Phrenology, will prove to clergymen the very best means of advanc-

ing, and influencing for good, the people in their charge; and I have a desire, also, to enable them to examine for themselves the claims of the subject which are so admirably and concisely stated in this volume. Although the number of copies I am able to distribute is small, I hope some good results may come of it, and especially that others of larger means may be prompted to act or co-operate in a similar direction. It is my desire that my name shall not be made public in connection with this; and wishing you abundant success in elevating mankind spiritually, mentally, and morally, I remain,
Faithfully yours, ****.

We like the ring of this: it is genuine philanthropy—a move in the right direction of practical benefit, and we hope it will prove the commencement only of many similar efforts, and that the work mentioned shall be placed in the hands of every one of the ninety or one hundred thousand clergymen in the country, or, at least, in the hands of all who would be willing to read and profit by it.

Now, the readers of the *JOURNAL* may call the attention of their pastors and clerical friends who are unacquainted with Phrenology, to this offer, and let those who desire to take advantage of it send at once, as, of course, the number of copies thus offered is limited, and the only work offered is "Brain and Mind."*

In this connection, we are enabled to note another proposition, which has for its scene of operation a Southern State, which promises to be an important matter. Through the energy of our Georgia agent, Mr. Howell B. Parker, who has for the past two years been working to introduce the *JOURNAL* widely in his State, another friend to the phrenological cause has been found who is willing to pay the difference between the subscription price and half-price for two thousand copies of the *JOURNAL*, to go to new subscribers in Georgia: thus furnishing the magazine to people there at \$1.00 instead

of \$2.00 per annum. These subscribers will also be entitled to the premiums offered to yearly subscribers by simply remitting the extra amount of twenty-five cents.

This offer is made for this year only, and is limited to the number stated. All subscriptions must be addressed to Mr. Howell B. Parker, Atlanta, Ga.

And further, through Mr. Parker a remittance has been received from an old friend of Phrenology, Dr. Samuel Irwin, for the purpose of placing the *JOURNAL* in every free reading-room in the State of Georgia. Applications for participation in this may be sent directly to the office of the publishers, or addressed to Mr. Parker as above. In taking this step, Dr. Irwin has done what we are sure will prove a great blessing, for he will enable hundreds of Southern people, young men especially, to read the *JOURNAL*, who would not otherwise see it at all.

These propositions are a challenge to other men and women of the country, North and South, who have means and are willing to devote part of them to the work of public education and public benefit.

We should be glad to receive even small contributions to the "Brain and Mind" Fund. No matter how small the amount a person may be able to contribute; that fund may be handsomely increased, and could be in advance of the demands made upon it. The establishment of a fund for the dissemination of books, such as are published by Messrs. Fowler & Wells, gratuitously among certain classes in society, or generally among the people, would be a work of the highest philanthropy, and the publishers would gladly do their part in the furtherance of so grand a work by furnishing the books at bare cost.

We can not but think that the very auspicious opening of eighteen hundred and eighty-one, which the proposals we have detailed illustrates, will be supplemented, and the good work of promoting a moral and intellectual reform go on to its end.

* The publishers ask only that clergymen who write for the book will enclose fifteen cents in postage-stamps to pay for the cost of its transmission.

PEOPLE OF GALICIA.

IN September last the Emperor Francis Joseph of Austria visited Galicia, a province of his empire, situated at the

arily, a festal one, the people, high and low, thronging to the chief cities where the Emperor made his halts, and greeting



GALICIAN PEASANTS WAITING TO SEE THE EMPEROR OF AUSTRIA PASS.

northern base of the Carpathian Mountains, and bordering on Poland and Russia. The occasion was made, as custom-

him on his arrival, and while in public with strong demonstrations of joy.

In Lemberg, the capital of Galicia, the

enthusiasm rose to the highest pitch; there were processions, illuminations, banqueting, bell-ringing, cannonading, and all possible exhibitions of loyalty.

The illustration presents a group of the country people as they appeared on the passage of the Emperor on his way from the railway station to the palace. The men and women are dressed in holiday costume, and the artist, Kallarz, has endeavored to depict their attitudes when in the presence of their royal master.

The population of Galicia is about five millions, the great body of whom are Roman Catholics, and are described as hardy, rude, and peaceable, giving the central government but little trouble on

account of socialistic or religious agitations, although they are very sensitive with regard to the right to representation and home government. They are allied to the Poles and Ruthenians by race, being Sclavic in origin, and retain many of the manners and customs of their semi-barbarous ancestors. The nobility are vivacious, high-spirited, and warlike, but the peasants are sluggish and depressed—the necessary result of ignorance and languishing industry. The fact that distilleries abound in the rural districts does not help, of course, to mend matters. The Jews, very numerous in the cities, control most of the commerce. In some departments of manufacturing there is considerable activity.

FRANCESCO PETRARCH, THE POET AND THE LOVER.

THE genius of the poet is too often overestimated by his contemporaries, or rather, we should say that this is the case with second-rate poets. The really great poets have not been sufficiently appreciated by their own age. Homer had to beg his bread in the seven cities that after he was dead clamored for the honor of his birth-place. The greatest of dramatists was only a first-rate play adapter and actor to the wits of James the First, and the author of "Paradise Lost" was considered a poor scribbler by the cavaliers of Charles the Second. With poets of lesser genius it has fared better. Many a minstrel lodged sumptuously in palaces, the protégé of kings when the "blind old man of Scio's rocky isle" breathed his burning lays. Greene and Marlowe ruled supreme on the English boards when Shakespeare went up to London, but nobody quotes them now. Thomas Shackford earned pounds where Milton earned shillings, and was patronized by the Crown; is he remembered now? Among this class we must place Petrarch. True, he has not been forgotten, but it is only as the sonnet-writer and the chivalric lover that the man is remembered who was ranked with Dante,

Ariosto, and Tasso, by the silly flatterers of his own time and those of the Renaissance.

A poet must primarily and absolutely be judged by his poetic qualities, according to the highest standard; and not relatively by the fashions and opportunities of the age in which he lived. Because he had the good fortune to perfect a living language and give harmony and purity to the Italian tongue; because in a licentious age his writings were free from impure metaphors or gross sensualism; because, more than all, he was the poet of chivalry, the expresser of that light and gallant spirit which almost died out with feudalism, until revived by Tennyson: therefore Petrarch was crowned with laurel and superlative praise. No one will deny that these were excellencies, but they hardly make a great poet. In strong original conceptions, in that flowing, easy grace of narrative which is necessary to command a sustained interest, and in that keen analysis of character and perception of truth which mark the true poetic genius, Petrarch is the least of all the Italian poets.

With Dante, indeed, he is incomparable. The author of the "Divine Comedy"

occupies a niche by himself, and is unapproachable. His orbit is still all his own, and the course of his chariot can never be confounded with that of a rival. Neither did Petrarch write anything worthy of comparison with the "*Gerusalemme Liberata*" or the "*Orlando Furioso*." The great epic of Tasso is well-nigh unsurpassed in grace of diction, unity of action, and vividness of description. How quick the transition of ideas, how beautiful the comparisons! After the *Æneid*, there is not, in my estimation, another poem which has so few weak and tedious passages. Its greatest defect lies in the too great prominence of supernatural machinery; yet this is hardly to be criticised in a poem. Ariosto, without being so great a poet as Tasso, has written some finer poetry. His "*Orlando Furioso*" is fairly alive with its facility of versification. He possessed some rare gifts. In his facile grace of expression, and his fertility and versatility of invention, he holds a first place among the poets. There is nothing, in fact, in the whole range of poetry that for vivacity and genial flow of movement equals some portions of his large poem.

In the grand quarternion of Italian poets it would appear then that Petrarch is the least worthy of admiration; yet faulty as he is, as the restorer of classical literature in Italy his services are unquestionable. His strains, so overestimated and admired by his own age and by the writers of the Renaissance, conferred a benefit in elevating and refining the imagination of youth, which criticism can hardly estimate, and which may have had much to do in the general judgment of his genius.

Born in 1304, and thus contemporary with Edward the Third, De Guesclin, Froissart, and John the Good, he saw chivalry in the culmination of its glory. An Italian, susceptible, imaginative, and passionate, like all his race, his spirit was touched and his character moulded by the sentiments of the age. The love of friends, the love of women, the love of fame, the love of books, the love of

great men of the past, the love of nature, the love of solitude, these were the dominant sentiments in the soul of Petrarch. His weaknesses were an exorbitant vanity, the prominence of a complacency forever alternating between fruition and mortification, the painful mingling of an effeminate self-fondling with a querulous self-dissatisfaction. That he was a poet no one will doubt who reads his lyrics and his sonnets; that he was a great poet is not admissible when one considers his egotism, his affectation, his lack of sustained fire, and his want of versatility.

What has contributed to lend more interest to his person and his story than his writings have done, is his famous passion for that poetical mistress whom he has immortalized in a hundred lays. The lover of Laura of Noves has been remembered when the poet might have been forgotten. The two have the same connection in the popular mind as Pyramus and Thisbe, as Abelard and Heloise. Poor sighing Petrarch, and gentle, uncomplaining Laura! Yet who ever seriously believed in the love of this devoted pair of turtle-doves? The story, nevertheless, is a charming one. You can picture the first romantic meeting in the church of St. Clara at early matins, and the sentimental encounters after, between the poet and the dame, extending through a period of twenty years, during which time the etherealized lover never ceased to inscribe sonnets to the beauty of her eyes, the rose of her cheeks, and the various charms which physically and mentally endowed the wife of Hugh de Sade.

Possibly Petrarch deemed himself enamored. A man of ardent imagination and an enthusiast in all the emotions of love, friendship, patriotism, and ambition, it was quite natural that his muse should be awakened by the beauty which charmed his fancy even if it never touched his heart. If true indeed that he cherished such a remarkable devotion to this woman, who it appears led a very miserable life with her morose and cynical husband, the only matter of astonishment, knowing what we do of the age of Petrarch, would be

the persevering virtue of Laura. The troubadours boast of much better success with Provençal ladies. But we do not once believe that he did. His emotion was too evanescent, his nature too selfish to love after such a manner. There could have been nothing manly, natural, or impetuous in his affection. It was simply an affected passion, a poet's dream.

You do not believe this, fair reader. Look then, my dear madam, on our pen portrait of Francesco Petrarch, and tell us if you think his is the face of a lover, of a man of strong and energetic passion, of deep and constant devotion. You perceive a countenance fat, round, and good-humored. Every feature tells the same tale, from the rounded and dimpled chin to the brow overhung with its clustering hair. The cheeks full and florid, the lips large and voluptuous, the eyes sagacious, sharp, and penetrating, are all indicative of good living, self-enjoyment, and partly prosperity. It is the face of a vain, ambitious, pleasure-seeking man, a courtier, a savant, a gourmand, and a sensualist, but of all sensualists the most susceptible of elegance. You do not believe in this mock passion of Petrarch's. Follow him then through his varied, brilliant career, from that April morning in 1327, when he first saw Laura's fair face under the veil of the devotee, till the day when his life closed at Arqua, forty-seven years after. What a sunny and honored life he led, going from court to court; from city to city, from castle to castle; the friend of all the great nobles of France and Italy; courted and fêted for his genius, his graceful appearance, and the reputation of his learning; the guest to-day of the Pope, to-morrow of kings, and the next of princes as powerful as kings! Fancy this man, learned, intriguing, pleasure-loving, amid all his exciting and luxurious life, his vast literary and political labors; fancy him, I say, the victim of an unrequited passion which was as ridiculous as it was incapable of moral defense. Nay, more, you think him truly the devout worshiper of Laura from the moment of the first sentimental encounter in the church of St. Clara to

the time he indited her his last sonnet when she was a fat, comfortable matron, head of a large household of grown-up children who called her mother! Felicitous innocence! You forget that the poet of Vancluse, like many other poets, and after the fashion of his indulgent, sensuous Italian race, sought the pleasures of love without hampering himself with the conjugal tie, being the father, under the rose, of a family which Laura was not the mother. How fervent and exclusive was his passion, was it not? Away with the idea. He cherished no more love for her than is generally wasted by an artist on his lay figure. He used her for a subject when in a certain poetic mood. Numberless women he loved and wooed, and it was their charms he sang as well, when he tuned his harp to Laura's eyes, to Laura's golden hair. At such times she was wholly an abstract thing, a creation of the imagination. The idea that he loved her! He never wrote sonnets about her when he had anything else to do. When composing his epics, when engaged in political intrigues, or when receiving the crown of the poet-laureate at Rome, there was little thought in the mind of this thoroughly selfish and worldly man of the beautiful but unfortunate Laura de Sade.

Petrarch died in 1374. His love of study endured until the last. He was found dead in his library with his arm resting on a book. Great, rich, learned, he was an ardent patriot, a shrewd politician, a sweet singer, a faithful friend. But he had not the genius of a great poet, nor the devotion of a true lover.

FRED. MYRON COLBY.

THE TASK.

LIFE's school has many tasks we all must learn,
Lessons of faith and patience, hope and love;
Knowledge of bitter taste, and wisdom stern,
Of fires, the temper of our steel to prove;

Much of forbearance gathering years must teach,
And Charity, with her angelic face,
Gentling the judgment, softening the speech,
Gives time its surest aid, and grief its grace.

THE YOUNG FOLKS OF CHERRY AVENUE.

CHAPTER VIII.

THE COMMITTEE OF ARRANGEMENTS.

" I THINK she is horrid ; there ! "

" Why, Lizzie Payton, I'm astonished to hear *you* speak so. "

" Well, I can't help it. When we had everything so nicely arranged, to come in and try to spoil it. And she had no business to do it either, because she had nothing to do with it in the start. "

" That's just the trouble, " rejoined Sophie, " or the reason, rather. She goes to our school, and thinks she ought to be consulted just as much as anybody. "

" Yes, and she thinks she can boss the whole affair, " cried Edith, stamping her foot. " Because she came from New York she thinks she knows more than anybody else, and puts on more airs than Mr. Thompson's peacock. "

The girls all laughed at Edith's emphatic demeanor.

" I think it's very strange that Miss Clem allowed her to interfere as she has, " said Milly, " and I'm going to-morrow to tell her that I shall not have anything more to do with the thing. "

" Why, Milly, " cried Lizzie, " it isn't at all Miss Clem's fault. She said we could arrange the pieces to suit ourselves, choose who should speak this and that, and when we were ready she'd hear us and give us some directions. But it isn't so much that, as it is the refreshments which we were going to have, and all to surprise Miss Julia and Miss Grace. "

" Oh, you weren't there, Milly, on Tuesday, " broke in Sophie, " when we decided to have a collation, as they call it, after the exercises. We thought it would be so nice to treat the company and surprise the teachers. Clara Manley, brother Fred, and one or two others have offered to help, and Miss Clem said she'd let us have the sitting-room, and she wouldn't say anything about it. Don't you think it would be delightful ? "

" Yes, indeed, and that's what Adah

meant when she said she was going to tell all about it if she could not speak just what she wished to. That would be too mean for anything. What were you going to have ? "

" Some biscuit, cake, macaroons, lemonade, blackberries, early apples, plums, and one or two kinds of jelly. Clara Manley knows all about such things, you know, and proposed that we should see what each would bring so as to have a variety. "

" No ice cream ? "

" Well, it's a good deal of trouble, you know, to make enough of that for two or three dozen people, and of course the whole school would want some besides. "

" I should like to furnish that, " said Milly, " we have a large freezer, and I know mamma would be willing. "

" That'll be splendid, " cried Edith. " My mother said she'd make fifty biscuits, and you know, Sophie, how nice they are ; and Tal's going to the mill to pick a lot of blackberries, and Horry said he'd come, if we wanted him, and be head waiter. "

" I want to furnish the lemonade and some of the cake, for mamma said I might, " remarked Lizzie, " but if Adah is going to tell, I don't see why we should trouble our heads any further about it, because the best part is the surprise we expected to make for our teachers. "

" That's just the fun of it, " rejoined Sophie, " and why I offered to take part. But don't let's give it up quite yet. "

" What shall we do ? " asked the others in a breath.

" Let's all go and see Clara now, and ask her advice. "

" Agreed, " said Milly, and the others echoed her approval.

This conversation took place while the girls were on their way home from school, and enough of its meaning can be gath-

ered from their remarks, I think, to make it unnecessary for me to relate all the circumstances of the affair which had provoked their indignation. Miss Adah Bang, to whom the reader was introduced in a former chapter, was the tallest, if not the oldest scholar in Miss Julia's division, and as she had not been entrusted with a knowledge of the proposed entertainment in the very beginning, and permitted to gratify her vanity by having a little apparent control of the arrangements, she pettishly declared to Lizzie that she'd "fix their mutton for them," by going straight to Miss Julia and "letting the cat out of the bag." The girls felt quite sure that she would do this as a matter of revenge, because generally they did not show much liking for her, and Milly, Sophie, and Edith had for two or three days avoided her company after school hours.

Clara was at home when the school-girls came in, and listened with much interest to their account of the cross which had met them in their effort to make the closing day of their school year an occasion of unusual enjoyment to teachers and friends.

"Adah's a difficult girl to manage," she remarked. "I think she's been pretty nearly spoiled by home indulgence, and so in this case we'll have to indulge her a little."

"Oh, I shouldn't want to give in to her," cried Milly.

"No, indeed, the hateful thing," added Edith; "she'd put on more airs than ever if she had her way this time."

"I mean that we must appear to give way," resumed Clara. "You know the best managers of others don't appear to exercise much authority; they govern through their understanding of character. Now we all know Adah's character very well. Nothing pleases her so much as to have people say she is smart, pretty, and tasteful. She has a great deal of Approbativeness, which Horry says is the proper word for vanity or love of admiration; and I think if you should go to her and take her into your confidence, she would be much

pleased, and then by not showing any ill-will in talking about your plans for the entertainment, she would let you have pretty much your own way."

"Really she can't do much for it anyhow," said Sophie, "for papa says Mr. Bang is quite poor, and Mrs. Bang avoids society because she can not afford the expense of having company."

"Then you see, girls, some reason for Adah's being fretted by your indifference. I've no doubt she feels very keenly their reduced circumstances; people who have a great deal of vanity always chafe under the restraints of inability to do as their neighbors do, and it is a great gratification to them to have people give them as much respect or attention as their neighbors receive. I think you will find that Adah will be satisfied with a small place in the exercises down-stairs and upstairs; so long as she has a part to perform, it will seem very important to her. I will go with you to see her, if you wish."

"Oh, do, Clara," cried Lizzie.

"Yes, do go with us," exclaimed the other girls.

"Hayo, who's in consultation now?" shouted Tal, running in. "Guess it isn't about going to Congress, hey, Lizzie? as girls can't vote quite yet, though Joe Winkle says women will have to vote before long to save the country."

"What an idea!" cried Milly, as she and the others burst into merry laughter.

"Well, you can laugh; it's so, and I believe it."

"Tal's a precocious statesman," said Clara; "I suppose papa will have to make a politician of him."

"Oh, don't by any means be a politician, Tal," entreated Lizzie, with an expression of so much grave concern on her face, that all laughed again, and Milly said:

"Why, what do you know about politics, Lizzie?"

"Not much, to be sure, but papa is one of the Town Committee, and one of the school officers, and I don't know what else, and he's obliged to be out a great deal at meetings at night, and mamma don't like

it, and papa says it's necessary for some of the intelligent men in the town to take an interest in these things, or else the politicians would have everything their own way."

"Why, Lizzie," remonstrated Tal, "a man can be a politician and be a good man too. Wasn't Webster a politician? and Clay and Franklin and Jefferson and Lincoln politicians? Papa says the country needs good men in politics as well as any place else, and if I'm a smart fellow when I'm grown up I'll—"

"Be a member or Congress, or just as likely President," laughed Sophie. "But say, Tal, did you stay after school was dismissed?"

"Yes, about ten minutes, looking over my piece for the entertainment. Yes, Phillip and I are going to change. He thinks he can do what I had better, and I guess I can do his part just as well. Miss Julia said it wouldn't make any difference."

"Was Adah Bang there?"

"Yes, and was talking to Miss Julia about something or other."

"What was it? Didn't you hear?" asked Sophie and Lizzie, anxiously.

"No, I wasn't payin' attention to her. Only heard a word now and then. You know her funny way of talking. She said something about being 'all in a hunk,' 'fearfully nervous,' 'never could speak before people,' or something like that."

"Oh, dear! I wonder if she has told Miss Clem," sighed Lizzie.

"Told her what?" demanded Tal.

"Why, Tal," replied Sophie, "she's put out because she wasn't consulted about the refreshments, and declared she'd go and tell the teachers, and spoil all our plans."

"What!" roared Tal, "the big goose! I'd like to see her do anything of the kind. I guess if she'd been talking about that I'd heard it sharp enough."

"If she has told, we won't have anything more to do with refreshments—at least I shall not," declared Milly.

"And I think," rejoined Tal, "that if she knew her telling would stop us, she'd

be the last one to 'blow on us,' as Tru Burr says, for she likes to be where there's something good to eat. Don't you remember the picnic over in Williams' woods, Milly? My, how she did stuff! I do believe she put away three quarts of strawberries and cream, and two pounds of cake."

"Tal, Tal," said Clara, reprovingly.

"I aint exaggeratin', 'cause I helped her to berries and cake and lemonade a good many times, myself, and Fred Deane did too. And I heard Fred say to somebody there that Bang girl was enough to tire out anybody with waiting on her."

"He told papa and mamma that," said Sophie, "and papa said, 'No wonder she was so thin, if that was an example of her every-day appetite.'"

"Well, girls, let us not comment further on her disposition in the eating line," remarked Clara, "but take it if you will as an assurance that she would not 'let the cat out of the bag.' Now, in a moment or two, I'll be ready to go with you."

Miss Adah answered in person the door-bell, which Edith jerked at half timidly.

"Why, Miss Manley, I'm awfully delighted to see you. Do walk right in."

"Good-afternoon, Miss Bang. We are on very important business, as you may perceive by our number. A sort of Committee-of-the-whole," said Clara, smiling.

"Oh, he, he, he, on business; well, that's too jolly for anything, he, he, he," giggled Adah, who turned and led the way to the small parlor or sitting-room.

"She doesn't invite *us* to go in," whispered Milly, who followed the others with an air of injured fastidiousness.

"Who cares?" replied Sophie. "Aren't we on business?"

Filing into the room, the girls took seats, with the exception of Milly, whose idea of propriety determined her to stand until she was invited to sit. Adah was evidently trying to play a part of injured dignity, for at first she scarcely looked at her school-fellows, but bestowed attentions upon Clara which were almost overwhelming.

"Do take off your shawl and hat, Miss Manley. Oh, this room is in a most abominable state of confusion. Alf's been here tearing up things, I do believe, and he's the most disorderly fellow on the face of the earth. Do take a seat by the window, and I'll call ma. She'll be awfully delighted to see you. She's been going to call over on your folks for ever so long, but you know ma is such an invalid she never goes out to see anybody. Hasn't it been hot to-day? I'm just about dead. And Miss Julia keeps that school-room just as close as an oven. I feel sometimes as if I must faint."

The girls here winked at one another, for they knew that if there were any reason for faintness on the part of the young lady, it was on account of the tightness of her dress.

"Miss Sommers," Adah continued, without looking directly toward the girl, who yet stood near Clara's chair, "why don't you sit down? Aint it as cheap to sit?"

"Thank you, I will," replied Milly.

"Miss Adah," said Clara, "you are aware, probably, that I am somewhat interested in the entertainment which is expected to close the school term."

"No, I wasn't at all aware of it. It seems as if some persons in Clem Academy, who I won't name, want to count me out of the thing."

"Excuse me, I think that you have misunderstood the matter. All the girls do not know what is in view, because the subject of refreshments has not been generally canvassed; the few who, so far, have talked among themselves about it, being fearful that if they communicated the idea to all, it would be likely somehow to reach the ear of the teachers, and that, you know, would completely spoil the enjoyment which the girls hoped to reap in the surprise it would prove to Miss Julia and Miss Grace. Now, as the four or five girls who have planned the affair live up on Cherry Avenue, some little distance from the school, they thought that by keeping the arrangements as much as possible to themselves, and getting a little outside assistance, they could carry

them through successfully, and so make for all concerned a very agreeable entertainment."

"Of course, Miss Manley, it would be awfully pleasant to Miss Julia, because she said this very day to me that she'd like ever so much to have a little spread; you'd just ought to see some of Delmonico's get-ups which ma and I have gone to. The very sight of the salads and meringues, would make you hungry enough to swallow them, plates and all; but then she couldn't afford it, as all they had to depend upon was what they got by teaching. I came mighty near telling her about what some girls I know were getting up, 'cause, you know, I do like to tell people anything that'll tickle them, and it would have come in so jolly just then. But I didn't."

"If you had, Adah, I should not have done anything more about it," said Milly.

"Nor I," said Sophie.

"And I should have been sorry enough to give it up," added Lizzie, because I do so want to make Miss Julia feel that we appreciate her."

"Well, they have given me a sort of general management of the affair," resumed Clara, "and so I suppose I should take the responsibility of saying who shall do this and who that. A good deal remains to be done toward completing arrangements, "and I am a little anxious to know what I can depend upon."

"Oh, I'll do whatever I can, Miss Manley," exclaimed Adah, with an air of surprise. "I was talking to ma the very minute before you rang, and she said I could offer to furnish some plates and glasses, because you know most people are afraid to let such things go out of their pantry; they don't want them cracked and broken. But la, we've such a lot of china and porcelain, that we don't know hardly what to do with it in this little coop. Why, in New York our butler's pantry was as large as this whole room."

"Thank you, Miss Adah, for the offer; we shall need dishes and glasses and a tray or two. So I'll put you down for

one dozen dishes for fruit, and one dozen glasses for lemonade. Yes?"

"Oh dear, yes, and a dozen more if you'll have them. Aren't you going to have any wine? Pa thinks a collation isn't anything without wine, or a punch-bowl on a side table. And all the people in our set used to have it as a sure thing."

"No, the people of Mapleville, at least most of those in our neighborhood, are very plain and simple in their ways," rejoined Clara, "and enjoy any little entertainment more as a social matter than on account of what they find there to eat and drink."

"He, he, he. I'd forgot that you're nearly all temperance people here. Pa and Alf say that's why it's so dull. If there were only two or three good saloons and a hotel where people could get some good wine to drink, you'd see a different place. There'd be something like life then."

"Yes, life of a very different *moral* type, Miss Adah, I grant you. To-morrow afternoon we are to have a meeting of the conspirators, or committee on refreshments, at our house; will you come over? We want to know just what each one will do, and so perfect our arrangements, if possible."

"Why, yes, I'll trot over, or at least try to. You can count on me for the dishes, you know."

"Yes, the dishes and glasses, a dozen of each," emphasized Clara, as she rose from her chair, and made her way, accompanied by the girls, to the door.

Out of the Bang mansion and into the street, tongues were loose again, and the girls generally expressed opinions freely on Adah's conduct.

"She was so anxious to have something to do with the entertainment," burst out Sophie, "and see how much she'll do toward it."

"A few paltry dishes and glasses," sneered Milly. "There, girls, just what I expected, after all the fuss she made, and—"

"That's what sister Clara said," interrupted Edith; "I mean she said Adah

only wanted to be considered one of us, and she couldn't be expected to do much."

"Well, anyway, I'm much relieved, and I think she'll keep quiet, don't you, Clara?" remarked Lizzie.

"Yes, my dear."

"Oh," said Milly, "she's in possession of a great secret, and she'll be a very important person for the next four days. I'm glad she hasn't any little brother or sister."

"Why?" asked Sophie.

"Because the whole house would know all Adah knows, and if there were any children in it, they'd circulate the news wide enough."

"Don't be too severe, Milly," admonished Clara. "I think Adah feels much happier now than she did before we waited on her; and if you girls will be kind in your treatment, she'll be agreeable enough toward you."

"Papa says it's best to be on the blind side of people, and then there won't be much trouble in getting along with them," said Sophie.

"The blind side," laughed Edith, "that's what Tal does with our Prince. You know he's blind in the left eye, and Tal goes on that side when he wants to tease him, because he can't see what Tal's doing."

"Well, I'm sure papa doesn't mean to take advantage of people that way."

"No, Sophie, Mr. Deane is too generous a man to trifle with a person's weaknesses. That's what 'blind side' means. Here we are," continued Clara, "at home. Good-bye, girls, and remember to-morrow."

"Oh, yes. Good-bye, Clara," shouted the others of the party as they continued on their way to their homes. CLARE.

(To be continued.)

A FLAT CONCLUSION.—Johnny came home from schools the other day very much excited. "What do you think, Pa? Joe Steward, one of the big boys, had an argument with the teacher about a question in grammar." "What position did Joe take?" "His last position was across a chair, with his face down."

OUR LEGACY FROM ALCOHOLIC DRINKS.

ONE of the most common fallacies in connection with this whole subject is the supposition that the effects of liquor-drinking are transient. Probably one cause of this is the fact that intoxication, the first great visible result of the poisoning by alcoholic drinks, is transitory, and yet in the very saying of this we are reminded that people ought to look for after-results from such a paralysis of all the faculties, and that these results are terrible and cumulative. Why is it, for example, that a man has delirium tremens only after quite a period of indulgence in alcoholic drinks? Certainly it can be for no other reason than that the frequently repeated ingestion of alcohol has produced new conditions which do not pass away with the stupor of intoxication. Dr. Richardson contends that drinkers are always becoming other men, men within men; that the alcohol induces a different constitution with its own peculiar appetites and demands, which the individual finds more difficult to resist than it is for a healthy man to resist his natural appetites. He quotes the Western man as a good illustration. This man was clever and intelligent, but he drank to sottishness. When a friend remonstrated and asked him why he thus pursued a course ruinous to soul and body, he replied: "Hospitality prompts me. When I betake myself to whisky, I soon become another man, and then I feel it is but fair to treat that other man."

We have a frequent and forcible illustration of this change in the constant testimony of the drunkard's wife, from which no amount of reiteration can ever remove the pathos: "It isn't Jim at all; it's the drink. He is the kindest husband in the world when the drink is not in him." Albeit she may even then be suffering from the severest abuse inflicted by "the drink." This proves the mental transformation; while Dr. Richardson bears testimony to the fact that there is a corresponding physical change, which becomes more or less permanent, and

that this changed condition being the result of the presence of alcoholic liquors, exists just according to the degree in which alcoholic liquors are taken. We wish to have no room for dodging in this matter. Every appreciable quantity of alcohol produces an appreciable effect, and a very small quantity, frequently repeated, produces the alcoholic constitution more certainly than heavier doses at long intervals which permit the natural constitution to resume its sway.

The inquiry is immediately suggested as to what influence such a constitution has on posterity. The father who tips and has little idea of the extent to which he has induced the alcoholic constitution, never fancies any possible evil in this direction. It is, indeed, known to some that children begotten during a debauch may be imbecile or idiotic, or sufferers in some other way, but that the taint induced by even moderate drinking *must* be passed down to future generations, is a truth which very few parents realize. Hear what Dr. Richardson says about this: "The most solemn fact of all bearing upon these mental aberrations produced by alcohol, and upon the physical not less than the mental, is that the mischief inflicted upon man by his own act and deed can not fail to be transferred to those who descend from him, and who are thus irresponsibly afflicted. Among the many inscrutable designs of nature, none is more manifest than this, that physical vice, like physical feature and physical virtue, descends in line. It is, I say, a solemn reflection for every man and every woman, that whatever we do to ourselves, so as to modify our own physical conformation and mental type, for good or for evil, is transmitted to generations yet to be, and not one of the transmitted wrongs, physical or mental, is more certainly passed on to those yet unborn than the wrongs that are inflicted by alcohol." ("Diseases of Modern Life," p. 272.)

"No vice is more hereditary than in-

temperance," says Dr. Yellowlees, Superintendent of the Glamorgan County Lunatic Asylum. No doubt we may any of us recall instances where the children of the drunkard are abstemious and worthy in every way; but then, may not the same thing be said of other vices? Our authorities do not say that the drinking father *always* produces a drinking child. Most persons can recall cases where the appetite has been inherited, and also cases where this *tendency* to drink has not been indulged, because the frightful effects of paternal drinking, and perhaps the warnings of the mother, have prevented the slightest indulgence on the part of the child. It is believed by many that the appetite is controllable if it is never inflamed by actual drinking. If, however, drinking be once indulged, no assurance can be held out that anything short of physical restraint on the part of others can prevent abandoned drinking.

And Mr. O. S. Fowler, in his "Hereditary Descent,"* gives a remarkable case of a man named Downing, a member of a family that with their other descendants were all remarkably honest, industrious, economical, temperate, and sober. The family had come over with William Penn, and taken up land on Chester Creek, which yet remains in the family. One of the most prominent and promising among the descendants became a Senator, and learned by being much in public life to sing songs, crack jokes, and drink wine after dinner till he felt jovial and merry, but never to absolute drunkenness. A daughter of his not known to have loved stimulants (and an excellent woman) had four sons, three of whom were noted and abandoned drunkards, and the fourth followed the others, but reformed. Several of the children of these sons became hard drinkers. Most of the descendants of this wine-loving Senator were hard drinkers for five generations.

But it is very important to notice that

* "Hereditary Descent: its Laws and Facts applied to Human Improvement." §125.

the curse entailed upon the children of alcohol-drinkers is not always an appetite for alcoholic liquors. As in drinking them he induces in his own system many other ills besides this terrible craving (which indeed keeps him a slave to the curse), so he in turn transmits these diseased conditions, or rather these tendencies to disease, to his children, for he can not give them anything better than he has. They may inherit better from their mother, and we are glad to say that in this country at least the most of the children do have temperate mothers, unless they tipple medicinally.

We are not in the habit of looking to the use of alcoholic drinks as a provoking cause for the dyspeptic and liver complaints so prevalent among us, and yet if the use of alcohol directly provokes these diseases in the drinkers, why should they not hand down a tendency to them in the descendants of drinkers? Headaches we know to be a common and early result to the drinker, and yet how few dream of tracing to this cause the inherited headaches of the present generation! We acknowledge unhesitatingly the hereditary tendency, but do not think of seeking for an original cause. Two literary people were speaking of this one day, at least one was complaining of frequent, severe, and unprovoked headaches, a life-long curse, and remarked, "My mother was troubled in the same way." The other replied: "I never have a headache. In that respect I am like my grandmother on my father's side. At the age of ninety she used to say she did not know what it was to have a headache." This brought out a responsive reminiscence: "Well, my grandfather used to go to bed drunk every night. I suppose, with your temperance proclivities you would be saying that that *is* the cause of my headaches."

"Can you give a better reason? I do not know that any of my ancestors drank, though I suppose they must have sipped occasionally, as everybody did in those days. Doubtless even hereditary headaches have an original cause."

It is an easy matter to blame our parents for what they have handed down to us; but how many of us take into consideration what wrongs we may be inflicting upon our own descendants! Did the Downing Senator, with his good-natured hilarity and friendly tippling, suspect that he was cursing his own descendants even to the fifth generation? But if this is the result of so comparatively slight a cause in one ancestor, what have we to expect for those whose many ancestors have all or nearly all been drinking people?

"Those whose blood
Has crept through *drunkards* ever since the flood."

As a physiological fact, Dr. Richardson tells us that it is not the blood, but the nerves to which we are to look for the transmission of hereditary mischief; that the blood is constantly varying in its quality; but that any serious injury done to a nervous center or trunk of a nerve, a "central injury" as he calls it, is liable to show its effect by producing hereditary disease. It is a significant fact in connection with this that alcohol is especially a brain and nerve poison, and hence especially obnoxious to this charge. This poison directly affects vitality by causing the failure of vital processes, and is probably in this way with other nerve poisons chargeable with much of the shortening of life known as infantile mortality. This is so common, and it has been so long continued, that many have come to accept it as an unavoidable peculiarity of the human race. It is not so with other animals. They seldom lose their young. Aside from accident and the interference of the butcher's knife, the most of them fill out their organic term of life which is determined by certain well-established laws. They live from five to ten times as long as it takes them to arrive at maturity. For example, our barnyard fowls arrive at maturity in about a year, and they live from five to ten years. With the human race in their present condition, this is not the case. Instead of living from five to ten times as long as it takes them to arrive at ma-

turity, the vast majority of them do not live to see maturity. It is not long since the estimate was made, and generally accepted, that half our people die off before they are five years old. In the latter part of the last century in London one-half of all the children died before they were three years old. Now that this is not necessary, is not a human peculiarity, we can prove by the Friends, who not only live temperate lives, but by their strict intermarriage among themselves, they have kept out the influx of outside poisoned blood, or shall we say the influence of poisoned nerves? At the date above referred to, one-half of all those born in their community lived to be forty-eight years old. Less than half a century later a colony of three hundred Quakers in Rhode Island, during a space of five years, lost not an individual under forty-seven years of age who was born in their community. How does this compare with the infant mortality which so often desolates our homes? Who knows the immunity from disease and death to which we might attain in the absence of these terrible nerve poisons!

It is said that the average extent of human life is rapidly increasing at the present time in this country. Are we wise enough to reflect that by this time the temperance reformation has had a chance to make a marked difference in this respect? Certainly we hear other causes credited with this improvement far more frequently than Temperance. A health officer in a large English town declares that in ten years time, by careful sanitary regulations, and especially by decreasing the amount of drink, he increased the average longevity of the place ten years. Again, early in the seventeenth century the average extent of human life in the city of Geneva was only twenty-one years. In the best period of the Romish Empire the average life of the better classes was only thirty years. In some other cases the average has gone so low that the tribe or nation has actually died out. We quote these cases only to show that there is no fixed rule

for human longevity unaffected by habits and conditions, and we maintain the reasonability of the supposition that chief among all the baneful causes are the poisonings of the race by the use of alcoholic liquors and other nerve and brain poisons. To what extent we suffer, it is very difficult to determine. The mortality is only one indication of the extent of the mischief. In this, as in other cases, the wounded are more than the killed.

Dr. Brown, of the Crichton Lunatic Asylum, many years ago wrote as follows, and some years subsequently confirmed it in all respects: "The drunkard injures and enfeebles his own nervous system and entails mental disease upon his family. His daughters are nervous and hysterical, and his sons are weak, wayward, eccentric, and sink insane under the pressure of some unforeseen exigency, or of the ordinary calls of duty. The heritage may be the result of a ruined and diseased constitution; but it is much more likely to proceed from that long-continued nervous excitement in which pleasure is sought in the alternate exaltation of sentiment and oblivion, which exhausted and wore out the mental powers, and ultimately produced imbecility and paralysis, both attributable to disease of the substance of the brain." The children may be fair and promising for a while, and fail at puberty, or prove unable to endure the strain of business life. "There is before us," Dr. Brown continues, "a long, melancholy list of individuals who have applied for advice, who have felt their incompetency for the duties of life; whose unfitness depended upon shyness, irresolution, awkwardness, or eccentricity; of unstable temper, of excitable fancy, of dull and torpid intellect, of violent passions, obscene appetites, which they resisted, but failed to conquer; whose infirmities could with more or less distinctness be referred to hereditary predisposition, taking its origin in long-continued indulgence, and who themselves regarded this as the cause of their misfortune and failure. . . . May not the unquestionable in-

crease of insanity and imbecility during the present century be partly traced to the bacchanalianism, the jovial habits, of the good old times and customs from which we have emerged or are emerging?"

Thirty years later, thirty years more of time since the above was written, have given us a chance to see a new and improved generation, who show out some of the results of a better state of things, and we should train our eyes to see these things; not only to observe the signs of drink upon the persons of the intemperate, the bleared eye, the carbuncled nose, and the purpled face—these coarse characters written upon the faces of the intemperate; but we should go much further than this. We should train ourselves to see the results of right living and a pure ancestry in the noble form, the manly, self-possessed bearing, the firm, elastic tread, the clear complexion, the beaming eye, the keen intellect, the generous sentiments, the benevolent heart. Too often when we see these characteristics we call them the result of chance. We say that nature has favored these people; but we ought to say that these gifts are handed down by rightful heirship the legacy of a pure and noble ancestry. If our young fathers and mothers knew these facts, do you not suppose it would make a vast difference with their tampering with terrible nerve poisons? If our young men knew that they owed many of their personal and mental graces to the Temperance movement which many years ago swept through this country and purified the habits of their parents, we think it would bring some abatement of the freedom with which they tip the social glass. Their present indulgence in nerve poisons will inevitably debase their physical and mental superiority, and hand down their names a by-word and a reproach to their children, for the coming generation is bound to understand these things better than the past, and who knows the disclosures which yet await our investigations?

JULIA COLMAN.

HOW DOES HE SLEEP?

A MAN who achieves any great thing in any department of human effort must have assistants in the shape of employés, lieutenants, deputies, marshals—whatever you may choose to call them. He has brain enough to furnish direction to the energy of many men. His success or failure will be due in a large measure to the judiciousness of his selection. He must know his men. They must be capable. They must be faithful. They must have no bad habits.

This last brings me to what I wish to present to the reader.

One of the most important things to know about any man upon whom you are going to place any dependence, is how he sleeps. Sleeplessness may sometimes be involuntary. There may have been some shock to the man's nerves which has made him insomnolent; but sleeplessness is more frequently voluntary. Men choose to push their studies or their work into those hours when they should be asleep. It does not matter for what cause any man may do this; the mere fact of not sleeping spoils his case. He may spend his nights in the theater, in the study, or in the "protracted meeting." It will make no difference; the result to the body will be the same. The sleep was not had, and for that the man must pay. One man may do with a little less sleep than another; but, as a general rule, if you want a clerk, a lieutenant, a lawyer, a physician, a legislator, a judge, a president, or a pastor, do not trust your interests to any man that does not take on an average eight good, solid hours of sleep out of every twenty-four. Whatever may be his reason for it, if he does not give himself that, he will snap sometime just when you want him to be strong.

The intellectual and moral connections of sleeping have, I think, not been sufficiently appreciated. Men and boys have been praised for "burning the midnight oil." Now, this "midnight oil" is a delusion and a snare. The student who is fast asleep at eleven o'clock every

night and wide awake at seven o'clock every morning is going to surpass another student of the same intellectual ability who goes to bed after twelve and rises before five. In sleep, the plate on which the picture is to be taken is receiving its chemical preparation, and it is plain that that which is the best prepared will take the best picture.

Men who are the fastest asleep when they are asleep are the widest awake when they are awake.

Great workers must be great resters.

Every man who has clerks in his employ ought to know what their sleeping habits are. The young man who is up till two, three, and four o'clock in the morning, and must put in his appearance at the bank or store at nine or ten o'clock, and work all day, can not repeat this process many days without a certain shakiness coming into his system, which he will endeavor to steady by some delusive stimulus. It is in this way that many a young man begins his course to ruin. He need not necessarily have been in bad company. He has lost his sleep; and losing sleep is losing strength and grace.

Here is the outline of the history of a suicide within my own knowledge: A young man, a stranger in New York, in a good situation, in a large boarding-house, has pleasant young companions; spends his evenings out; goes to midnight parties, from eleven to seven; if his nerves become disturbed, then a little drink—a little mistake in business—another drink—reproof from employer—more drink—more mistakes—loss of situation—no help from frivolous companions—money all gone—then credit all gone—then turned out of the boarding-house—wandering in the street—mortification—desperation—shoots himself.

Now, it does not always come to this; but all people who are losing sleep are somewhere along this line. They are somewhere in the rapids.

We must begin a reform in this depart-

ment. People who "call and profess themselves Christians" must refuse to go out in the evening to any amusement, to any entertainment, to any religious exercises, from which they can not return at ten o'clock, to be in their beds at eleven. The absurd and ruinous custom of guests arriving at nine and ten o'clock, and supper being served between eleven and twelve, must be opposed. Well-to-do officers and members of the several churches must be made by their pastors to feel that if they give such entertainments they are responsible in a measure for the deleterious results that are to come to the bodies, to the intellects, and to the souls of their guests, young and old. Employés in every department must be made to understand that intelligent men are not going to entrust important matters to the hands of other men who do not sleep. How dare any merchant consider himself a Christian who works his clerks all night, and then holds them responsible for the bodily, mental, and moral injury they have sus-

tained, and which reacts upon his interests?

Our religious services, our business, our amusements, our police regulations must all be adjusted to this great necessity of our nature. When the city is governed as it should be, no man will be allowed to make night hideous with loud noises. Not even policemen will be permitted in the dead of night, for an hour at a stretch, at the top of their voices, to bawl for the carriages of people who set the laws of health at defiance themselves, and will not permit other people to obey them—a custom which is rendering property in the neighborhood of places of amusement unfit for residence. In this age of rapid transit and accumulated work we must more and more provide for the necessity of sleep.

Instead of asking our acquaintances when we meet the usual question of "How do you do?" we might teach a good lesson by that other question, "How do you sleep?"

REV. DR. DEEMS.

OVERWORK AND BRAIN EXHAUSTION.

THE brain is but an aggregate of minute cells, and chemico-histological research has established the fact, that intelligence and normal brain action are coexistent with the normal condition of the nerve cells; that every deviation from this condition is attended with a structural modification. In 1857 I made twenty minute examinations of those dead of pulmonary phthisis to ascertain what lesions of the brain and other organs occur in this malady, believing then, as I have since demonstrated to be so, that it originated in some structural defect or alteration in those nerve centers which preside over the respiratory, nutritive, and blood-making processes. I found that in every case that the medulla oblongata was altered in its consistency, less firm than natural, and of a lower specific gravity. By digesting it in ether, alcohol, and bisulphide of carbon, I iso-

lated the oleo-hypophosphite principle. Comparing the relative amount thus obtained with that found in a healthy brain, I noted that the loss varied at least thirty per cent. In the superior cerebral lobes there was not any observable change detected by the microscope, chemical analysis, by weight, or other methods of investigation. These researches were alluded to in my paper, "Phosphate of Iron," *Medical and Surgical Reporter*, August 2, 1873, and elsewhere, and will appear in a work which I have in preparation on "Tuberculosis Scrofulosis and Allied Diseases."

Further research and investigations have not only confirmed this early discovery, but enabled me to formulate from animal brain and blood pharmaceutical preparations, and prescribe a course of diet which will obviate in a large measure the primary lesion and tubercular

phthisis. To attribute a malady to brain exhaustion, which in its various forms and locations produces about one-sixth of all the premature endings of human life, invests the subject with momentous interest, and this interest is intensified when the fact is recalled that this percentage excludes all pulmonary and other maladies that are not essentially tubercular. The theory wrought out by me twenty-eight years ago, while pursuing my phrenological studies, I find by a French work received within the last three weeks from a friend from Paris, was advocated by Cheneau as early as 1842. He, however, stopped with theorizing, while I proved its accuracy by chemical analysis.

The intimate relation between brain exhaustion and consumption is, however, no new truth, but one long observed and attested by the best writers on the subject during the last hundred years. Laennec, of Paris, one of the highest authorities on the subject, said: "Among the causes of pulmonary consumption, I know of none more certain than grief, or melancholy above all, when deep or prolonged. Almost all the persons whom I have seen consumptive, and who did not appear constitutionally predisposed to the complaint, have seemed to attribute the origin of it to long and deep mental suffering." The manner in which intense brain strain may become the exciting and determining cause, is simply based on the fact that long-continued or excessive brain action consumes a large amount of brain matter. While I have collated an immense amount of facts, which will be given in the work already named, I prefer here to call up other testimony. I could not quote from a higher author than Professor William B. Carpenter, the author of the standard work on Physiology. He says in his "Human Physiology":

"Additional evidence for the belief that the functional activity of the nervous tissue involves disintegration of its tissue by the agency of oxygen is found in the increase of *alkaline phosphates* in

the urine when there has been any unusual demand upon the nervous power.

"No others of the soft tissues contain any large amount of phosphorus; and the marked increase in these deposits, which has been continually observed to accompany long-continued *wear* of mind (whether by intellectual exertion or by the excitement of the feelings), and which follows any temporary strain upon its powers, may be fairly attributed to this cause.

"The most satisfactory proof is to be found in cases in which there is a periodical demand upon the mental power, as, for example, among clergymen, in the preparation for and discharge of their Sunday duties. This, when the demand for mental exertion is severe, and especially when there is that state of excitability of the nervous system which is frequently co-existent with a diminution of its vigor, is found to be very commonly followed by the appearance of a large quantity of the alkaline phosphates in the urine. And in cases in which constant and severe intellectual exertion has impaired the nutrition of the brain, and has consequently weakened the mental power, it is found that any premature attempt to renew the activity of its exercise causes the reappearance of the excessive phosphatic discharge, indicative of an undue waste of nervous matter."

In the course of a paper upon the result of overwork, read before the London Medical Society, Dr. Routh said: "The symptoms of mental decay resemble the gradual change that comes over old people, and yet are very similar also to those induced by venereal excesses in both sexes, except that in the latter there are symptoms of spermatorrhœa, which are absent in cases suffering from overwork. In both cases the tendency is to the production of idiocy from softening of the brain and insanity. He said there was reason to believe that the immediate cause of these symptoms was deficiency of phosphorus in the brain, and endeavored to prove this by considering *seriatim* the following points: 1st. It is

proved chemically that a man grows older, and mentally weaker, as the brain contains less phosphorus. This was shown by the analysis of Hentier. 2d. The solidity of the brain in a measure depended upon protagon, a phosphoric compound, and those foods which were richest in phosphorus were found by experience to renovate most speedily weakened brain power, such as shell-fish and fish generally."—*The Doctor*, Dec. 1, 1872.

Dr. Edward C. Mann says: "The pathological phenomena discovered in the brains of persons dying insane, all have for their basis interference with the due nutrition, growth, and renovation of the nerve cell, which by interrupting the nutrition, stimulation, and repose of the brain, essential to mental health, results in the impress of a pathological state in the brain and disordered mental function." This is high American authority, corroborating the testimony of very high English authority.

It is a universally admitted fact, that intense study, mental excitement, strong passions, and deep grief produce an increased amount of phosphates in the urine. This fact proves the relation between nerve and brain activity and waste of the phosphoric elements; that if the latter are used up in degree faster than replenished from the food, exhaustion must follow; that the functions they perform must languish, and diseased conditions be the inevitable consequence. Examinations of the brain of men dying insane, by Dr. Mann, fully corroborate this. Admitting the cardinal points of Phrenology, the chain of causation is easily followed. Depressing emotions involve those faculty centers which lie near the base of the brain, and it was at the base of the brain that I found the brain lesions of consumption. Dr. Mann found the principal lesions in those dying insane in the cerebrum.

Softening of the brain and nerve masses characterizes consumption, diabetes, Bright's disease, and insanity. Bernard, the great physiologist, found that pricking the medulla oblongata at different

points produced either saccharine or albuminous urine, showing plainly how the body is influenced by brain and nerve conditions. If brain exhaustion is productive of such serious results, it must be a subject of great importance, and should be better understood than it now is. The early indications are too generally overlooked. Inability to sleep soundly is often the first symptom, and this symptom is always the forerunner of nervous exhaustion, if long continued. It may accrue from the attention being strongly fixed upon some absorbing object, or it may be the expression of already existing exhaustion. Before actual brain lesions have ensued, they can be prevented by the diversion of the mind from the theme upon which it is dwelling, and by pleasant scenes and associations calling into action an entirely different class of emotions and thoughts.

Rest is the great restorer. Without it, all the drugs of the materia medica are of small avail; with it, their importance is often small. Diet is another important item; in fact, improper, insufficient, or innutritious food is often among the poor classes the one essential cause. It is not sufficient that food be eaten and digested in quantities equal to the demands of the organism, but it must contain all the principles which the organism requires.

Dr. S. B. Hunt, in his contribution to the sanitary memoirs of the late civil war, entitled "Army Alimentation in Relation to the Causation and Prevention of Disease," says: "The various salts of lime, soda, potash, iron, magnesia, and phosphorus are all essential to the proper assimilation of food. Starvation is a comparative term. We can starve muscles by withholding nitrogen; we can starve the fats of the body by withholding carbon. So, too, we can starve the brain by withholding phosphorus; and starve the blood by failing to supply it with those salts of lime, potash, soda, iron, and magnesia which are essential to their healthy condition. Just how these salts exert their power is not known; but we do

know that when they are withheld the blood globule becomes irregular in form, and starvation diseases are developed. Without these, nitrogen no longer builds up the muscles, and carbon fails to maintain animal heat." He further says: "Immediately within the bran of the grain of wheat lies a shell of gluten—the reservoir of vegetable fibrin and albumen and of the phosphates. Much of this is bolted away with the bran in the effort to make a white flour, and it is not unfair to estimate that the plastic value of the grain is thus reduced one-half."

The supply of the mineral elements seems like an easy task; that as they exist so abundantly in nature, there would be no difficulty in supplying any deficiency. Experience has, however, proved that unless the inorganic compound be in certain molecular combination, which can only be found in vegetable, cereal, or animal structures, they are not assimilated by them and are excreted as rejected bodies.

Dr. Tilbury Fox, one of the most distinguished physicians of the present day, says: "There is something special in the organismal phosphates, those, in fact, which have been formed by passing through a living organism, as compared with artificially prepared."

M. Andre Sanson, in a paper read at the Academy of Medicine of Paris, and published in the *Gazette Medicale*, calls the attention of French surgeons to the want of value in the commercial phosphates, and says that "to promote osseous growth, the administration of phosphate of lime, either in the shape of the laboratory-made hypophosphite or in that of powdered bone, is unavailing. Several attempts with these substances have never been successful. It is because their form does not allow of their assimilation. On the contrary, the organismal phosphates, such as are elaborated in vegetables, are real aliments."

M. E. Begin, of France, in his "Essay on Wine," says: "Nature possesses means of preparation and secrets of the alembic which it is impossible for science to at-

tain, and which furnish the healing art with agents much more efficacious than those prepared by chemistry. It is thus with iron, which, in the different forms in which it is tried, is not easily assimilable; it either escapes digestive action or it produces such irritating and exciting effects in the organism that its use can not be long employed. The same with iodine and other bodies, the action of which may be great, and their direct use produces inconveniences and often dangers.

"If, on the contrary, you appeal to nature, and not to chemistry, iron and iodine are met with in perfectly assimilable forms, and in such a condition that they agree with the economy of our nature without fear of accident, repulsion, or elimination."

These quotations from eminent authorities teach us the folly of attempting to make food. It must grow. Laboratory compounds, of course, can not furnish nitrogen, or mineral principles, and it is most likely that artificial glucose would fail as a carbonaceous food. The obvious conclusion is that nervous exhaustion is the immediate and direct consequence of either an excessive outgoing or a deficient incoming of nerve-pabulum; that excessive expenditure in intense thought, emotion, passion, or grief, by robbing the nerve centers, will derange the entire organism. The business man, overanxious in pursuit of gold; the scientist, in the eager desire to penetrate the arcana of nature; the lawyer, delving in the ponderous tomes of doubtful justice; the divine, anxious to make his sermons popular, bring the intellectual powers to the strain; and when these are pushed beyond a certain limit, loss of memory, want of continuity, impaired reflective powers result, and these are the principal modes of expression of nerve exhaustion. Disastrous as they may be to the intellect, they often may not affect the general health, unless cares, disappointments, and losses mingle with them; then the organic functions may suffer severely. On the other hand, depressing emotions

act directly upon the respiratory and nutritive functions, deranging them and producing fatal maladies.

The first class is more manageable. It is easier to throw off the chains of ambition than sorrow; easier to fly from the counting-house, forum, or pulpit, than to "take the ghost from off the floor." Grief is an emotion which appears to affect in a marked degree the medulla oblongata. Fear or intense feeling causes us to hold our breath, because it draws off nerve power from that nerve center; this could not endure long without causing death. In this manner fear or a strong emotion sometimes kills. But if this nerve force be only diminished, the functions imperfectly performed, it may lead to serious nutritive disorders and tubercular consumption. It is hard to save the bud while the worm feeds upon it; so it is difficult to remove the consequence while the cause is still in operation. When the worm can be plucked out, the bud may revive.

About five years ago a venerable gentleman consulted me as to his only daughter, in fact his only child, who had been under the care of several eminent physicians. Hearing the history of her case, I gave an unfavorable opinion, but at his request visited the young lady. Reclining upon a lounge was the wreck of a once beautiful woman. The pearly eye, the hectic flush, the cavernous cough, and the emaciated form indicated that a few weeks would end her earthly career. With a smile she welcomed me and said: "Doctor, father is anxious that I should try your remedies under your directions, and to please him I will obey your orders, but I know I am now beyond human skill." I attempted to encourage her with the bare possibility of improvement, when she unlocked the secret of her heart. She was the victim of blighted affection; she loved her father's clerk, and he reciprocated her regard, but her parents forbade the marriage and excluded the young man from her presence; then she began to decline. I determined to attack the cause. I appealed to her fa-

ther; told him the chances were against a survival of many weeks, and suggested as the last favor he could do his daughter would be to permit the marriage. He consented, and the lover was admitted to her presence. No longer desiring death, she now clung to life, and begged at each visit with strong urging for me to save her. She slowly improved, was married, and after six months of doubtful battle, regained a comfortable degree of health. While my treatment got the credit, I am sure the result pivoted upon the triumph of love—the influence of mind over matter. Without the young man, all I could do would have been as impotent as snow.

From my own experience I could cite many victims of consumption in which prolonged sorrow had been the exciting if not the determining cause. The subject of brain and nerve exhaustion is an important one to the professional as well as the non-professional reader. In fact, this malady is so prevalent as to be entitled to the name of epidemic disease. I have penned these thoughts, not so much to instruct as to call out from abler pens better presentations of an important subject.

In summary, I will say: Rest is the great remedy for brain exhaustion, and the rest must be especially applied to the overworked faculty. Cheering scenes, enlivening society, relaxation from care and anxiety, are strongly indicated. As a diet, milk, eggs, fish, gluten flour, and bran soup. If these fail, consult a good physician.

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Philadelphia, Pa.

TREATMENT FOR A FELON.—Take of soft lye soap and flaxseed-meal or corn-meal a sufficient quantity, stirring the meal in slowly and thoroughly, so as to form a salve or poultice. Envelope the finger in this, applying snugly, to bring it in close contact. Renew the poultice every 12 to 24 hours. Don't try every prescription you may hear of. Depend on this. It will, if applied in time, abort the disease; if adopted later, it will bring it to a small "head" (if too far advanced to be "scattered.") when it may be picked almost painlessly.—*Therapeutic Gazette*.

THE MAGNETIC HAND.

CONSTANT reference is made in the Bible to the *hand* as a symbol of power. There are, at least, sixteen hundred references to the hand, and many other references to "touch," "handle," and words lexically related. The special office of the hand in healing is repeatedly referred to. The prophets and apostles were called to lay their hands on the sick and diseased. Our Lord, also, healed by a simple touch of his hand; and even, at one time, it is said that when a believing one touched the hem of his garment, Christ perceived that "virtue" or healing power had gone out from him. The fact that there are so many so-called "faith cures" to-day should lead us to study with new interest the phenomena of natural and moral science which lie at the basis of them. When properly understood, there is a new significance given to many scenes in the history of our Lord and of his apostles, and a new unity is seen to pervade the world of matter and of mind. So far from leading to materialism and to a denial of the supernatural elements of Christianity, our faith will be invigorated, as we find God very near to us in these forces or laws which he has established and which he uses for the noblest ends, and which we, too, may use. To those who, as teachers, preachers, and missionaries, have to do with the uplifting of humanity, everything is valuable which has to do with persuasive or commanding power.

A word as to the twofold use of a magnetic hand. First, as to its healing power, or the physical advantages it wields, and then the moral advantages. God set in the Church first apostles, then prophets, and then teachers; after these, miracles and gifts of healing. Miracles, in the common meaning of the word, have ceased. Nobody in the world pretends to raise the dead from the church-yard or to give to an ignorant person the ability instantly to understand and converse in unknown tongues as at Pente-

cost. But there are gifts of healing in answer to prayer and sometimes without prayer, that are so marvelous that the short reply of self-satisfied ignorance is "Humbug!" Ridicule, however, is no answer to facts. "I *will*, be thou clean," said the Master, and the believing sufferer was healed. Two willing ones met. The thoroughness of confidence in his own ability was matched by the complete confidence of the applicant. The plenitude of that power was measured by the fullness of the divine nature of Christ. Man never can equal it. Yet, in more senses than one, we can become "partakers of the divine nature" and be "filled with the fullness of God" as we never yet have dreamed of. When John came near to Christ in the revelation of Patmos, he fell as one dead, and so were Peter and his associates "heavy with sleep" at the Transfiguration. Seeing him, the soldiers at the sepulchre did quake, and "become as dead men." So to-day, a man of magnetic or electric power can, in a lower degree, lock up for a time the eyes, the speech, and sensation of another, so that the diseased or injured limb may be tenderly cared for and the patient be free from both the mental agitation and the physical pain of the surgical operation. The public test of this power at the rooms of the New York Academy of Sciences (January 10) before a large number of physicians and surgeons, was a triumphant success. Dr. George M. Beard stands well in his profession, specially in the department of nervous complaints. In answer to his word, "they that looked out of the windows were darkened," and painful operations, like the extraction of three decayed teeth from one person and the application of an iron white-hot to the flesh of another, were performed without the slightest pain. Dr. Shattuck, in the presence of Lowell physicians, removed a tumor two inches deep from between a lady's shoulders while she was pleasantly resting in the magnetic

state. While the use of opium, chloroform, and other anæsthetics result, in some cases, in nausea, delirium, or even death, the patient wakes from this sleep with a smile to the full and healthful consciousness of life, without unpleasant feelings. The repetition of the sleep comes to be invigorating to the physical constitution.

Again, the magnetic hand is a moral power for good; for this electro-magnetic impartation which one vigorous brain gives to his friend, or a parent to his child, creates a new bond of moral as well as physical influence of incalculable value. It may be perverted, as other social influences are; as the family life itself is, so that the domestic center is an ungodly and debasing one; as religion itself is often perverted into superstition and idolatry; but neither science nor religion are to be viewed with suspicion on this account.

Not only is it our privilege, but our solemn obligation, to understand this body "fearfully and wonderfully made," and not to neglect the gift that is in us, perhaps undeveloped. Its use not only

opens to us new ideas of the royal opulence of life to us, of the meaning of Scripture, but of the avenues of influence for good that lie all about us. E. P. T.

A REMEDY FOR OBESITY.—And now we are invited to try another cure for excessive fatness. This time it is not a drug-cure, but a food-cure, actually administering that which is generally supposed to make fat. Prof. Tarnier has called attention (in *An. de la Soci. de Med. de Grand.*, No. iv., 1877) to the success of a milk diet in cases of obesity. He lays down the following regimen: 1st day, three-quarters of usual food and one litre of milk; 2d day, half usual diet and two litres of milk; 3d day, one-quarter usual diet and three litres of milk; thereafter, four litres of milk daily and nothing else. Once in a while allow a little solid food to prevent disgust for milk. If diarrhœa occur, suspend milk diet for a while, then resume. This method is not likely to hurt one at any rate.

NOTES IN SCIENCE AND AGRICULTURE.

Mr. Harald Westergaard, of Copenhagen, contributes to the *Journal* of the Statistical Society an interesting note on mortality in the Faroe Islands and in Greenland, which contains some anthropological facts. The inhabitants of the Faroe Islands, about ten thousand in number, are of Norwegian origin, a tall, handsome, healthy people, nearly all born on the islands, and the death-rate is as low as sixteen in the thousand. In Greenland, on the contrary, the Eskimo features still prevail; the inhabitants of the whole country do not amount to ten thousand, and they live under such unfavorable conditions for longevity that in South Greenland the death-rate reaches thirty-seven in the thousand. The most fatal months are those of autumn.

The Physiology of Walking.—From a summary given by the London *Lancet* of the manner in which M. Marey has investigated some points in the physiology of walking, we extract: "Some time ago he devised an apparatus for registering the steps, which he has called an *odograph*. It consists of a small cylinder, rotating by means of clock-work in

its interior; and of a pen which marks on the cylinder, and is raised at each step by an impulse communicated by a ball of air beneath the sole. Observations have been made on a number of soldiers. It was ascertained that the step is longer in going up hill than in going down hill. It is shorter when a burden is carried; longer with low than with high-heeled boots; longer when the sole is thick and prolonged a little beyond the foot, than when it is short and flexible. It thus appears that the heel may with benefit be almost indefinitely lowered; while it is disadvantageous to prolong the sole of the boot beyond a certain limit, or to give it an absolute rigidity. Some influences which lengthen the step lessens its frequency: so in going up hill, the step becomes at the same time longer and less frequent. In walking on level ground, the length of the step and its frequency are always proportioned; the quicker the walk, the longer the step."

"A Little Farm well tilled."—Under this heading the Springfield (Mass.) *Union* presents some observations worthy of notice by those who have an itching for large

farms. After speaking of the comparative failure of big farms in the West, and noting a remark of the *Toronto Globe* that great farms require a vast amount of machinery, which, to be made profitable, must be kept at the same work year after year, it says:

"A still better example of the superiority of small farms over big ones is found nearer home, in the market gardens near the great cities. Some of the finest of these we know of are in the vicinity of Boston. For an example, there is one of five or six acres within the limits of that city, which produces its owner a clear annual income of from \$3,000 to \$5,000. Instead of spending his money for machinery and labor, the farmer devotes his capital largely to the enrichment of his ground. The amount of manure he applies to his few acres seems almost wasteful, but the results prove his wisdom. In two or three weeks he has marketed from one small patch \$175 worth of string beans. His early potatoes have brought him something like \$2,000, and the ground where they grew was soon after at work producing a second crop of vegetables. The amount of 'truck' which he manages to secure from his few acres, which lie about his house and barns, is really marvelous, but the secret is high cultivation and a scientific method. The same method may be applied anywhere in Massachusetts, and the dawdling away over hundreds of acres, and getting only half a crop, and at the same time impoverishing the soil, is the sheerest folly."

Dead Letters.—Nearly three millions and a half of letters and packages were received at the Dead Letter Office at Washington during the fiscal year ended June 30th last, of which 290,000 were held for postage, 202,000 were misdirected, and over 9,000 were not addressed at all. The great mass of the letters and packages contained nothing of value, and over 2,000,000 of this description were destroyed, the senders not being found. Of the remainder, 21,974 contained drafts, checks, notes, etc., of the face value of \$1,526,217, and 26,264 contained money amounting to \$49,438. Most of the property has been returned to the senders. These particulars ought to make people careful about two things: 1st, addressing their letters; 2d, finding fault all round when they miss a letter or paper.

A Prominent English Farmer DEAD.—There must be very few intelligent, progressive agriculturists in this country who have not heard of J. J. Mechi, of Tiptree Hall, near London, England. For nearly or quite a generation of men, this enterprising farmer cultivated a large farm on regular high scientific farming principles, and has always found profit as well as great pleasure in so doing. The recent reverses which have befallen so many English farmers bore heavily on him also, and his bankruptcy, which was occasioned by bad crops and reverses in his business as a fine cutler, which he still

kept up in London, utterly overwhelmed him, causing his death December 26, 1880. His sad end will be heard of by a host of sympathizing friends this side of the Atlantic.

How to use Oil-Stones.—Instead of oil, which thickens and makes the stones dirty, a mixture of glycerine and alcohol is used by many. The proportions of the mixture vary according to the instrument operated upon. An article with a large surface, a razor, for instance, sharpens best with a limpid liquid, as three parts of glycerine to one of alcohol. For a grinding tool, the cutting surface of which is very small, as is also the pressure exercised on the stone in sharpening, it is necessary to employ glycerine almost pure, with but two or three drops of alcohol.

How Chickens get out of Shells.—An observer says: "Take an egg out of a nest on which a hen has had her full time, carefully holding it to the ear; turning it round, you will find the exact spot which the little fellow is picking on the inside of the shell; this he will do until the inside shell is perforated, and then the shell is forced outward as a small scale, leaving a hole. Now, if you will take one of the eggs in this condition from under the hen, remove it to the house or other suitable place, put it in a box or nest, keeping it warm and moist, as near the temperature of the hen as possible (which may be done by laying it between two bottles of warm water upon some cotton or wool), and lay a glass over the box or nest, then you can sit or stand, as is most convenient, and witness the true *modus operandi*. Now watch the little fellow work his way into the world, and you will be amused and instructed. After he has got his opening, he commences a nibbling motion with the point of the upper bill on the outside of the shell, always working to the right (if you have the large end of the egg from you and the hole upward), until he has worked his way almost around, say with one-half of an inch in a perfect circle; he then forces the cap or butt end of the shell off, and then has a chance to straighten his neck, thereby loosening his legs somewhat, and so, by their help, forcing the body from the shell."

Man in America.—Professor Fowler, in a lecture before the Royal College of Surgeons, London, discussed the question of Man's Origin on the American Continent, saying that until recently opinions on the early peopling of America had been divided between the views, that the inhabitants of this continent were a distinct, indigenous people, and therefore not related to those of any other land; and that they were descended from an Asiatic people who, in comparatively recent times, passed into America by the way of Behring Strait, and thence spread gradually over the whole continent. These theories have had to undergo considerable modifications in consequence of the discovery of the great antiquity of the human race in

America, as well as in the Old World. The proof of this antiquity rests upon the high and independent state of civilization which had been attained by the Mexicans and Peruvians at the time of the Spanish conquest, and the evidence that that civilization had been preceded by several other stages of culture, following in succession through a great stretch of time. The antiquity of this quasi-historical period is, however, entirely thrown into the shade by the evidence now accumulating from various parts of North and South America, that man existed on the Western continent, and under much the same condition of life, using precisely similar weapons and tools, as in Europe during the Pleistocene or Quaternary period, and perhaps even farther back in time. Recent paleontological investigations show that an immense number of forms of terrestrial animals, that were formerly supposed to be peculiar to the Old World, are abundant in the New. Tak-

ing all circumstances into consideration, it is quite as likely that Asiatic man may have been derived from America as the reverse, or both have had their source in a common center, in some region of the earth now covered with sea.

A Convenient Metric Standard.

—It may be well for the reader to know that the nickel five-cent piece of our coinage is a key to the tables of linear measures and of weights. The diameter of this coin is two centimeters and its weight is five grammes. Five of them placed in a row will, of course, give the length of the decimeter, and two of them will weigh a decagramme. As the kiloliter is a cubic meter, the key to the measure of length is also the key to measures of capacity. Any person, therefore, who is fortunate enough to own a five-cent nickel may carry in his pocket the entire metric system of weights and measures.



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H. S. DRAYTON, A.M., Editor. N. SIZER, Associate.

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RULES OR STANDARDS IN OBSERVING CHARACTER PHRENOLOGICALLY.

CABINET COLLOQUY. NO. II.

"YOU phrenologists appear to have no law of proportion," said a visitor, "and that, in my opinion, is one reason, and an important one, for the reluctance which scientifically educated people show in accepting phrenological data."

What do you mean by a law of proportion?

"I mean a precise standard for length,

breadth, height, and for the development of parts of the head like the forehead, temples, crown, occiput, aural region, and so on. In art there is a law of proportion which determines the length of the face relative to the height of the figure; the correspondent sizes of the nose, mouth, chin, ears, eyes, etc., are prescribed; the length of the arm, the hand, the leg, the foot, is a matter of definite prescription. Now it seems to me that unless you can say that a head of a given length should have a certain breadth, height, and so on, you fail to give to Phrenology the exactness which it should have to be truly scientific."

We understand you. The objection is by no means new, and involves a fallacy which becomes apparent when we consider the nature of the subjects with which Phrenology deals strictly: brain and mental phenomena. Organisms differ, no two persons being entirely alike in nervous constitution. Men indeed differ more than brutes of the same family, more than vegetables of the same genus. This is a necessary consequence

of their higher development; yet the close observer finds it necessary to arrange them in classes or types if he would study their characteristics effectively. He may establish three or four grand types and array under them the multitude. Often, however, he finds a person whose qualities are so mixed that he is at a stand with regard to his classification—like the botanist who now and then finds a flower which seems to belong to no particular class of plants, so complex is its structure.

"I know," said our visitor, "that there is a great variety of constitution among men, but it does not appear to me to be so extended as the variety of the vegetable kingdom. The botanists emphasize this variety by the use of the term infinite when alluding to its amazing extent. Do you mean to say that the variation of organism in man is even greater?"

As regards man as a nervous and mental organism, yes; for in the expression of mind the variety and scope of human power is indeed infinite. The naturalist is profoundly impressed by the extent of the domain into which he has entered, simply because he has made it the field of his particular study. It is said that a German entomologist spent thirty years in observing the habits of a single species of worm, and declared that the interest accumulated as he proceeded, new features revealing themselves at every step. It is, in fact, a matter of common experience to find a subject, which to the casual view appeared insignificant, become, when carefully examined, of such importance as to surprise us, and to awaken regret that we should have been previously so indifferent to its merits. The great mass of the intelligent are more interested in the contemplation of the ex-

ternal world than of the inner self or the nature and functions of mind; hence it is that they do not realize the numberless differentiations of thought, feeling, temper, emotion, etc., which men display; and they have no idea of the difficulties presented to the phrenologist in his effort to analyze character and disposition, and to sum up with accuracy the quality, power, bearing, and effect of a given mind. He must apply laws and leading principles, otherwise he would have no basis for his study. He must have something which stands to him in the relation of a rule of proportion, and he has one, but it is a rule that is formulated by each organism which he examines rather than a rigid measure to which he can apply that organism. The botanist can not give you an exact standard of measurement for the leaves, stem, petals, corolla, etc., of a plant. His experienced eye sees at once the difference in general outline between a rose leaf and a seringa, between the leaf of an elm and that of a beech-tree; he has learned their contour, their comparative features as to length and breadth, but he knows that on the same bush or tree he will find fully matured and healthy leaves which differ in size and marking.

"I had not thought of the matter, sir, from that point of view, but as phrenologists usually measure heads and attribute to size a high degree of importance, it would certainly appear reasonable to expect their recognition of a formulary governing the relations of size."

It is reasonable, and to a certain extent there is such a formulary. For instance, it is a matter of general acceptance among physiologists that a man whose head measures less than eighteen inches in circumference is deficient in

the quantity of brain essential to mental capacity for the practical work of life; yet a head may be twenty-three inches in circumference, and its owner be an imbecile. It is also generally accepted that the larger the head the greater the power of the mind, conditions of health and quality of organization being of course taken into consideration. You recognize promptly differences between men in fiber, density, elasticity, and strength, muscularly and nervously, do you not?

"Certainly, sir, but little experience is necessary to discover such differences."

And you have also definite notions with reference to their meaning. Some men you may compare with cotton-wood, rating them as soft, spongy, weak, and flabby in character. Others you may compare with oak as dense, hard, firm, steady, trustworthy. Yet if you were asked to state specifically the properties which enter into the organism of the "cotton-wood" man and into that of the "oak" man so as to convey to the inquirer a scientific reason of their mental differences, you would fail; you could not find a law of proportion which would apply to each. But in studying each man you would perceive very soon that each type must be considered in great part by itself; that twenty two inch "cotton-wood" brains can not furnish a standard by which twenty-two inch "oak" brains may be analyzed. I might say to you that a head measuring twenty-three inches in circumference should be eight inches long from the root of the nose to the occipital spine, to be in good proportion; also that it should be by caliper measurement six inches high from the ear opening, and six inches broad, measured from ear to ear. These, however, are

only points of symmetry; what they are worth to character and capacity is dependent upon the quality of the organism.

"Then, since you have degrees of firmness or coarseness of structure, how can you estimate them accurately without a perfect model or standard?"

As I have already intimated, and just as the gardener compares one flower with another, or one apple with another, and is at no loss to determine which is the finer in development—which approaches more nearly perfection. The standard of the phrenologist is that organism which he has examined and found to possess the highest order of cranial development, the most compact fiber, the finest contours, the most delicate sensibility, the most active and strongest mentality. As a scientist he can not erect a standard which shall be recognized as perfect, because he can not formulate a perfect character—it never having occurred to his experience. He can conceive of higher forms of thought, emotion, sentiment,—more harmonious and beautiful expression in conduct than any he has observed; indeed, he carries in his mind's eye an ideal of human character, but he is far from rating his conception or ideal as perfect.

"Then the study is comparative?"

Necessarily comparative. So is the study of every department of natural science, otherwise there would be little gain to the world in the observation of nature. From his point of view of comparative observation, the skillful phrenologist finds thus far a scale of seven degrees to be sufficient for his purposes in estimating brain development, and a head will now and then be found whose organs differ so much as to represent nearly all the seven degrees.

"Can you give an example, say an historical character, in which the variation is great, according to such a scale of measurement?"

Yes. Here is a cast of Baron Eldon, once Lord Chancellor of England. You observe that the head is large. Now cast your eye carefully on every side of it, and then consider its contour as a whole. You observe here in the temporal region a decided want of harmony with the development near the ears, and the projection of the frontal lobes over the eyes. To be symmetrical, those hollows above the strong cheek-bones should be filled up; and then the head falls off rapidly, or hollows in backward from the crown. Notice how wide the head is; Destructiveness is very large, bordering on the highest or seventh degree. Secretiveness is fully six, and so is Cautiousness. His Firmness was immense, but Conscientiousness, right alongside, could not be marked more than five in the scale of seven. His Veneration is well marked, however, and deserves six. Notice the flatness at Mirthfulness, which is insignificant, as compared with his Comparison; while Tune is almost wanting entirely, and Constructiveness and Ideality are relatively small. Now look at the perceptive faculties, these right over the eyes; how very large they are, showing him to be a man of facts and memory, but not so highly endowed in reasoning power. There's Acquisitiveness, which we should mark from four to five, and a little, below Appetite, which is fully six. The organs of the occipital region vary as you can see, Combativeness being very large, Friendship moderate, Conjugality very strong, but Inhabitiveness moderate. Taken altogether, the head is very irregular—a combination of large and small organs,

indicating a character of great force and strength in certain directions, and of marked weaknesses in others; in fine, strikingly inharmonious. If you remember the life of Eldon, you can judge for yourself whether or not this cast fairly represents him.

"I must say," replied our guest, "that I have heard Lord Eldon spoken of as a character of singular inconsistency: brilliant and powerful in certain directions, weak, coarse, and even contemptible in others. Your outline of his development is certainly very interesting, and I should be glad to compare it specifically with what is recorded of his life."

You are at liberty to avail yourself of any assistance I can give you, we rejoined, and if you please, you can make this cast serve as a starting-point, or first experiment in the study of character by the form of the head.

NO TIME TO READ.

IN the passing chat of the day we often hear it said, "I wish that I had time to read good, solid books, but I am so busy that I can not." They who express themselves in this manner are without doubt sincere in the conviction that they have not the leisure for reading, and if we should answer them by saying, "You could probably find a full hour almost every day for profitable study," they would be shocked by our apparent rudeness. But we should not be any the less right in our challenge, as could be shown by an honest analysis of their methods of employing their time.

No matter how busy a man may be, there are intervals which can be put to good account in the way of self-improvement. The book-keeper needs occasional

relief from his toil at the desk, and can find it in a few minutes' exercise out of doors, and in the travel to and fro from his home to the counting-room. If he smoke cigars, as book-keepers too generally do, he can find leisure to consume one in the morning before setting about his work, perhaps another after dinner or luncheon, and of course one at night. Many of our busiest men smoke four cigars a day, and are far from complaining that they have no leisure for that so-called enjoyment. The salesman usually has exercise enough and it is a relief to him to sit now and then in the course of the day; but assuming that he, like the book-keeper, is required to give an undivided attention to his duties while in the store, are there not intervals morning, noon, and night which might be appropriated for reading something better than the fragmentary newspaper?

We meet busy men every day at the railway station, in the ferry-house, in the car, ferry-boat, omnibus—who are skimming the newspaper mainly to "kill" time while in waiting or in transit to their destinations. Many a precious quarter of an hour is frittered away thus. How easy it could be for them to carry a volume of history or science in a pocket, and when detained in travel, or delayed in the transaction of business by a laggard, the apparently lost time would be used to advantage. We have heard of an eminent Englishman who added greatly to his stock of knowledge in literature and science, by utilizing the forced leisure of business appointments in this way.

The mechanic may urge his subjection to industrial rules as a reason for not reading, but he will make out a poor case. Before the morning bell summons him to the bench or the lathe, could he not find five,

ten, or fifteen minutes to give to a useful book? Then there is his hour at noon, and, after work hours, there is a wide interval to be filled up before going to bed.

We knew a gentleman who was for a few years the managing clerk in the busy office of an eminent New York law firm—yet by utilizing the spare moments which occurred from day to day acquired a practical knowledge of shorthand and French. He usually carried a book in his pocket when he went into court to meet an appointment or to watch a case, and if compelled to wait for lawyer or judge, he would study his shorthand or take notes in it as best he could of the testimony of a witness or the remarks of a pleader.

One of the busiest clergymen in America, a man whose industry as an author and editor are as well known, we think, as his eminence as a speaker, and whose large parish and numerous official relations must make constant demands upon his time, said not long since that he had read Froude's elaborate "History of England" mainly at the dinner-table between the meat and the dessert. To him such reading afforded diversion of mind from the graver duties of the day, and so relieved his brain from the pressure and strain of hard thinking.

Then there is Dagnesseau, one of the chancellors of France, who wrote an extensive work in the successive intervals of waiting for dinner.

We could refer to many other prominent men who have not only discharged with great ability the duties of a laborious profession or official post, but kept their minds stored with the latest and best productions in literature and science. So when we hear persons, whose pursuits are not above the ordinary routine of the average business man, complain that they

have no time to read, we can not but smile. And were we permitted we would suggest that by introducing a little more of method into their daily movements and keeping a sharp lookout for those scraps of time which they unwittingly waste, because of certain habits into which they have drifted, they would be surprised by the large aggregate of leisure that occurs to them in the course of a week.

A BRAIN SQUEEZE.

THE *Dispatch*, of Erie, Pa., published the following among its items of news: "Brakeman Snodgrass, of Corry, met with an accident at that place while making a coupling that has probably never before been experienced by any man who lived to tell the tale. He had his head caught between the bumpers, and was so horribly squeezed it was not deemed possible that he could live, but he is now getting along finely. His head, which was once round, was pressed by the accident out long and slim. He is also from one-half to three-quarters of an inch taller. The terrible squeeze which his head received has made him cross-eyed, but strange as it may seem, his mind is as clear and bright as it ever was."

This is a most extraordinary statement. It is possible, just possible, that the skull might be squeezed longitudinally without producing such fractures of the bones as would lacerate the membranes and wound the brain itself. It is just possible, too, that such a squeeze might change the form of the brain without disturbing the relation of its parts. But such possibilities are so improbable, so unlikely, that we should not give them our credence, unless they were supported by the testimony of scientific observation.

If such an accident have happened, we will challenge the last statement in the paragraph quoted, about Mr. Snodgrass' mind being "as clear and bright as it ever was," and relegate it to the domain of an enthusiastic, if not unlearned, reporter's imagination. A squeeze between the bumpers of two railway cars, which in a moment made a round head long and slim, and added half or three-quarters of an inch to its height, must have deranged some of the more important organs, and their influence upon the mental economy in general could not be otherwise than disturbing. At any rate, we should be pleased to learn, and we are sure our readers would be glad to know, the facts of a case which, if the meagre news item be true, is of a most interesting character.

TRUE PROGRESS.

IN another part of this Number is a brief allusion to a new departure or two in phrenological work for the good of the public. We are pleased to note such movements, for they are evidences of practical earnestness on the part of a few in helping along the cause of social improvement from the phrenological point of view.

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.

LIME IN THE EYE.—*Question*: What should one do when a particle of quick-lime gets into his eye?

Answer: What is done should be done quickly,

for such an accident, it scarcely needs be said, is very dangerous. Acetic acid or vinegar will neutralize or destroy the caustic property of the lime; so dilute a little with water, in the proportion of three or four parts water to one of acid, and apply the mixture to the eye, using a soft linen handkerchief, or better, a camel's hair brush. Afterward bathe the eye with warm water. And if you suspect serious trouble send for a physician, one who knows a good deal about the eyes by preference.

DISCOVERER OF PHRENOLOGY.—J. E. H.—There had been a vast amount of discussion and speculation from the days of Socrates down with regard to the relation of the form of the head to character or the mental expression, but Joseph F. Gall, of Vienna, was the first to announce a specific method of determining the character of a man by the size and peculiar contour of his skull. Willis, in the seventeenth century, was a shrewd thinker and skillful anatomist, and wrote in favor of localized functions in the brain, but did not point out particular centers for special faculties, as Gall did.

ORGANIZATION OF THE PHRENOLOGIST.—J. M. R.—As it is the province of the phrenologist to study men and analyze their characters with a view to their improvement, he should be himself organized on a liberal scale; i. e., have a large head, a well-balanced temperament, a fine general organization. Especially should be largely endowed in intellect and moral power, so that his culture may be broad and comprehensive, and his view of mankind generous and sympathetical. He should be well trained in anatomy and physiology, and be well versed in ethnology. He should also be acquainted with the principles of hygiene and sociology, so that his advice shall be intelligent and discreet. No sort of knowledge is useless to the phrenologist; the more he knows, the better he can perform his philanthropic work.

SPEAKING IN PUBLIC.—S. R. M.—It would be better for a young man to be modest in his exercise of his voice when discussing a subject before an audience. To speak in a tone which is too loud for the room is improper, and marks the man of inexperience or rough manner. Be deliberate and calm; avoiding in argument unnecessary outbursts of rhetoric, for, being unused to speaking, you will be likely to render yourself ridiculous by giving too much emphasis to halderdash or empty platitude. I can give you no better advice than that of Hamlet to the Players.

WASHING THE BODY AFTER DEATH.—G. A. S.—Thousands of years ago it was the custom with some of the most enlightened nations to wash the bodies of the dead. The ancient

Egyptians we think did it as a part of their process of embalming, and among the Greeks it preceded burning, especially if the deceased were a person of eminence. The Hebrews anointed bodies for burial. The present custom, like many others quite unnecessary, owes its existence therefore to antiquity. We are in favor of its disuse for several reasons besides that of its being entirely unnecessary in cases of natural death. One is that it so often falls to the lot of women to perform the office, whether the dead be male or female. Another reason is that the practice is often attended with danger to the health of those who perform it.

ABNORMAL HEADS.—Question: How would a phrenologist analyze the head of a Flat-Head Indian, or the Aymara Indians of Peru, who bandage the head below the ears, causing it to grow nearly twice its normal size in height, and shaped like a bonnet block standing on its end? What effect does such deformities produce upon the mind?

Answer: The experienced phrenologist would at once detect abnormality in the contour of a head. The Flat-Head skull shows for itself the effects of compression, as do also the heads of the Aymara. Nature's untrammelled growths always show a relation to symmetry and proportion. The naturally developed skull has flowing lines and curves, whether it be low or high, wide or narrow. Compare a Flat-Head with a Sioux or Shoshone, and you will at once perceive the artificial impression which the bandage has given to the shape.



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 SINGULAR COINCIDENCE.—Mancelona, Mich., January 14, 1881.—Editor PHRENOLOGICAL JOURNAL:—I have just read the article published in your JOURNAL of December last on the subject "Exemption from Physical Death a Possibility," and have taken my pen to say to you that the same have had development in my own mind. In 1871 I had just passed through a new state of physical development, one that had the effect to change all the forces of the system, to develop the brains instead of wasting the body at all. At one stage of this development—my food being principally Graham gems and milk—I was thrown into a state of sound sleep as far as the outer senses were concerned; but at the same time I was seemingly conscious of new thoughts and ideas that presented themselves relating to the Bible. The Garden of Eden, the forbidden fruit, the serpent, and the

seven-headed dragon of Revelation presented themselves to my mind as being the human mind and the physical system of man; that the forbidden fruit was indulgence in the Amative faculty, and out of that indulgence grew the further selfish action of all the faculties of the base of the brain, these faculties acting selfishly from the time of the expulsion of our first parents from the Garden of Eden to the time of John the Revelator's vision concerning the seven-headed dragon, the selfish faculties being the seven-headed dragon; which, however, received a check in the advent of Christ and his theory of life and government, and is destined to receive a fuller check at his second coming, which may be very soon. This I prepared in the form of a communication, and sent it to the editors of the PHRENOLOGICAL JOURNAL in the year 1874, desiring them to publish it in the JOURNAL if this could be done in the next issue—which was, I think, the September Number; if this could not be done, I asked them to return it immediately, as I was going West, and would take it along as a lecture. It was returned by them, saying the pages were already full. I took it West, and used it in public addresses in Michigan and Ohio. I am still using portions of that lecture in connection with my Temperance lectures, to show the necessity of living according to the laws of health, so that the perfect action of the system will create the magnetic force that is generated and deposited at the base of the spinal column could be reabsorbed and act upon the physical, and change it to spiritual substance, thus passing from the material state to the spiritual, without passing through the unconscious state. This is one of God's laws that govern matter in its progressive stages to higher and more refined, and is but one step on the ladder of progression, but not so great a stride in belief as to look backward and envelope all that science and the Bible declare is true, namely, that all we see on earth and floating in space; all there is on this globe, its mountains and plains, its hills and valleys; all that man has brought forth by his skill and talents, was once in a gaseous form floating in space.

MRS. M. T. HOPPIN.

CHESS.—The game of chess calls into action the organs of Individuality and Causality in trying to perceive your opponent's cause or reason for making a certain move; Cautiousness and Secretiveness, to foresee and guard against surprise and mistake; Calculation, in counting the moves and noting the changes; Constructiveness, in assisting to plan movements; Firmness gives promptness and resolution; Combative-ness, Destructiveness, and Hope, give courage, defence, and hope, when baffled in an attempt to "check" or "mate," or when seemingly de-

feated in the game; for it is the action of the last three organs with Firmness which gives strength and ardor to the words,

"Never give up.

It is wiser and better

Always to hope than once to despair."

The action of the same organs is required in playing checkers, but in a less degree. Either of these are excellent games for the amusement as well as the instruction of the young. It sets them thinking; and at the same time it is amusing them, it is cultivating the organs I have named. Chess, however, is far more advanced, profound, and thorough than checkers, and is intended more for adults and young folks than for children.

When any person is playing a game of chess, you can almost read his character; for instance, if you see that he tries to mislead by trickery, going about it in a cunning way, you may know at once that his Secretiveness is large or very active. But, on the other hand, if he moves openly, using no stratagem or trickery, you may at once decide that his Secretiveness is small or inactive, and that his play is governed by a sentiment of generous strength.

J. C. C.

A WARM ADVOCATE, AND THE REASON.—I am of the opinion that a man can not take the highest rank in the Christian religion without understanding the principles of Phrenology. I have been a reader of the JOURNAL for over twenty-five years. When my attention was first called to Phrenology, I was a young man with no well-marked plan for life, without any aim to labor for. I was without a dollar in the world, and I was very poor in another sense. I was poor in mind as well as in purse. I had to spell every word, letter by letter. About this time I went to Cincinnati, in 1844, and became a waiter in the "Henry House," and hearing some of my associates remark that they were going to attend a lecture in the evening, I determined to accompany them. There I learned the name of the lecturer, who was O. S. Fowler, and then and there I heard of Phrenology; in fact, it was the first lecture I ever heard of any kind. I visited Prof. Fowler at his rooms the next day, and secured an examination and chart, which has been the leading star of my life. Gall, Spurzheim, Combe, Fowler, Wells, Sizer, and other stars of this beautiful system of mental philosophy, have been, and are still, my constant companions, at least through their works; and all that I am I owe to Phrenology. I am a graduate of the Ohio Medical College, served during the war as a surgeon of the Sixth Minnesota Infantry Volunteers, have lectured on Phrenology and Physiology with acceptance, and, I hope, profit to my audience.

At the age of twenty I could not read a sen-

tence in the language. I have attributed to Phrenology the fact of my getting away from my former dark and besotted ignorance. Oh, that God would raise up a host of able men and women who will be defenders of truth, and fill the places of the leaders and pioneers in this great cause. The harvest truly is ripe and great; the laborers are but few.

H. W., *Kansas.*

WANTED—A BALANCE-WHEEL.

WHAT is the cause for half our woe?
What makes the world so crooked go?
Why do so many men get drunk?
And why so many sweet hopes sunk?

Wanted—a Balance-Wheel.

A beautiful girl trips down the street,
Admired by all she chances to meet.
But under that banged and frizzled hair
What are the words engraven there?

Wanted—a Balance-Wheel.

A youth is asked to the haunts of sin,
He stops and thinks he might just peep in.
Ah! my boy, if your head had been right,
You'd have spurned the tempter with all your might.

Wanted—a Balance-Wheel.

A poet is burning the midnight oil,
His brain and his temper are ready to boil,
Now, if he'd only a perfect head,
He would pause in his labor, and go to bed.

Wanted—a Balance-Wheel.

So let us examine our heads to-day,
And see the machinery is all in play.
The world is in tune; it is only we
That fail to move harmoniously.

Wanted—a Balance-Wheel.

SARA KEABLES HUNT.

PERSONAL.

Mrs. SOPHIE W. KENT performed an important office at a fair recently held for the benefit of the Sunday-school connected with the Rev. Mr. Marley's church, corner 14th Street and 2d Avenue, New York. She examined the heads of a large number of the visitors, in fact eighty-five, and acquitted herself creditably. Mrs. Kent's services are available for other like occasions.

JEAN LEON GEROME, the eminent painter, is one of the handsomest men in France. The lines of his face are wonderfully strong and refined, and he has an unmistakable expression of power, while his manners are quiet and courteous. M. Gerome is now nearly fifty-seven, and has been painting since he was a school-boy.

MARIE VANZANDT, a granddaughter of the late Signor Blitz, the magician, is said to be creating a wonderful sensation in the European capitals by her operatic abilities.

JAMES E. BROWN, a wealthy citizen of Kittanning, Penn., who died recently, left twenty-five dollars to each widow in the place, and the same sum to every wife who shall become a widow. Kind Mr. Brown!

INSHTATHEAMBA. The editors of *St. Nicholas* have in a recent number a story of Indian life, by Inshtathcamba, "Bright Eyes," the daughter of an Omaha chief, who has been traveling through the States during the last two years under the protection of two of her kinsmen, trying to rouse the conscience of the whites to the rights of her race. Miss La Flèche (for that is her English name) makes now, we believe, her first essay as an author.

Gov. ST. JOHN, of Kansas, predicts that by the middle of January that State will not have within its borders a distillery, a rectifying establishment, or a saloon. Happy Kansas!

WISDOM.

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

He has not lost all to whom the future still remains.

To amuse the public: what a sad vocation for a man who thinks!

ALL honest men will bear watching. It is the rascals who can not stand it.

Revenge, at first, though sweet,
Bitter, ere long, back on itself recoils.

EVIL ministers of good things are as torches—a light to others, a waste to none but themselves only.—HOOKER.

LET men laugh when you sacrifice desire to duty if they will. You have time and eternity to rejoice in.—THEODORE PARKER.

PERFECT ignorance is quiet, perfect knowledge is quiet; not so the transition from the former to the latter.

It is a great misfortune not to have enough wit to speak well, or not enough judgment to keep silent.—LA BRUYERE.

ALL youths are not fitted for college education. It is not best to make a one-story brain try to carry a three-story education.

WHEN you give, take to yourself no credit for generosity, unless you deny yourself something in order that you may give.—HENRY TAYLOR.

THREE six—the peevish, the niggard, the dissatisfied, the passionate, the suspicious, and those who live upon others' means—are forever unhappy.

LIFE's evening will take its character from the day which has preceded it; and if we would close our career in religious hope, we must prepare for it by continuous religious habit.

THE truest help which one can render to a man who has any of the inevitable burdens of life to carry, is not to take his burden off, but to call out his best strength that he may be able to bear it.

TO be vain is rather a mark of humility than pride. Vain men delight in telling what honors have been done them, what great company they have kept, and the like; by which they plainly confess that these honors were more than their due.

MIRTH.

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

A NICE young man who wished to make himself agreeable to Longfellow, said: "Sir, every night of my life I fall asleep over one of your books."

A GERMAN, lately married, says: "Id vas yoost so easy as a needle cood walk oud mit a camel's eye as to get der behindt vord mit a vomans."

A GEORGIA boy who wrote to Santa Claus for a pony, was wise enough to add: "Pascrit.—If he is a mule, Plee ty his behine legs." They know what a mule is in Georgia.

LITTLE boy, learning his Catechism from his mother: Q. What is a man's chief end? A. His head.

THE Rev. Dr. Hall said every blade of grass was a sermon. The next day he was amusing himself by clipping his lawn, when a parishioner said: "That's right, Doctor. Cut your sermons short."

"WHY, Franky!" exclaimed a mother at a summer boarding-house; "I never knew you to ask for a second piece of pie at home." "I knew 'twan't no use," said Franky, as he proceeded with his pie-eating.

A MOTHER, trying to get her little daughter of three years to sleep one night, said: "Annie, why don't you try to go to sleep?" "I am trying." "But you haven't shut your eyes." "Well, I can't help it; ums come unbuttoned."

A HOMEOPATHIC CURE.—Patient—"Yes, sir; you're an ignorant blackguard, sir." Homeopathic M.D.—"Well, sir, then you've come to the right person for treatment; as, according to our treatise, 'like cures like.'"

WHEN spelling is "reformed" she'll write:

"I'm sailing on the oshun,
The se is hi, no sale in slte,
It fliz me with emoshun."
But one "spell" will not change its name,
For she'll be se-sic just the salm!

DR. G— is one of the most fervent apostles of materialism. In recalling certain souvenirs of his youth, he began an anecdote in the most natural tone in the world, in these words: "At that time I was in love with an agglomeration of molecules, called Ernestine."

HE said he was so bashful and blushed painfully, and asked her if she could spell bashful. She said she thought she could do it in a pinch, and spelled it b-a-s-h-f-o-o-l. Then he looked uneasily at her and began to wonder if she was unutterably ignorant or superlatively sarcastic.



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.

SCHOOL MANAGEMENT: A Practical Guide for the Teacher in the School-Room. By Amos M. Kellogg. New York: E. L. Kellogg & Co. Price, 75 cents.

There is no lack of books in school management, but there are few of them which are the product of wide experience as is the case with Mr. Kellogg's. An old preceptor, and now editor of the *New York School Journal*, he can speak *ex cathedra* on the practical work of a teacher.

He writes in a condensed style, evidently aiming to give just the information needed, especially by inexperienced teachers; and, if we know anything about human nature in its early stages of growth, he has prepared a very useful little volume. He believes the way to manage a school is to render the pupils manageable.

An introduction by Thomas Hunter, President of the New York Normal College, discusses the subject somewhat in the *objective* style—visiting a school and pointing out its excellent features. It shows how that good government increases the teaching power of the teacher, and makes valuable suggestion as to the mode by which regular attendance and the co-operation of the pupils can be secured.

GOETHE'S MOTHER. Correspondence of Catharine Elizabeth Goethe with Goethe, Lavater, Wieland, Duchess Anna Amalia of Saxe-Weimar, Friedrich Von Stein, and others. Translated from the German, with the addition of Biographical Sketches and Notes. By Alfred S. Gibbs. With an Introductory Note by Clarence Cook. 12mo, cloth. Price, \$2.00. New York: Dodd, Mead & Co.

In Mr. Cook's introductory note "To the Reader" we are informed of the death of the translator and editor of these letters before his book had found a publisher. He was a Philadelphia physician of fine culture, and thought with good reason, that now, when so much attention is given to Goethe and the period of German literature which he represents, it was fitting to supply in convenient form information concerning the inner life of the great poet's mother, the woman who, according to Mr. Lewes, "was more like what we conceive as the proper parent for a poet." Mr. Cook has acted as Dr. Gibbs' literary executor in bringing the volume to the notice of the public.

The letters were gathered from a variety of German sources, and have never before appeared in English. They afford interesting glimpses of the thought and character of one of the most cheerful and attractive figures in the literary life of the last century. Catharine Elizabeth Goethe was an admirable example of the best type of the cultivated German woman of her time. She was very fond of literature, art, and especially the drama; had a warm heart overflowing with love for her children and grandchildren, and great affection for her friends; at the same time an excellent housewife, she had shrewd, practical views of the business and duties of life.

Lavater, eminent for his studies in physiognomy, was closely intimate with the Goethe family; and the letters, in which he is a principal, disclose a lively warmth of regard and a recital of incidents which are quite delightful in themselves as well as clear reflections of the true character of the writers.

There are three portraits of Goethe's mother, one of his father, one of his sister Cornelia, and one of Lavater, and the title-page bears a picture of the Goethe house in Frankfort. The work is a valuable addition to Goethe literature accessible to English readers.

OUR HOMES. By Mary Dwinell Chellis, author of "From Father to Son," "The Temperance Doctor," etc. 16mo, cloth. Price, \$1.50. New York: National Temperance Society and Publication House.

In this volume the fertile author has stepped a little out of her wonted channel of temperance story-writing, although she keeps that even in view. She discusses in the talk of her characters topics of every-day life, such as personal and household economy, social mannerisms, business

habits, the essentials of happiness, true success, and so on. In great part the book is a portraiture of real life, especially in its more conspicuous features of labor, suffering, and care which owe their existence to imprudence, prodigality, covetousness, and dissipation; and here and there words of admonition and encouragement are sown for the counsel and comfort of the reader who may be among the world's unfortunates. It is a book indeed which can scarcely be perused by any one without conferring some practical benefit upon him or her.

THE ADVENTURES OF AN ATOM: Its Autobiography. By the Author of "The Imps of the Wind." New York: Hurst & Co. pp. 416. Price, \$1.50.

This book is filled with vivid pen-pictures, some of them elegant and tender, others full of fire and power, and others are the quaintest possible conceptions ever put in print or even speech, but withal intensely interesting.

The theme and theory evolve the thought of a human atom endowed with soul and consciousness, which is by turns permitted or compelled to reside in the brain of one man or in the heart of another—once it is in a fish, again on a distant planet—and it purports to write the history of its surroundings, the statements and arguments it hears, and the character and destiny of the persons it inhabits. The author in his preface says: "I claim absolute originality in this work—in every part of it."

The reader will probably concede the claim, and deem the volume a successful effort.

EXTRACTS FROM CHORDAL'S LETTERS:

Comprising the choicest selections from the series of articles entitled "Extracts from Chordal's Letters," which have been appearing for the past two years in the columns of the *American Machinist*. With steel portrait of the author; also, original illustrations by Charles J. Taylor. 12mo. Price, \$1.50. New York: American Machinist Publishing Co.

This is a well-written and well-printed volume of hints and suggestions of a most solidly practical character, and highly valuable to the educable worker in iron and wood. The reader is at once struck with the intelligence of the writer, and if no mechanic himself, he is won by the piquancy of the style to read on and on to the end. His meaning can not be mistaken by anybody, for he speaks always in the manner of one who knows pretty much all that is known about the subject, hitting off the common methods of doing business in machine-shops, the peculiarities of foremen, workmen, owners, etc. The author's connection with the *American Machinist* will continue; and we've no doubt every mechanic who reads this volume will wish to know more of its author and his pithy, common-sense views.

THE LESSON COMMENTARY ON THE INTERNATIONAL SERIES OF LESSONS FOR 1881. By the Rev. John H. Vincent, D.D., and the Rev. J. M. Hurlburt, D.D. Octavo, 342 pages, extra cloth. \$1.50. Boston: Ira Bradley & Co.

The names of the authors of this book are sufficient to show that the lessons referred to are a series of Sunday-school lessons for the coming year, and it is also a sufficient guarantee for the excellence of the work. The volume claims to be non-sectarian in its nature, and that, doubtless, was the aim in preparing it as a part of the Scripture series, and the mode of its compilation would be likely to reach that end. The volume contains a number of finely engraved maps, in addition to the running commentary on the lessons, which are otherwise illustrated. The commentaries are eclectic, being selected from standard authors; a complete list of whom is given in the introduction. There is also a talk to Sunday-school teachers by Dr. Vincent. The adoption of the International Lesson Series has led to a more systematic and thorough study and analysis of the Scriptures than has ever been made before, and of all the popular lesson-helpers we know of none better than this.

HORSES' TEETH. A Treatise on their Mode of Development, Physiological Relations, Anatomy, Microscopical Character, Pathology and Dentistry; based on the works of well-known Odontologists and Veterinary Surgeons. To which is added a Vocabulary of the Medical and Technical Words used. By William H. Clarke. 12mo, pp. 262. Price, \$1.50. Published by the author, at 82 Beekman Street, New York.

The title so fully describes the scope of this volume that little need be added, except in the way of criticism. The author is frank enough to admit professional inexperience in the special department of Physiology, to which his book belongs, but claims public attention to it on the score of having made the topic he treats on a matter of careful investigation for a year, and having prepared the book in response to a want expressed by horsemen generally. Mr. Clarke has wisely deferred to the opinion of naturalists and veterinary surgeons, and quotes liberally from their observations and opinions in every chapter, thus supplying a cyclopædic stock of information bearing directly on the horse's teeth in health and disease, which is very convenient for those who keep or raise horses, and the average veterinary surgeon.

PRETTY PEGGY, AND OTHER BALLADS. Illustrated by Rosina Emmet. Small quarto, boards. Price, \$2.50. Dodd, Mead & Company, New York.

Fun for the children in the little rhymes, but much more fun in the colored illustrations which adorn every page. A very taking holiday book, but unfortunately received too late for notice in our holiday Number.

DANCING IMPS OF THE WINE; or, STORIES AND FABLES. By Angelo. pp. 268. New York: Hurst & Co., Publishers, 123 Nassau Street.

This work is very handsomely illustrated, printed on fine tinted paper and attractively bound. The author is a new, but not young, candidate for fame. He has done a great deal of reading and thinking, and writes with uncommon nerve and vigor, and in a style at once fresh, brave, full of imagination and strong common sense. The work will attract children and youth, as well-told stories and fables always do; and ripe age and experience will follow the writer with unflagging interest to the last.

A convention of animals and insects to discuss their wrongs at the hands of man and each other, each making a speech from his own experience, is among the most quaint and witty chapters, and is well worth the price of the book. It will be widely read. Price, \$1.25.

PUBLICATIONS RECEIVED.

MORAL SUASION, with Moral Action; the Bible Plan of Prohibition. From an address by G. T. Stewart, of Ohio. An able presentation of the moral aspects of prohibition. Price, 5 cents. J. N. Stearns, Agent, New York.

THE MORAL LESSON OF GEN. GARFIELD'S LIFE. An address by Hon. Frank Fuller to the young men of New York, October 31, 1880, at Cooper Institute. This excellent address is founded upon Mr. Fuller's personal knowledge of its subject, and deserves a wide reading, especially by the young men of America. Published by Fowler & Wells, New York. Price, 10 cents.

THE THIRTY-SEVENTH ANNUAL REPORT of the New York Association for Improving the Condition of the Poor, for the year 1880.

THE NEW GERMAN CRUSADE. A lecture by Robert Collyer, delivered in the Church of the Messiah, December 28, 1880. A discussion of the influence of the German immigrant upon American social and industrial life. G. P. Putnam's Sons, New York.

GODET'S COMMENTARY ON LUKE. With Preface and Notes specially prepared for this edition by John Hall, D.D. Godet's Celebrated Commentary on Luke is perhaps the best commentary on this Gospel ever written. I. K. Funk & Co. have now in press an edition which they will supply at popular prices, or give it as a donation to every subscriber for their PREACHER AND HOMILETIC MONTHLY.

EASY EXPERIMENTS in Chemistry and Natural Philosophy. For educational institutions of all grades, and for private students. By G. Dallas

Lind, author of "Methods of Teaching in Country Schools," etc. Published by J. E. Sherrill, Danville, Ind. A very convenient manual for the use of teachers and those generally who would like to make experiments in illustration of principles of chemistry and natural philosophy. Mr. Lind keeps in view the cost of materials and apparatus, so that the thin purses shall not suffer much. Most zealous students of physics are poor, and unless they can have simple and cheap apparatus, are unable to make the investigations they would. We commend the book to such very heartily. One hundred and four experiments are detailed, and one Appendix explains how to preserve natural history specimens.

CHRISTMAS BOOKS. By Charles Dickens. With Illustrations. First and Second Halves. Printed without abridgment. Price, 25 cents each. Messrs. I. K. Funk & Co., of this city, have adopted the convenient octavo form, of the always attractive Christmas stories of Dickens. The illustrations are much like the original ones. The two volumes are respectively No. 49 and No. 50 of the "Standard Series."

MUSIC. "Goldlocks," "Grandpa's Darling." Words by Mrs. A. Elmore, music by G. P. Skelly. Price, 40 cts. Spear & Dehnhoff, New York, publishers.

THE PRESENT OUTLOOK OF SPIRITUALISM. A discourse delivered by Henry Kiddle, of New York city, at Lake Pleasant Camp Meeting, Montague, Mass. A strong and earnest defense of an honest conviction.

ANNUAL MESSAGE of Governor B. F. Overton, to the Chickasaw Council, at Tishomingo City. An argument for the establishment of the Indian in possession of home and land, and his education in the methods of self-support, according to civilization.

ANNUAL ADDRESS before the Woman's National Christian Temperance Union at its seventh annual meeting in Clarendon Street Baptist church, Boston, October 27, 1880, by Frances E. Willard, President. A very interesting review of the work performed by an enterprising and zealous association for humanity.

THE HOME ALMANAC, for the year 1881. Illustrated by John S. Davis, Harry Fenn, the Morans, Woodward, Hogan, and others. Presented by the Home Insurance Company of New York.

THE LITTLE FOLKS' READER. Published monthly by D. Lothrop & Co., of Boston, Mass., is an admirable means of instructing as well as amusing our little ones of the household. Price but 75 cents a year.

NEVER! A Ballad. Words by Grace H. Horr. Music by Alberto Himan. Published by Alberto Himan, New York.

THE FOURTH ANNUAL MEETING of the Music Teachers' National Association, at Buffalo, N. Y., Summer of 1880. A prominent feature of this report is Prof. H. G. Hanchett's essay, "Teaching as a Science," which abounds in useful suggestions.

VICK'S FLORAL GUIDE for 1881 even exceeds the former annual issues of this famous Rochester florist, in completeness and beauty. A fine portrait of the author is published with it.

SCRAP-BOOK. Recitation Series, No. 2. For schools, home, and literary circles. Edited by H. M. Soper, Professor of Elocution, Chicago, Ill. Price, in cloth, 50 cents.

THE ILLUSTRATED SCIENTIFIC NEWS of New York appears in a new and improved form, under the management of the publishers of the *Scientific American*, Messrs. Munn & Co.

THE HARVARD REGISTER, for January, 1881, appears in a new cover, and is replete with matter of interest to collegians, and especially to Harvard alumni. It should be well sustained.

MUSCLE TABLETS. Dr. Joseph D. Bryant, Professor of Anatomy at the Bellevue Hospital Medical College, has arranged a series of Tablets for the use of physicians and students, in which the names of the muscles, their origins, functions, and nervous supply, are given briefly; the whole series, although printed on card-board, filling but a small envelope. They are designed to refresh the knowledge of the practitioner with regard to the muscles of the human body. Price of the set, \$1.00. Wright & Schondelmeier, No. 419 Broadway, Publishers.

THE STATE AND THE LIQUOR TRAFFIC. By Ezra M. Hunt, A.M., M.D., of New Jersey. This pamphlet discusses the origin and the early restrictive character of the license system, and shows that its intent was to confine the sale of alcoholic beverages to *bona fide* travelers, and that it was not designed to make the traffic in liquors, as latterly, a special source of public revenue. Price, 10 cents. National Temperance Society and Publication House, New York.

STRENGTH OF GROWING PLANTS.—The power of plants to force their way through a resisting medium is very remarkable. A writer in a foreign journal asserts that he has observed an instance where a dandelion forced its way through two inches of asphalt which had been spread over it. The great force with which the roots of plants pierce the hardest and most compact soils is also very wonderful.

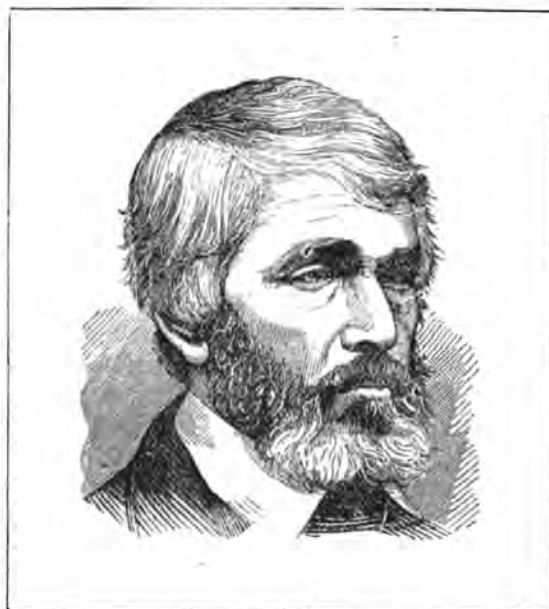
THE PHRENOLOGICAL JOURNAL

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[WHOLE No. 509.]



THOMAS CARLYLE.

ANOTHER name is added to the list of the world's great dead. Of Carlyle it can be truly said, that he occupied a place in English literature peculiarly his own. At once essayist and historian, he was self-constituted the censor of

thought and manners. He was pragmatic and severe in his judgment; fraud, folly, and ignorance, whatever might be their station, knew the keen edge of his sarcasm. No other writer of the age was so outspoken against chicane and deceit.

And no fear of criticism, no dread of want because of unappreciative or timid publishers, restrained his candor. He has been called rude, harsh, relentless, unsympathetical; but few men among the world's writers may be named who possessed warmer hearts and more earnest feeling for the suffering, toiling masses of humanity. Mark the force of this passage in "Sartor Resartus":

"Two men I honor, and no third. First, the toil-worn craftsman that with earth-made implements laboriously conquers the earth and makes her man's. Venerable to me is the hard hand, crooked, coarse; wherein, notwithstanding, lies a cunning virtue, indefeasibly royal, as of the scepter of this planet. Venerable, too, is the rugged face, all weather-tanned, with its rude intelligence; for it is the face of a man living manlike. Oh, but the more venerable for thy rudeness, and even because we must pity as well as love thee! Hardly entreated brother! For us was thy back so bent; for us were thy straight limbs and fingers so deformed; thou wert our conscript, on whom the lot fell, and fighting our battles wert so marred. For in thee, too, lay a God-created form, but it was not to be unfolded; encrusted must it stand with the thick adhesions and defacements of labor; and thy body, like thy soul, was not to know freedom. Yet toil on, toil on; thou art in thy duty, be out of it who may; thou toilest for the altogether indispensable—for daily bread."

Again, his broad mind taking in the situation of the laborer's mental darkness or lack of opportunity, he exclaims, out of a heart filled with compassion:

"The poor is hungry and athirst; but for him also there is food and drink; he is heavy-laden and weary; but for him also the heavens send sleep, and of the deepest; in his smoky cribs, a clear dewy heaven of rest envelopes him, and fitful glimmerings of cloud-skirted dreams. But what I do mourn for is that the lamp of his soul should go out; that no ray of heavenly or even of earthly knowledge should visit him, but only in the haggard

darkness like two specters, fear and indignation. Alas! while the body stands so broad and brawny, must the soul lie blinded, dwarfed, stupefied, almost annihilated? Alas, was this too a breath of God; bestowed in heaven, but on earth never to be unfolded? That there should one man die ignorant who had capacity for knowledge, this I call a tragedy, were it to happen more than twenty times in the minute, as by some computations it does."

A lofty moral spirit pervades his writing, which has exerted a powerful influence upon literature and upon public thought, and long after the fine writing of many of the world's admired poets and thinkers has been forgotten will this influence be manifest.

Our portrait represents him as he appeared twenty years ago, when yet in the fullness of his powers. The strong Scottish organism is conspicuous—force is depicted in every feature. Yet the strength of the character is not in one direction solely; the great Firmness, Conscientiousness, Destructiveness, have their complements in the large Benevolence, Caution, Veneration, and the broad reach of the intellectual faculties. His convictions were the rule of his life; upon them he rested his hopes, his destiny; so that whatever was the object they formulated, he was inclined to pursue it unflinchingly. He was not one to conceal himself; but on the contrary, the man appeared in his language and conduct. Imitation is one of the weakest organs in the portrait, while Human Nature appears to be one of the strongest. He understood society better than the average of men, yet he could not conform to its mannerisms in any particular, unless his moral sense approved. He could not be otherwise than emphatic, for his nature craved decided, positive expressions; no half-way, no lukewarm, indeterminate methods were acceptable. Half his quarrel with society was based upon the anomalous and purposeless character of so great a proportion of its life. Intellectually he was a born critic, and his

productions in all departments show the quality of criticism.

A brief review of Thomas Carlyle's long life discloses the following facts :

He was born on the 4th of December, 1795, in the little Scotch village of Ecclefechan—a small place with the odd reputation of containing a greater number of bridges than any other township or parish in the United Kingdom. The elder Carlyle was a farmer—a man of much solid common sense. From the little parish school, Thomas went to the larger school at Annan, and thence, at the age of fourteen, to the University of Edinburgh. Here he came, as he himself has so pathetically said, hungry for all sorts of knowledge—young, fresh, eager, with the world before him; and here he worked for seven or eight years. He had been destined to be a minister of the Church of Scotland; but when he had reached manhood, he was not sure that he believed the doctrines of his father's Kirk, and it was needful that he should settle the doubt. Before this had been fairly accomplished, he had discovered his vocation to be that of a writer.

On leaving the University he associated with Irving in teaching, and while thus occupied used some of his leisure in writing for periodicals. His first regular contributions to literature appeared in the *London Magazine*, then under the control of Leigh Hunt and Charles Lamb. For Sir David Brewster's *Encyclopædia* he wrote biographies of Montesquieu, Montaigne, Norfolk, Nelson, and the elder and younger Pitt. Everything he published bore the stamp of vigorous and original thought. His style was a model of strength and clearness. That odd and powerful style of writing now termed "Carlylese," as it does not appear in his earlier efforts, seems to have been formed during the study and translation of Goethe's "Apprenticeship of Wilhelm Meister."

In 1826 Carlyle married Miss Welsh, a descendant of John Knox. With his wife came to him a little estate at Craigenputtock, some fifteen miles from Dumfries,

and here he lived and labored for a time, now and then leaving it for another home at Comely Bank, Edinburgh. His married life in general appears to have been very happy, and when Mrs. Carlyle died, about fourteen years ago, the bereaved man exclaimed that the light of his life had gone out.

Carlyle's first book, "Sartor Resartus," was written in 1831. After being refused by several publishers, it appeared as a serial in *Fraser's Magazine*, and two American editions of it were printed before an English publisher was found to issue it as a volume.

About this time Carlyle removed to London, and established himself at Chelsea, in an old-fashioned red brick house of the Queen Anne period. Thence he sent forth, in 1837, the greatest book of his life-time, the "History of the French Revolution." In 1840 he delivered his magnificent series of lectures on "Heroes and Hero Worship," and published his essays on Chartism. In 1843 appeared "Past and Present," and in 1845 "Oliver Cromwell's Letters and Speeches, with Elucidations." "Latter-Day Pamphlets" appeared in 1850, and their tone of denunciation and scorn raised a tremendous outcry against the author.

In the year following was published the most beautiful and charming of all his works, the "Life of John Sterling." In this delightful book Carlyle not only preserves the memory of his friend, but gives us glimpses of Gladstone and Stuart Mill, and a wonderful portrait of Coleridge.

The last important work upon which Carlyle was engaged was the "Life of Frederick the Great," the first volume appearing in 1858. In vividness and detail it rivals the "French Revolution." His death occurred on the 5th of February last, the man having attained a little more than eighty-five years. A few months before, he had said: "I am weary—wearily unto death—of this toil and moil and strife; of seeing wrong ever galloping along in a coach and four, and right ever pushed into the mire by the jostling,

unthinking, beer-guzzling and otherwise much bemuddled crowd. I am waiting impatiently for the end. May it come soon; I am ready; I long to go."

One of the most interesting incidents of his life, and one which brings out in the clearest manner his kind and patient character, is that of the destruction of the manuscript of the second volume of his "History of the French Revolution." He had loaned it to Mr. John Stuart Mill, who wished to read it, and a careless servant one morning used it to kindle a fire. On discovering the loss Mr. Mill was greatly horrified; as Carlyle himself says in his "Reminiscences":

"How well do I still remember that

night when he (J. S. Mill) came to tell us, pale as Hector's ghost, that my unfortunate first volume was burned. It was like half sentence of death to us both, and we had to pretend to take it lightly, so dismal and ghastly was his horror at it, and try to talk of other matters. He stayed three mortal hours or so; his departure quite a relief to us."

Of course, the loss of the product of months of severe mental toil was appalling at first, but he soon after set to work, and greatly sustained by the sympathy and encouragement of his wife, reproduced the volume, which is considered by far the best of the series. D.

COARSENESS.

ANY lack of refinement in one's manner, or any incivility in one's ordinary personal address, ought certainly to be a matter of regret to the person whose daily life displays such a defect. But it is by no means uncommon for men and women to think, or to pretend they think, that rudeness of manner and neglect of the courtesies of life are evidence of a strong character; and that a coarse and uncivil habit of speech is an admirable proof that the speaker is a "plain, blunt man," who is above shams and pretences.

Now, while coarseness may exist along with strength of character and righteousness of life, it is always a blemish to them, and never a help. It is, of course, true that refinement is not righteousness, and that a rude and ignorant saint is always better, in God's sight, if not in man's, than a refined and intellectual sinner. But that is not the question at issue. The only point concerning which one ought to think is the question whether a lack of graciousness in character and courtesy in manner is in itself a good thing or a bad thing. Unfortunately, there is too common a tendency to confuse this question by considering it along with totally irrelevant matters. Badness is sometimes polished, goodness is sometimes rough; therefore, illogically con-

cludes the hasty reasoner, anxious to excuse his own coarseness, rude strength is better than courteous strength. This shallow argument finds plenty of acceptance, because it is a great deal easier for most people to be thoughtlessly coarse than to be studiously gentle; and so they conclude that it is a matter of little moment whether their manners are attractive or not. Every one who is trying to lead a good life, should also try to lead a winsome and courteous life. By abandoning gentleness of disposition and graciousness of word and deed, he throws away a means of growth and an effective weapon. Coarse Christians little know how often they play into the enemy's hands. It is almost always a grave mistake, in a matter of manners, or in any other matter, to try to put yourself on other people's level. If you are trying to do right, the chances are that, by adopting a coarse manner of speech or action, you will degrade yourself, both in your own eyes and in those of him whom you are trying to reach, and yet will fail in the good you seek. Rude and rough people are ready to excuse themselves for their own coarseness; but, after all, they despise it in those who are striving to instruct and help them.—*Sunday-School Times.*

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER VI.—*Continued.*

BRAIN OF BIRDS, REPTILES, AND FISH.

THE cerebro-nervous system of birds is constituted, as it is in quadrupeds, of three distinct parts: (1), two hemispheres, Fig. 216, A, A; (2), a cerebellum, C, C; (3), a medulla oblongata, o. On comparing these parts, however, with those in quadrupeds, we find differences which are too remarkable not to be the subject of special consideration.

The hemispheres are constantly double, or composed of two parts alike in form and volume, or, at least, their difference in these respects is scarcely perceptible,

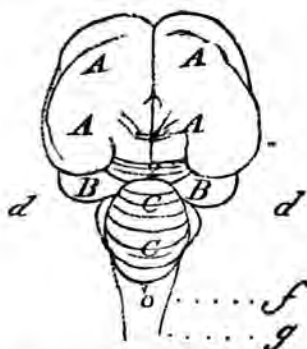


Fig. 216.—OUTLINE OF THE DUCK'S BRAIN.

a peculiarity of structure which we do not find in quadrupeds, and still less in man. In the entire bird family, without exception, the hemispheres are smooth, offering no trace of convolutions. Comparing one bird with another, especially different species, we find that the form of the hemispheres in birds varies greatly. (See Figs. 217, 218, 219, 220, 221, 224, 225). These illustrations are but a suggestion of the immense variety of shapes actually existing, and when studied in relation to bird-habit and character, they have a very important phrenological significance.

Behind the cerebral hemispheres we note the cerebellum (Fig. 216. C, C). This part of the nervous system, which in man and a few of the apes is quite covered

by the cerebrum, and is partly so in the dog, marten, and other quadrupeds, is entirely uncovered, or outside of that



Fig. 217.—BRAIN OF THE SCREECH OWL.

division of the brain, in all the bird family. It shows some resemblance to the body of a caterpillar which has been deprived of its hair, being divided like it into sections or rings, of which the wider always occupy the middle portion. The greatest diameter of the bird cerebellum is from top to bottom, or is longitudinal, not transversal, or from side to side, as in quadrupeds. When the skull is very thin, as it is found in the warbler or thrush family, we can distinguish by the exterior the division of the parts com-



Fig. 218.—BRAIN OF A COCK.

posing the cerebellum. In vertical section it presents a kind of arborization or treelike arrangement of its substance,

but with far less of detail than in quadrupeds (Fig. 222).

In man and the quadrupeds we have seen that between the cerebellum and the cerebrum, and upon the posterior sur-



Fig. 219.—BRAIN OF TEAL.

face of the pons varolii, are found four tubercles known as quadrigeminal. In birds, however, we find but two, and instead of being situated centrally in relation to the cerebro-spinal mass, they are placed on each side of the cerebellum, and more or less covered by the posterior part of the cerebral hemispheres, but never completely (Figs. 218, 219). They are connected by a commissure, the breadth of which varies according to the species.

Fig. 223 represents the brain of a jay, in which this commissure is very wide, considered in relation to the volume of that bird's brain, and is quite remarkable as compared with its development in some other birds. We notice in this representation (Fig. 223), the hemispheres



Fig. 220.—BRAIN OF THE SNIPE.



Fig. 221.—BRAIN OF THE SWALLOW.

having been separated for the purpose, that there is no commissure analogous to that in man known under the name of the corpus collosum; we see only the two which we have just indicated.

The bi-geminal tubercles of birds are hollow. Between them, and lying upon the posterior commissure, is a small body which may be regarded as the analogue of the pineal gland in man. Its seat in



Fig. 222.—BRAIN OF A HEN. VERTICAL SECTION.

the brain is indicated by the arrow on Fig. 216. M. Serres is of the opinion that this little body is of a size always correspondent to the volume of the brain; but the observations of others do not support him.

In the reptiles there are found two smooth cerebral hemispheres—a cerebellum without layers, and a spinal marrow. When divided vertically the reptilian cerebellum shows a class of structure differing much from all the forms of nervous constitution which we have examined; it appears to possess no arborization (Fig. 226). In fishes the cerebral hemispheres show a singular arrangement; sometimes they are composed of two divisions expanded on the right and on the left, as in the brain of the herring (Fig. 227) and mullet (Fig. 228). At other times there are several tubercles placed one behind



Fig. 223.—BRAIN OF A JAY, SHOWING COMMISSURE.

the other. The cerebellum is smooth, and its section offers no trace of arborization.

The spinal column of fishes is usually expanded at the upper extremity, whence

proceed the nervous filaments which communicate with the cerebrum and cerebellum. This latter part of the nervous system is sometimes divided into several parts which bear some relation to

nervous system will not, we venture to think, be uninteresting, especially to those who may be tempted to undertake it. It is not well to commence the study of the nervous system by taking an ani-



Fig. 224.—BRAIN OF AMERICAN PARROT.

the cerebellum of birds. The mullet (Fig. 229) is a striking example of this kind of organization.

There is no class of animals of which the nervous system offers so much of distinctive variety in structure as that of fishes. Prof. Agassiz, Mr. Huxley, and some others have given us some very interesting sketches of their studies of certain species, but we have no general work in which the principal classes, genera, and species are examined with care and illustrated with well-executed representations. Such a



Fig. 225.—BRAIN OF THE CROW.

work would be a very valuable contribution to neurological science.

SOME PRACTICAL HINTS.

A few suggestions at this point upon the practical examination of the cerebro-



Fig. 226.—BRAIN OF THE FROG.



Fig. 227.—BRAIN OF THE HERRING.

mal, old or young, the body of which is in a state of putrefaction; the most favorable time for dissection is that when the body has become thoroughly cold.

The brains of men who have passed their sixtieth year, and those too of old horses, are excellent for tracing the cerebral fibers, because at an advanced age the fibrous substance of the brain obtains more consistence. But it must also be borne in mind that in very old men and in animals exhausted by age and labor, the study of the brain is rendered very difficult on account of the diminution of the convolutions, or their softening, or their adherence to the investing membrane.



Fig. 228.—BRAIN OF LONG-TAILED WILD DUCK.

We can not examine successfully the brain of a fetus, that of young animals, those of birds, reptiles, and fishes, only after a previous maceration in alcohol weakened about one-half with water. The brain is not at all impaired by this

treatment, and can remain several hours in the liquid.*

By using the saw we can preserve the skull of quadrupeds; but it is not always convenient to do so in the case of birds. A strong scalpel with a short blade is best for cutting away the light bony tissue and securing the brain unimpaired in the case of small birds; but the larger species, like the turkey, chicken, guinea-fowl, and goose, have skulls which are so hard that it is not easy to open them with the scalpel, but we can use a saw with very fine teeth. The dura-mater is very thin in birds, and hence very soon dries up, but is perceived by the light folds or creases it forms upon the brain when the skull-cap is removed.

By moistening this membrane with a little water, it can be removed without affecting the brain.

There are certain parts of the brain of quadrupeds, and especially of birds, which can not be seen well only after a long maceration in alcohol—the mixture for the purpose being then in the proportion one-third of the spirit to two-thirds water. The main object is by this means to remove the blood contained in the cerebral

vessels. After three or four hours' continuance in this mixture the brain is to be plunged into a jar well corked, and containing only pure alcohol. The exterior form of the hemispheres may alter a little, but certain parts become of a consistence which renders them easy to study. Some



Fig. 229.—HEAD OF MULLET OPENED TO SHOW BRAIN.

anatomists use dilute acid, nitric, carbolic, etc., in the preparation of nervous substance for study, but as a general thing alcohol is sufficient. Whatever may be the means employed, a perfect knowledge of the structure of any part of the nervous system, especially the cerebral, will not be obtained by any one without repeated examinations of the same parts.

* In summer, however, the mixture should be stronger, two-thirds alcohol, and care should be taken that the jar or vessel in which the brain is placed be well closed, otherwise it may become swollen and change its shape completely. A brain will absorb a large quantity of alcohol, so care should be had to keeping it covered.

SKULLS, BRAINS, AND SOULS.

(BY THOMAS DWIGHT, M.D., IN THE INTERNATIONAL REVIEW, MAY, 1880.)

REVIEWED BY A PHRENOLOGIST.

SOMETIMES it matters not what we name an article, provided the name give some hint of our subject; still it is always well to have the title of an article convey the most that a few words can in regard to the subject we propose to write upon.

As this article proposes to be a reply to that which appeared in the May Number, 1880, of the *International Review*, it

is simply entitled as above; otherwise it might have had some other title. The points of the author of the original piece will be taken up in order—at least as nearly so as the reply will warrant.

His opening sentence is as follows: "After the collection of childish theories, known as Phrenology, had passed through refutation and ridicule into forgetfulness, the idea remained that some-

thing of a person's character and mental power can be inferred from the shape of the head. The head was thought significant, however, only as an index of the size and shape of the brain."

Here in a few lines is a condemnation of a subject—(I was about to say a *science* and philosophy, for that is what I regard it; but at present will simply refer to it as a *subject*)—a condemnation and a lurking compliment in one sentence.

Many a wise head has attempted to demolish Phrenology, and even thought it among the worthless things of life, yet the latent wisdom of the wisest of them has to admit that there still remains the thought, "that something of a person's character and mental power can be inferred from the shape of the head."

As to Phrenology being a "collection of childish theories," for one I am glad that the public print is putting year by year the simple record, *pro* and *con*, on file,—that the future may have ample means to judge from,—of those who venerate these theories and regard them as the highest of mental knowledge—the means whereby we know the most it is possible for man to know of himself; and the views of the many wise men who regard these views as childish.

"The head," our above-named critic continues, "was thought insignificant, however, only as an index of the size and shape of the brain." In this *power* is omitted. If "size and shape" are all that is worth considering, they don't amount to much. The phrenologist regards "size and shape" only so far as they indicate something. Our opponents deny, at least seem to deny, that they amount to anything in the human head. They are very willing to admit that "size and shape" in other things have scientific and practical bearings; but when it comes to the masterpiece of the Creator—the human head—the "size and shape" are of no importance, excepting perhaps in an artistic or ethnological point of view.

There is enough for an article just in these words, but I will pass on to his

next point: "One of the most evident absurdities of Phrenology was the placing of bumps in regions utterly uninfluenced by the growth of the brain." To those not acquainted with the teachings of this science, this remark would seem to convey the idea that phrenologists were the most arbitrary people in the world, and of all people had the least respect for nature. To such as will heed the response, and who are inclined to hear both sides, I would respectfully state that these "bumps," which so disturb the wise men, are not the work of man any more than geological strata are the work of man. Those "bumps," or properly, convolutions, were placed there by the same hand that caused the formation of the different epochs of the world.

A wise man by the name of Gall made the human head a special study, after the same manner that other wise men have made studies of other departments of nature; then other wise men followed him. Everything must have a name, that we may identify it. So, as this science advanced, names must be given to the different organs as they were discovered and located. This naming was not done in a day. There was nothing arbitrary or unnatural about it. The whole aim and object of these philosophers was to give natural names to natural things, and in this they have most happily succeeded; and I will challenge the nomenclature of any other science to surpass that which they have advanced. They started on a natural basis, and advanced cautiously and with the greatest wisdom from point to point. To strangers of the system, the names given to these various organs, and the location of the organs themselves, may at first seem queer; but in order to appreciate them, they must not commence at the end; but let them make a study of man's nature, and step by step advance, following up the different organs from the starting-point, and they will see the wisdom in the names of the different properties common to all men. The "bumps" are there; the phrenologist only gives them a name; and practi-

cal tests over and over again confirm the location and admirable nomenclature of these developments.

The writer says: "Recent students of the head have, for the most part, been careful to measure the skull in such a way as to obtain some idea of the size of the brain within." This, if it infers anything, carries the idea that the phrenologists, from Gall to the present day, have not made careful measurements of the skull. If they have not, then no set of men who ever lived have done this; for herein is where they base their doctrine. Yet it seems queer to see so intelligent a man tell the people such a thing at this day. The phrenologist would have been very weak and foolish not to have done so—to have made the most complete measurements possible. Others have measured and studied the skull, but only the phrenologist has seen philosophy in the skull. The size and shape of the skull, together with the minor details of thickness, texture, etc., were not overlooked by him. He has studied it, measured it, and weighed it, more completely and carefully, and with more satisfaction, and got more out of it than any other set of men who ever made it a study, and history will testify to this. So it seems the height of absurdity to imply that he has not, or to state or to imply that "at present" others are doing it better and more scientifically than he. One thing I will venture here, and that is, the more they study the skull the more and more they will advance unto the same ideas as held by the phrenologist. Dr. Dwight thinks, "If its walls [the skull's] were transparent, we shall be brought face to face with the real question." For one, I do not see wherein he would gain anything by such an arrangement. He could only see the brain, but to see what the brain was doing would require some higher power than we at present are endowed with. A transparent skull would advance the subject but very little.

"The head has been studied because it was thought to be an index of the brain; now, is the brain the index of the soul?"

he inquires. Yes, I will say, if there is any such thing as a *soul*, the brain is certainly an index of it. The finer the brain, the finer the shape of the head and the finer the soul (I use the word *fine* in its general sense); and this is the very reason why we should improve the brain, for thereby we improve the soul; and any system of education that neglects this is most unwise and unworthy of the name of education.

But Dr. Dwight may ask, How are we to determine the highest types? On the same basis as we determine the best horse or the best article—the best of anything.

He says: "Anatomically, the brain is simply a mass of nervous tissue, situated in the skull, and continued down the spine as the spinal cord." This seems a queer statement for a doctor to make. Why did he not continue the ramification of the nerves to the very fingers' ends? for surely these minor nerves are as much a part of the brain as the spinal column. The brain is the head-center of the nervous system, and nature has wisely located it in the head of man. The spinal column is not a continuation of the brain, as this would imply, but simply an adjunct of it; and it is not so much a part of the brain as the nerves are a part of the spinal column. Surely the smallest nerve of the little finger is a part of the nervous system of which the brain is the head, yet at the same time the brain is a part and a superior part by itself, and it is *the part* that gives individuality to the whole man; the rest, the spinal column and the nerves, may be alike and are quite alike in all grades and classes of animals having the spinal column. And in many animals, and indeed most animals of the higher grades, the general type of the nerve-center, called the brain, may be and is very similar as to kind, but different in other respects. Mentally, the sole difference between man and the lower animals is in the general development of that which lies within the skull. The lower grades of animals commence with one form and size, and as the creat-

ure advances in the scale, there are certain changes of development until we reach the highest type of man.

"The weight of the brain," this author says, "depends largely on the development of the upper part, the hemisphere, the great development of which is essentially a human characteristic." But he tells us no more about the weight, and it does not seem to occur to him that weight of brain by itself is not of much account in the grade of mental ability. Weight depends more on coarseness, coarseness as to fiber and shape, than on fineness. It is not the heaviest brain that is always associated with the finest mental qualities.*

The phrenologist's pet saying—"other things being equal"—applies to weight as well as to size and other things. Then this author tells us that "there is some reason to believe that the anterior lobes are the most intimately connected with intelligence." Well, we phrenologists have *known* this fact now for a great many years, and we are very glad to find that intelligent men outside, in the medical profession, are beginning to have these truths dawn upon them. They are on a good track, and we hope they won't stop here; if they keep on at this rate, in the course of another hundred years they will have arrived at the point where the phrenologist is at present.

Mr. Dwight comments upon a statement by Mr. Andrew J. Parker, as follows: "We must affirm that a brain thinks, because of the nature and position of its molecules." This Mr. Dwight ridicules, yet he has nothing to offer as a substitute. I have not seen the whole of Mr. Parker's article, so can not form a fair judgment upon it. Still, it would seem that the proper statement to make on this point would be that the brain was constructed for a purpose, just as the heart or any other member is. Perhaps the same object might have been accomplished by a different position of the

molecules; but the molecules sustaining their organized position produce a certain result, so therefore, in one sense, it is well and proper for us to say that "a brain thinks because of the nature and position of its molecules," just as we may say that a heart causes the circulation by its peculiar construction of muscles and valves. It can not be denied that the brain does think, nor that there exists as a part of it these molecules in peculiar position.

"I know no theory has ever been advanced according to which it is even possible for matter to think." It may be forever beyond our power to prove that matter thinks, but this we do know—this *first-cause* we can advance unto—we do know that within this organ which we term "brain," and which is formed of matter, *thought is produced*. We know not the process, but within the cells of this beautiful instrument or organ the connection between the world of matter and the world of thought is made. Herein is the subtle yet powerful link between matter and spirit.

So, with all due respect, we do not think that Dr. Dwight has made much of a point against Mr. Parker—if anything, Mr. Parker has shown more knowledge of the subject than he.

The size of brain in different individuals seems to trouble Mr. Dwight and the class he represents a great deal. "All brains dwindle" with age, and from this it would seem to him that mental properties ought to dwindle. In the first place, the general health has somewhat to do with the shrinkage of the brain. In the next place, it should be borne in mind that the human brain is an ever-growing and accumulative force, when rightly used, growing finer and finer, at least until touched with decay, and what it may lose in mere weight it more than gains by application. This, it would seem, was a fact too strong to need proof; yet if proof is called for, I think that it may be seen in every-day life. And here is another point these men seem to overlook, and that is, this point of gain in the

* The late Mr. Thackeray was an exception to this ordinary rule—his brain weighing fifty ounces (Troy), an enormous weight.

orain through application; and this teaches the plain fact of the apparent superiority of inferiority—under certain conditions—and calls especial attention to the phrase that is so often on the lips of the phrenologist—"other things being equal."

"Other things being equal, size is the indication of power"; but in all departments of nature, from the most inferior organization to the brain of man, we see that through culture and training, association, and application, oftentimes the seemingly inferior, so far as external appearances are concerned, is absolutely the superior. Yet so common as this truth is, the opponents of Phrenology persist in not seeing it, at least when it comes to the human brain. They think it something very bright and unanswerable for them to show that persons with small heads sometimes have more mental ability than persons with large heads. They seem to have entirely overlooked the cause, or perhaps not yet discovered it; still, this is one of the first things that the phrenologist learns. All nature teaches it to him. It is before our eyes every moment. Phrenologists not only see it, but they are all the while calling attention to it. Yet these men think the phrenologist blind. Well, nothing pleases the phrenologist more than such articles as this, which appeared in the May Number of 1880, of the *International Review*, for it puts their opponents as well as themselves on record. Such writings by such representative men will be well to refer to a hundred years hence; they will prove just where they, and even we, stood on this subject in 1880.

After commenting upon size, Dr. Dwight asks, "How shall we compare the intellectual merit of Cuvier and 'Jim Fisk'?" Then he tells that the late James Fisk, Jr., had a brain weighing fifty-eight ounces, surpassing Daniel Webster and other great men; and of able men who had small brains. When Dr. Dwight has said this much, he seems to think he has said all, at least he goes no further; and if he could go further,

self-defense, it would seem, would have prompted him to do so; but he does not. Such a statement from such authority at this age of the world is by the phrenologist regarded with more pity than contempt.

Words are often clumsy things to convey ideas. A rude cut or diagram will sometimes convey more than pages of print. Place before a phrenologist good pictures of two such men as James Fisk, Jr., and Daniel Webster, and his mind will in an instant read the two men. Then add to this a little information as to the culture of these men; that is, give information as to the advantages of culture and association. For it may happen that the Daniel Webster may be so situated in life as to have had few advantages of society, while the naturally rude man may have had for his associates from youth the ablest men in the land. This practical knowledge of men the phrenologist demands, for it is not always prominent as to degree in portraits; still, a good portrait will convey considerable information as to the culture of the individual. With this knowledge of the person, the phrenologist will readily see and explain the difference between two such men as James Fisk, Jr., and Daniel Webster, and give the points in the respective men's characters. The mere weight of brain is to the phrenologist of no account. The distribution and balance of brain, and the culture indicated in the features which the two brains have formed, is his book whereby to read these men.*

"Which is the greater?" First, what is understood by *great*? Some men are great in one department—some in another. Then great faculties do not always make what the world calls "great men," and the world's "great men" are oftentimes very small men.

The phrenologist deals as it were with

* Webster died at seventy years, but his brain, when examined, was of such proportions, that the physician who examined it estimated it to have weighed over sixty ounces in full health and maturity. Fisk was about forty at his death, and in splendid health.—ED. P. J.

the raw material; he tells what each is capable of, just as a good sailor knows what two ships are capable of; but although he may know this, neither he nor any human being can tell what disadvantages of rig, associations of winds and currents the ship or man may have to contend with. Many a "great" character is spoiled by some little weakness; for example, avarice, excess of appetite, or even want of appetite. The word "great," as applied to the human mind, is a very non-committal and indifferent term. All the "great" minds have not made great records, and often a very ordinary mind has been so placed as to be seen in a very favorable light, and obtained the distinction "great." It is not the office of the phrenologist to make attempts at prophecy as to individuals. His office is to analyze the individual mind and to pass judgment on what he is able to see under the most favorable light that may be thrown upon the subject. Through Phrenology we are the better able to describe people, and to discover their points of character, and it is the best medium whereby we may understand man, and, in fact, the only medium whereby man may know himself.

The author having touched upon the *skull* and the *brain*, now passes to the *soul*. "If the soul exists, science demands its recognition." Some, he says, deny its existence, others admit such a thing, but are not inclined to confess it, and so leave it generally to the clergy.

As to this existence of a soul, the phrenologist, as such, does not pretend to know any more about it than any one else. Men, without regard to their professions, require different degrees of proof as to certain things in nature. Then in all the departments of nature, as well as at the Head of Nature herself, there are many "first causes": the "Great First Cause" of all, and a "first cause" presiding over each department.

Every department of science sooner or later leads up to this Great Unknown. We have the brain, the controlling element in the body. We can trace it up as

to its size, shape, weight, texture, formation, etc., but after a while we come to the question, What produces *thought*—is there a subtile element beyond and behind all this matter which our earthly powers will not permit us to see?

Thought we can no more understand than *Life*; and *Life* we know has been one of the problems of the ages, and that we are still in the dark in regard to it; and further, with no light by which to fathom it. We see the living body; it has an existence visible to us, yet after a while there comes what we term "death." What a change! The visible body is still there, but all that gave value to that body, beyond that which is merely material, has departed. As it lies there by itself, it is comparatively a worthless thing; with what we term "Life" in it, its value is beyond price. The value was in what was invisible to us, rather than in what was visible. In *Life*, as in *thought*, we are led up to the Great Unknown; and every time we are led up to this Great Unknown we realize that the invisible must have an existence. It seems a self-evident fact that it has existence; and what has existence must exist, even though we are unable to perceive it in its invisible form. We, as visible beings to the flesh, are only able to perceive that which is material.

All or most all admit that there is a power behind the invisible too subtile and too great for our weak faculties to perceive. This power has received various names, such as "Soul," "Spirit," "Divine Essence," etc. Each man, as he has invented a term for it, thinks he thereby sees deeper into the recesses of nature than his fellow-man, who was satisfied with what to him seems a lower and more earthly term. But after all, can one man say that he *knows* more of the practical workings of this subtile instrument, the brain, or of life, than another? Does he know more of the power behind the throne than his neighbor, who is his peer in wisdom? At the end do not the wisest of us have to admit that there are certain bounds beyond which we can not pass?

With all this, the great majority of men claim that man has a soul, for all nature teaches that there is something beyond what the visible eye sees. All sensible men know that we *think*, and they know that this thinking is a mechanical process, so much so that by training and education we are taught how to develop thought. Yet no one ever saw the *process* of the *thought*. A thought may be to a certain extent visible, after being developed practically before the world; but a thought may be retained within the skull of man indefinitely, and have an invisible existence, and even accomplish much harm or good. It would seem that all sensible men should admit that there is *something* beyond us, call it what we will, "Soul," "Spirit," "Divine Essence," or by whatever name we will. There seems to be little, very little, sense in quarrelling with the world as to a mere name. The *property is there*, despite the name or the character of the name. How shall we best understand and search after this character? Only one study, one science of the many known to man, can enlighten us, and that is the science of Phrenology. This is the only science that leads man up to his Soul, and the best science yet known to man that makes man familiar with his soul and with life, and teaches him the best way to advance the condition of that soul in life.

By advancing the character of the *visible*, we advance the character of the *invisible*, at least all the sense in man, it would seem, would go to prove this, and I think that the contrary proposition would be more than any able and honest man would want to attempt to prove.

It would appear that belief in the soul, and in the immortality of the soul, would prompt men to do all that it is possible in this life to advance their own souls and the souls of their fellow-men; but it is too often the case that those men who pretend to care the most for the condition of souls hereafter, do all in their power in this life (unwittingly, perhaps, yet effectually) to prevent these souls from making that advancement in this life

that they would be capable of under the laws of nature, if unhindered by the shortsightedness of man. For a man to teach the immortality of the soul, and then neglect the advancement of the rudest and most humble soul here, seems one of the most preposterous things.

Dr. Dwight says: "If the soul exists, science demands its recognition." After this, this writer might add that if *electricity* exists, science demands its recognition; so with *Life* and many of the principles of life; and so on through all departments of nature up to nature's God. For one I think that science does not *demand* any such thing, and I think that I would go as far in science as any other human being. What science demands, is to know all that is possible for the mind of man to acquire. What we term "First Causes" are beyond our reach, and we can see no way whereby to penetrate the veil and see beyond, at least in this life. When we advance to a higher sphere, to what may be termed a *spiritual existence*, then our faculties may be permitted to see and be familiar with *souls*—the subtle power of *electricity*, the *secret of life*, etc.

This brings us face to face with the idea of immortality—or a future life. Scientifically we know nothing of this, and it is one thing about which the world has made no advancement in thousands of years. Knowledge is far more diffused than during the early ages, but the wise men of early ages made certain advancements which all these years would seem to go to prove, and effectually prove, that we can not go beyond the veil so long as we are in the flesh; and the accumulative knowledge of the ages would seem to prove that the better we utilize our opportunities here in the present, the better we shall be prepared for the duties of a higher existence in the future.

But will we surely have a higher existence? That is the great question of all ages. We can never really *know* anything until we find it out ourselves. This is a plain law in regard to things of this life. Even in this life we can not stand

in the present and *know* anything of the future. From the study of laws we may oftentimes venture a guess; but *certainly*, unless we have, in part at least, advanced unto the future, is impossible. But when we advance and as it were acquire the future—come up to it; leave it behind us—then we *know* it. If this be the common law of life, how much more so must this be true in regard to what is of another condition of existence. No true science demands the knowledge of the future until it is acquired, or come up to, any more than it would demand the characteristics of a country until that country was discovered.

True science is ever satisfied to plod on, and is always on the alert to discover all the laws of nature that it is possible for man to know; still, it never demands that which from the very nature of the case is, in the present, impossible. Shall we have a future existence? When it comes to absolute scientific knowledge, one knows no more about it, and knows as much about it, as another. Still, from peculiar organization and advantages, some may be better able to venture a reasonable probability than others, yet the wisest of us must admit that we "see through a glass darkly."

Withal, it seems scientifically more reasonable to believe that there will be a

future and higher existence beyond this life than is realized here. It seems very unreasonable to believe that we were created with such a combination of low and high qualities simply for a temporary, brief existence. We, as mere men, would not do such a thing, and it seems beneath the properties of a God to indulge in or for a moment to harbor such an idea. I know that there are some few morbid and non-hopeful minds that can not see the interpretations of nature in this light; but I think the great majority of the wise men of all ages have held to this idea, though not all for the same reasons. We are so constituted as to be able only to know the past and the present. We are ever linking the future to the present and past—acquiring it; making it our own. The wisdom of the Creator must be greater than that of the creature—the wisdom that made us must be superior to our wisdom. We see about us every day evidence of this wisdom. If this wisdom is able—and we know it is able—to accomplish what we see, surely it ought to be able to accomplish immortality for man; indeed, it would seem beneath Him not to do it, and simply a part of his plan to accomplish it—to advance matter and mind ever on and on to a higher and still higher estate.

Washington, D. C.

ISAAC P. NOYES.

ORGANIZATION AND CRIME.

THOSE who have been favored with fortunate hereditary organizations and tendencies, must not forget that the great mass of the human race stands near the line where animal impulses dominate intellect and moral will, and that education alone—in the highest sense of the term—will determine whether they shall be most animals or angels, and also (an affair of much deeper importance) which kind they will transmit as posterity.

To prove that an habitual inclination to crime is the outcome of anatomical deformity, or of pathogenesis, would by no means imply an irresponsibility for

criminals; it would only make clear the nature of the physical perversion, and afford the only direct method by which the extent of the responsibility could be approximately estimated. It would put us on the road to ascertain how far and by what means regeneration could be effected, and how the responsibility could be augmented by an intelligent and persistent treatment or education of the moral will.

Instead of licensing crime because it resulted from disease, science would urge and devise much more vigorous measures to protect society, and to protect it by

such ways as would also protect and humanize criminals. Prisons, which brand the beings they confine with social annihilation, and which utterly crush all self-respect—without which last all men are brutes—would for a moment stand forth in all their hideous reality, and then pass into history as the well-intentioned but crude and misdirected device of a primitive age, to command law and order; a savage relic that forever disappeared before the holy light and warmth of Humanity as it came into the world hand in hand with Science. Criminals, instead of being subjected to a vindictive retaliation, and returned to the world more dan-

gerous beings than ever, would be cared for, educated, and, if necessary, kept for life under the eye of protectors; instead of being outcasts, their self-respect would be continually appealed to and strengthened. . . . In a rightly-conducted state of affairs, with every able-bodied person whom the State found necessary to put under official restraint and treatment, an important part of the treatment would be regular, productive occupation, the income from which would be ample not only to defray State expenses, but to give also a surplus to be employed in some way to the advantage of the person.

E. P. FOWLER, M.D.

LOUISA MAY ALCOTT.

ONE of the best known men in this country, and especially in circles of culture and mental refinement, is A. Bronson Alcott, the father of the lady whose name gives title to this sketch. Born in humble circumstances, but of good New England stock, he commenced life for himself while in his teens, taught school first in the South, then in the North, became a writer on educational and philosophical topics, and won reputation through his originality and sincerity of opinion and the reformatory tendency of his views.

The reputation of her father certainly assisted Miss Alcott in her effort to obtain the notice of the public; but as soon as the public found that her books possessed qualities deserving consideration, she became popular on her own merits as an author, and may now be entitled one of the three or four most successful writers of juvenile story books in America.

Louisa May Alcott was the second born of four daughters. The captivating book, "Little Women," was based in good part upon incidents which occurred in the home-life of these four girls. Indeed, its naturalness and vivacity soon won a popularity almost unequaled by any juvenile book. This venture made her fame and fortune as a writer, although

one publisher to whom it was offered returned it with the counsel that she had better stick to her school-teaching and give up authorship as a most uncertain line of industry.

Miss Alcott commenced writing for the press twenty-five or more years ago, being influenced, probably, by her father's example, if not by the very prevalent mania among ambitious young ladies for writing something for the magazines.

She ventured one day to step into the editorial office of the Boston *Saturday Evening Gazette* with a small package containing her first manuscript story. The editor read it, accepted and published it, and thus the author received her first literary compensation.

Such, in fine, was the beginning of a career whose end may not be, we hope, for many years to come. She continued to write essays, sketches, and stories, which have been received and published by various weeklies and monthlies of the day.

Her first book, "Hospital Sketches," appeared first as a serial in the Boston *Commonwealth*. It was a record of her personal experience in the hospitals at Georgetown, and its tender descriptions won many friends.

After "Little Women" appeared the

"Old-Fashioned Girl" and then "Little Men," which pleased the community almost as much as "Little Women." These two books, regarded as companions, have been translated into German and French, and found a very respectable circulation abroad. "Work," also, has been popular and profitable. "Eight Cousins," a later book, is, in some respects, we think, the best which has come from her pen.

bad, wise and unwise—in fine, just what children are and will be. And then her incidents illustrate homely simplicity, genuine affection, self-sacrifice, and the graces of Christian charity, so that their influence, without being at all of the preachy kind, is healthful to mind and heart.

Her latest story is founded on the old nursery rhyme of "Jack and Gill," and was published in *St. Nicholas*. The plot,



LOUISA MAY ALCOTT.

According to a New York writer, she has received upward of sixty-five or seventy thousand dollars for her publications, being one of the very small minority among the multitude of workers with the pen in this country who has achieved a really brilliant financial success. One reason for this success appears conspicuously in her stories. They are natural, simple portraiture of youthful life; her boys and girls are the boys and girls of our play-ground, our school, our home; they are good and

briefly stated, is, a little boy and girl, while "coasting," break their respective arm and back, and are laid up for something like a year. The manifold ways in which they and their friends contrived to occupy this enforced confinement so as to make it one of the happiest, busiest and most profitable periods of their life are charmingly related by Miss Alcott in her best veins of invention.

Miss Alcott's portrait shows her to be a woman of unusual force. The profile is strong and distinct in its markings.

Nose, mouth, and chin have characteristics of energy, purpose, and resolution. She is tall and spare in frame—the Motive temperament of her father being impressed upon the bodily contours, and conspicuously influencing her mental organism. She is more powerful in thought, more earnest and thorough-going as a worker, than she is delicate and symmetrical. Her convictions are deep and controlling, giving her character for independence. Her intellectual faculties are generally active, and being strong and well disciplined, she has a much broader comprehension of the matters relating to life than the average. Few persons, whether men or women, are more steadfast in opinion than she.

Firmness contributes emphasis and positiveness to her conduct, supporting the impressions or conclusions obtained through the intellect.

As a member of society, judging from the portrait, she is not known for an easy disposition to conform to fashion and custom, but rather for originality of view and practicality of motive. She believes in being true to one's impressions of truth and duty; admires spirit and zeal in those who have work to perform for themselves or the world; warmly appreciates kindness, charity, and sympathy for those who deserve it. As for formalism in Church, State, or social life she has comparatively little time or regard to give in that direction.

"TIRED, WEAK, AND DISCOURAGED."

So tired—so tired. Poor heart! take rest, take rest;

And drop the weary burdens down that fret and strain you;

Shall God who bears the worlds upon His breast,

Fall, in your hour of need, oh, doubter, to sustain you?

Take rest! Take rest!

So weak, poor heart, so weak! But One is strong

And able all the thrusts of Evil powers to parry,

To fix the balance between right and wrong,
And lift the heavy crosses that you can not carry—

In God be strong!

Discouraged—oh, poor heart—take cheer! take cheer!

Let the full eye of hope these dismal shadows banish;

Go forward and the tangled way will clear,
The terrors that you tremble at will turn and vanish—

Take cheer! Take cheer!

A. E. M.

THE PURITAN CHILD.

BEING AN AUTOBIOGRAPHY—THE LOVE HOME.

IN a little cottage set like a pearl in emerald, lived a young man and woman who were truly husband and wife. Neither were twenty-three, and both were eminently handsome as were the Puritans in general. They were of a generous make: he six feet "in his stockings," and she something less, erect, and of commanding carriage, for dignity of manner was essential in these early days. He was of the choicest Pilgrim stock, while she traced her pedigree to the Huguenots

exiled from France in Queen Elizabeth's time.

The home had four rooms on the ground floor—a garden in front—the gable of the house fronting the county road. In the garden grew lilies and roses; tall holyhocks, london-pride, mallows, and love-lies-bleeding, with a wilderness of pansies, known as the "lady's delight." On two sides of the cottage was a grove of aromatic pines, somewhat somber perhaps, and full of suppressed

whisperings, but loudly resonant when the elements were high. Here were found the trailing arbutus, which the Pilgrim dames tenderly named the Mayflower, and the berries of the winter-green, like rubies, and Indian pipe, like a pearl blossom.

No neighbor lived nearer than a mile, hence the young wife with her single servant, more companion than servant, was much alone during the absence of her husband, who, as a matter of course, had already risen to the dignity of captain of a vessel in which he was part owner, called the *Ranger*.

It was a sequestered, Arcadian spot, removed from ordinary ambitions, but replete with domestic tenderness, and that pervading comfort which is found among all old families, for the Puritans were "good providers." Books were not wanting of a religious and polemical character, relieved by history, biography, and the journals of the day.

Here three daughters were born to the young pair, of which I was the second. When I was nearly forty years old, I took occasion to visit this pretty cottage in company with my lovely son, Sidney. As a coincidence I here found a bright young mother living quite alone, and three little girls; as in my mother's day. The mother was pleased with the notice I took of her children, and remarked:

"My house has an interest of itself; you must know that a poet was born here in this very room."

I was pleased at this and gave her my card, at which she grasped my hand warmly, saying:

"I must know just how you look," and she studied my face with pleasant scrutiny.

In this oasis of verdure and heavenly peace I was born August 12th. I was called a fine large baby, which is not an unusual thing, of course; and soon grew to be fair of complexion, with golden hair inclining to curl.

Of my father I have but indistinct recollection, I being little more than two years old when he perished at sea. Still,

as an evidence of early impressions, when I was two years of age I remember distinctly sitting on my father's knee, he in a high-backed arm-chair, and my sister on his other knee. My father had a fine tenor voice, and he sang to us, touching his chin now upon one child's brow and now upon the other's, at which we both giggled as children will.

Somewhere about this time there was through the country a great revival of religion, and both of my parents became what is called converted. This was natural among a people always thoughtful, and who had been trained under the fearful teachings of Jonathan Edwards. My mother used to dwell upon the prevalent state of feeling at that time with great solemnity. My father being an earnest man, suffered for many weeks, from that morbid sense of ill-desert, which characterized what was called conviction; but at length taking down the Bible he said: "Although the fig-tree shall not blossom, neither shall fruit be in the vines: the labor of the olive shall fail, and the fields shall yield no fruit, and the flock shall be cut off from the fold, and there shall be no herd in the stall, yet I will rejoice in the Lord, I will joy in the God of my salvation."

Taking the hand of my mother they knelt down, and my father poured out his soul in prayer with a divine rapture.

I belong to a long-lived stock, and one untainted by disease of any kind, mental or bodily. My paternal grandfather lived to be ninety-seven—as his father was eighty-nine at the period of his death, and was born just a hundred years after the landing of the Pilgrims, and his father lived to be ninety-nine, my great-grandfather might have talked with the *Mayflower* people.

My maternal grandfather never had a day's illness till he was struck down with fever and died at eighty-seven. What was quite remarkable was the fact that he cut a third set of teeth when about seventy years old, which were white and sound at the time of his death.

I was born at half-past nine on the eve-

ning of the 12th of August, and I have amused myself by casting my horoscope, which has proved strangely coincident. Those old astrologers were wonderful for the religious awe with which they strove to penetrate the secrets of nature, and study out the laws of life, and causes of its many mutations. They certainly anticipated many of the results of modern science.

My mother says I was observant beyond other babies—was very gentle in temper, rarely crying. As she was of a bright, cheerful make, diffusing sunshine around her, I apprehend a cross child would have been summarily cured of the infirmity. She was a fine conversationist, often eloquent, her fine eyes lighting with animation. She sometimes vividly described the great eclipse of the sun which occurred on the 16th of June before I was born, in the following August. She preserved the following among her papers, as a record of a deeply impressive event :

"At the point of greatest obscurity, the air was so chill as to make an overcoat desirable. A short time before this, the darkness in the west assumed the appearance of an approaching thunderstorm. A luminous ring surrounded the moon after the sun was totally hid. Such was the darkness that the time could not be determined by a watch. The number of stars visible was greater than at the full moon."

An account of the scene in Boston thus describes it : "The morning was ushered in with the usual hum of business, which gradually subsided as the darkness advanced. An uninterrupted silence succeeded. A fresh breeze which had prevailed, now ceased, and all was calm. The birds retired to rest : the rolling chariot and the rumbling car were no more heard. The axe and the hammer were suspended. Returning light reanimated the face of things. We seemed as in the dawn of creation, when '*God said, Let there be light, and there was light!*' and an involuntary cheer of gratulation burst from the assembled spectators." — *Monthly Anthology*, 1806.

I think I have a leaning to the occult. Life on the surface is apt to be so commonplace and prosaic, that I am fond of detecting beautiful tendencies, and intimations, and meanings in the phenomena of nature which an observant religious mind may detect.

LEARNING TO READ.

I can not remember the time when I could not read. I had a sister two years older than myself, who was sent to a school in the neighborhood, where she was treated with great tenderness and regarded as quite a phenomenon. I missed her so much at home, that an arrangement was made for me at two years to go with her. The good teacher often let me sleep upon her bosom, and laid me on her bed for my daily nap.

When my sister stood up for her lesson, I used to stand beside her, and listen with amazed interest to the mystery of A, B, C, and the subtilties of a-b, ab. I never opened my mouth to pronounce a word, but with my two little hands tucked under my arm-pits, stood a marvel of quietude, intent and solemn eyes fixed upon the book till the lesson was done. No one supposed I was learning anything ; but one day when my mother was rather exulting over the proficiency of my sister, I quite astonished the family by saying :

"I can do that, too."

"You ? let us see," and all laughed.

I took the book and read with perfect ease. At first it was thought mere imitation, but on further trial it was found I could read as well as my sister. I do not think this altogether pleased my mother, who had a natural love and pride in her first-born, and did not like to see her eclipsed. I remember I saw this, and had a feeling of shame as if I had surreptitiously obtained book-knowledge. As at that time I acquired without labor, I saw there was little merit in what I obtained.

In the meanwhile my father died, and my mother married again, and we two children had new, and to us some unge-

nial, experiences. We went to a country school at Cape Elizabeth, where the family moved. I well recollect the amusement with which the big boys and girls listened to my reading—I, less than six years old, out of the same books that they lumbered through. The teacher would stand me in the center of the room, so that my small voice might be heard. I had a lisp at that time, which greatly mortified me, but which made me a pet with the big scholars. They would try to tempt me to repeat some choice paragraph abounding with the obnoxious *s*, by all sorts of choice things, but as I was not easily flattered, and never covetous, and felt my lisp a great defect, they could not prevail upon me to exhibit it, except upon dire necessity. I was not to be cajoled out of my little proprieties.

At this time I could repeat innumerable chapters from the Bible, and all the poetry I could find. All the catechisms also, which gave rise to much mental questioning, and some very strong protests even at this early age. I had learned whole dictionaries, to say nothing of geography and grammar, of which I was very fond, and thought I understood.

I pondered over "Foxe's Book of Martyrs" with a shuddering interest. It began early to shape my character, and combine itself with those growing ideas of steadfastness to truth and duty, which were early a part of my mental furnishing. I read Bunyan's "Pilgrim's Progress" again and again with delight, and expounded its meaning to my little mates with great earnestness.

MYSELF.

This writing about myself I find very pleasant; not that I am pleased with myself, far from it; Puritan children never are. As a child, I was truth-loving and stout-hearted, despite of delicate nerves and acute sensibilities. I never quarreled nor did mean things, and was rather apt to despise those who were guilty of them. I was a tremendous moralist, watching my own doings with severe scrutiny; ob-

servant of the shortcomings of those about me, but more in sorrow than in anger, for very early I learned that the love I applied would not do for all. I like to talk about myself, for though conscious of many infirmities, I am in the main of a wholesome make. We do not talk so much of the entire, acknowledged beautiful as we do of that which deviates from the ordinary track. In Central America is a plant which unfolds the perfect image of a dove, the divine Paraclete; this is something to think about, more than the praise we award to rose or lily.

I have in my cabinet a large fly from Brazil, known as the Lantern fly, because it carries upon its head a pouch which emits a beautiful bluish flame. It is bright enough to illuminate a large space with a steady, not flickering, light. We talk of this creature when we should not waste a word upon the common house-fly. So it is with me, I like to talk about myself, not that I am anyway wonderful, but having a way of my own, and none the worse for having it, I conceive a record may not be amiss.

From the age of five to ten, I may call the blossoming time of my life; no after-period ever having developed me so rapidly. I was no precocious Miranda nor Crichton nor Montaigne talking Latin and dealing with the learned; but I recall, even now, with pain, my eager quest for knowledge and the insufficiency of supply. My perpetual questioning, and yet no child ever had a fuller life or more replete with childish delights. I coursed down hill and snow-balled in the winter. I had a numerous family of dolls, and a full paraphernalia for childish house-keeping. I sang and danced, I read and declaimed, and prayed, and instructed my little mates with a zeal that never tired. I could not conceive that any one should ever demur at doing what seemed the needful thing to be done. I would feel my blood rush to my face and choke in my throat as I knelt to pray or read to strangers; yet I never once shrank from what was before me, while at the same

time, when my mother wished to make a display of my proficiency in elocution or knowledge, I was silent. This was bad in me, but somehow I found it impossible to please her in this way. I lived two lives in one: that of the mere common child, and that of the spiritualistic, knowledge-seeking, earnest, conscientious young creature awed by the mystery of life, and concealing, as far as possible, this life from all others, for I was sensitive to ridicule, and often had things said to me that wounded my self-love.

My mother was a little proud or vain of her two children by the first marriage, and seeing me, I suppose, with a weird, abstract face, sometimes would say to me: "Now don't be wool-gathering, Elizabeth. Keep your thoughts upon what is about you. Pay attention. You really look as if you were not bright, sometimes."

She did not say this unkindly, but it gave rise to a painful misgiving on my part, and I used to reply: "Ma, I do not think I am bright."

At which she would give a quick laugh and say, "Nonsense!" but never indorsed my mental capacity. I used, hence, to compare my mental status with that of other school-children, which led me to conclude they were even worse off in this respect than I was. The religious biographies, also of pious children, which I read with contempt at what seemed mere silliness, helped to reinstate my self-respect.

THE DICTIONARY.

I am not writing this as any remarkable record, but because I think many

children who suffer as I did, are little understood, and repulsed when a more cordial recognition of childhood would greatly enhance its brief period of felicity.

My search after meanings made a dictionary in constant requisition. I read everything I could lay my little hands on; and when there was nothing to be had, studied dictionaries. I used to write words upon slips of paper or in the palms of my hand, to be looked out and the meaning found. I remember when scarcely six years old I was reading the records upon the stones in the cemetery at Cape Elizabeth, where we then lived, when I came to one intended to commemorate the departure to another world "of Mahitable Higginbottom, *relict* of Deacon Higginbottom."

"What does *relict* mean?" I eagerly asked of all the girls with me.

Nobody knew, and we all began to hunt among In Memoriams, in hope of solving the problem. All in vain, and I started for home at a full run of nearly a mile to consult the dictionary, which told me that *relict* was the remainder; and remainder, a *relict*, what is left. I next appealed to my mother, who replied:

"When your father died, I was his *relict*."

My poor little brain was sorely distressed at the incongruous ideas that crowded into it. I pondered over the matter more or less for years, and do not doubt it was this infantile experience that later in life evolved in my mind the subject of the equality of the sexes.

ELIZABETH OAKES SMITH.

"GEORGE ELIOT"—MARY A. EVANS CROSS.

SO much misrepresentation and so many misstatements have been made concerning this author, that it seems necessary to gather the facts and present them to that numerous class of readers who are interested in her history.

Mary Ann Evans was born at Griff, near Nuneaton, November, 1820. Rob-

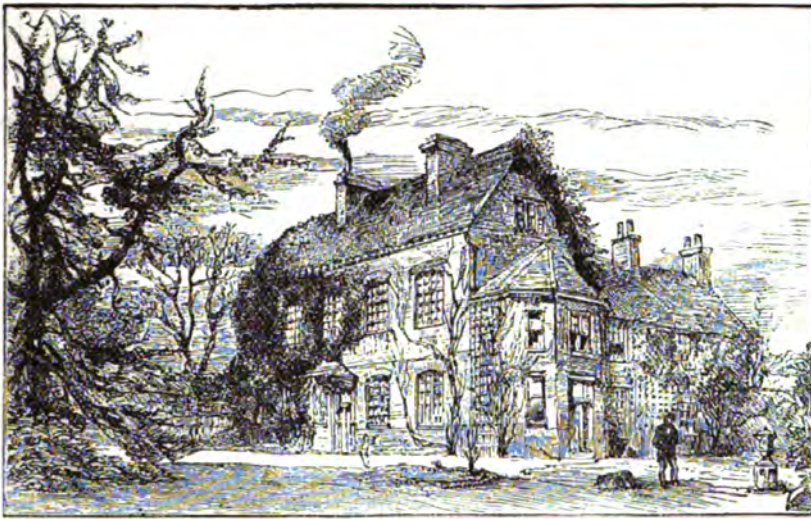
ert Evans, her father, was surveyor and land agent to five estates in Warwickshire, among them those of Lord Lifford and Lord Aylesford. He was highly respected, and considered thoroughly trustworthy. Mr. Evans was twice married. The first wife left a son and a daughter. Of the three children of the second wife

Mary Ann was the youngest. As a child she was precocious, being a teacher in the country Sunday-school at the age of twelve. At Miss Franklin's school in Coventry she received her early training, which she regarded as very wisely and thoughtfully directed by Miss Rebecca Franklin. She was very popular among her school-mates, and remembered by them for her pleasant conversational powers.

Probably in these early years, in the simple, country district where her father lived, Miss Evans gathered and hoarded

the-mannered girl, with pale, grave face, naturally pensive in expression, a low, sweet voice, and expressive gray eyes which could light up with intense meaning and humor." Her conversation at that time was said to have shown "thoughts so rich and singular, that converse with Miss Evans made speech with other people seem flat and common."

At Foleshill the budding genius was aided in development by lessons in Greek and Latin, French, German, and Italian, and by making some acquaintance with



HOUSE IN WHICH "GEORGE ELIOT" WAS BORN.

in her memory those materials which, wrought up by her wit and imagination, served as the groundwork for "Scenes of Clerical Life" and her first three novels—"Adam Bede," "Mill on the Floss," and "Silas Marner." At this time her mind was imbued with Evangelical sentiments; in some of her letters she speaks of herself as a Calvinist.

Whilst still a young girl Mary was left alone as housekeeper for her father, her mother having died when the child had reached her twelfth year, and her brothers and sisters having married and left home. In 1841 Mr. Evans moved to Foleshill, near Coventry. The daughter is described at this time as "a quiet, gen-

Hebrew. From the organist of St. Michael's, Coventry, she had lessons in music, and through ardent study and strong love of the art became, in after years, a superior performer on the piano-forte. By means of a strong memory and true sympathy with humanity in all varied phases, she acquired a vast fund of knowledge which served her admirably in the career of a novelist.

Among Mary Evans' literary friends in Coventry were Mr. and Mrs. Charles Bray,* with them she found sympathy

* Mr. Charles Bray is the author of the well-known phrenological work, "Education of the Feelings," an American edition of which, with notes, is published by Fowler & Wells.

and literary encouragement. Her Calvinistic views burdened her spirit; more liberal ideas came to take their place; these unfortunately were supplanted by agnostic beliefs. Of her conversation at this date it is said:

"She had no petty egotism, no spirit of contradiction; she never talked for effect. A happy thought well expressed filled her with delight; in a moment she would seize the point and improve upon it—so that common people began to feel themselves wise in her presence, and perhaps years after she would remind them, to their pride and surprise, of the good things they have said."

During this residence at Foleshill the "Leben Jesu" of Strauss was translated. The labor of this work was very heavy, yet she completed it in one year (1846). It was a marvelous effort for a young woman of scarce twenty-six years. In 1849 Mr. Evans died, leaving his gifted daughter free to enter wholly upon a literary life. She soon had the pleasure of taking a Continental tour with her friends, Mr. and Mrs. Bray. After finishing their tour her friends returned to England, but Miss Evans, for purposes of study and recreation, remained at Geneva, Switzerland, until the following spring. Upon returning to her own country she remained with Mrs. Bray until 1851, when she went up to London to assist Dr. Chapman in conducting the *Westminster Review*. Here she wrote essays and reviews, taking for her literary name the masculine pseudonym of "George Eliot," which she always retained. Her first work that attracted especial attention was "Scenes of Clerical Life," published in *Blackwood* in 1857, and in book-form during 1858.

"Adam Bede," a work of great charm to the majority of readers, a work which ranked its author at once among England's foremost novelists, a work that found translators in France and Germany, and thousands of readers in America, was the next book from the pen of the new novelist; it was published in 1859. This book excited great curiosity as to the

name and sex of its author. Was it "man or was it woman," was discussed *pro* and *con* in every literary circle in Great Britain. There were feminine touches and masculine breadth and tone, yet close critics were puzzled. Charles Dickens, however, at once divined the womanhood of the author; upon the appearance of "Scenes of Clerical Life," he wrote Mr. Langford: "Will you—by such roundabout ways and methods as may present themselves—convey the inclosed note of thanks to the author of 'Scenes of Clerical Life,' whose first two stories I can never say enough of, I think them so truly admirable. But, if those two volumes, or a part of them, were not written by a woman, then should I begin to believe that I am a woman myself."

Various claimants appeared or were mentioned as the author of "Adam Bede"; in the London *Times* of April 15, 1859, the following letter was published:

"SIR:—The author of 'Scenes of Clerical Life' and 'Adam Bede' is Mr. Joseph Liggins, of Nuneaton, Warwickshire. You may easily satisfy yourself of my correctness by inquiring of any one in that neighborhood. Mr. Liggins himself and the characters whom he paints are as familiar there as the twin spires of Coventry.

"Yours obediently,

"H. ANDRES, *Rector of Kirby.*"

On April 16th, the *Times* gave a reply from the real author, which we subjoin:

"SIR:—The Rev. H. Andres has with questionable delicacy and unquestionable inaccuracy assured the world, through your columns, that the author of 'Scenes of Clerical Life' and 'Adam Bede' is Mr. Joseph Liggins, of Nuneaton. I beg distinctly to deny that statement. I declare on my honor that gentleman never saw a line of those works until they were printed, nor had he any knowledge of them whatever. Allow me to ask whether the act of publishing a book deprives a man of all claim to the courtesies usual among gentlemen? If not, the attempt to pry into what is obviously meant to

be withheld—my name—and to publish the rumors which such prying may give rise to, seems to me quite indefensible; still more so, to state these rumors as ascertained truths.

"I am, sir, yours, etc.,

"GEORGE ELIOT."

Yet the secret soon came out, and Marian Evans, as she was now frequently called, was known as the author of the works mentioned. Of the "Mill on the Floss," issued in 1860, no attempt was made to deny the authorship. Persons familiar with Mr. Evans, say that he is the prototype of more than one character in his daughter's work, and mention Caleb Garth in "Middlemarch" as an example, the craftsman's pleasure in perfect work being the trait of character particularly marked. A letter written to Miss Hennell, of Coventry, in regard to the germs of "Adam Bede," throws much light upon the early views and influences of the writer; we can not illustrate our subject better than by quoting a portion:

"HOLLY LODGE, Oct. 7, 1859.

"DEAR SARA:— When I was seventeen or more—after my sister was married, and I was mistress of the house—my father took a journey into Derbyshire, in which, visiting my uncle and aunt Samuel, who were very poor, and lived in a humble cottage at Wirksworth, he found my aunt (Elizabeth Evans) in a very delicate state of health after a serious illness, he persuaded her to return with him, telling her that I should be very happy to have her with me for a few weeks. I was then strongly under the influence of Evangelical belief, and earnestly endeavoring to shape this anomalous English-Christian life of ours into some consistency with the spirit and simple, verbal tenor of the New Testament.

"I was delighted to see my aunt. Although I had only heard her spoken of as a strange person, given to a fanatical vehemence of exhortation in private as well as public, I believed that I should find sympathy between us. She was then an old woman—above sixty—and, I be-

lieve, had for a good many years given up preaching. A tiny, little woman, with bright, small dark eyes; hair that had been black, I imagine, but was now gray—a pretty woman in her youth, but of a totally different physical type from Dinah. The difference—as you will believe—was not simply physical; no difference is. She was a woman of strong natural excitability; which I know, from the description I have heard my father and half-sister give, prevented her from the exercise of discretion under the promptings of her zeal.

"But this vehemence was now subdued by age and sickness; she was very gentle and quiet in her manners, very loving, and a truly religious soul, in whom the love of God and love of man were fused together. There was nothing highly distinctive in her religious conversation. I had had much intercourse with pious Dissenters before. The only freshness I found, in our talk, came from the fact that she had been the greater part of her life a Wesleyan, and though she left the society when women were no longer allowed to preach, and joined the New Wesleyans, she retained the character of thought that belongs to the genuine Old Wesleyan. I had never talked with a Wesleyan before, and we used to have little debates about predestination, for I was then a strong Calvinist. Here her superiority came out, and I remember now with loving admiration, one thing which I at the time disapproved. It was not strictly a consequence of her Armenian belief, and at first sight might seem opposed to it, yet it came from the spirit of love which clings to the bad logic of Arminianism.

"When my uncle came to fetch her after she had been with us a fortnight or three weeks, he was speaking of a deceased minister, once greatly respected, who, from the action of trouble upon him, had taken to small tippling, though otherwise not culpable. 'But I hope the good man is in heaven for all that,' said my uncle. 'Oh, yes,' said my aunt, with a deep, inward groan of joyful conviction,

'Mr. A.'s in heaven—that's sure.' This was at the time an offense to my stern, ascetic, hard views—how beautiful it is to me now!

"As to my aunt's conversation, it is a fact that the only two things of any interest I remember in our lonely sittings and walks, are her telling me one sunny afternoon how she had, with another pious woman, visited an unhappy girl in prison, stayed with her all night, and gone with her to execution; and one or two accounts of supposed miracles in which she believed—among the rest, the face with the crown of thorns seen in the glass. In her account of the prison scenes, I remember no word she uttered—I only remember her tone and manner, and the deep feeling I had under the recital. Of the girl she knew nothing, I believe, or told me nothing—but that she was a common, coarse girl, convicted of child-murder. The incident lay in my mind for years on years, as a dead germ apparently, till time had made my mind a nidus in which it would fructify; it then turned out to be the germ of 'Adam Bede.'

"I saw my aunt twice after this. Once I spent a day and night with my father in the Wirksworth cottage. Sleeping with my aunt I remember. Our interview was less interesting than in the former time; I think I was less simply devoted to religious ideas. And once again she came with my uncle to see me, when father and I were living at Foleshill; then there was some pain, for I had given up the form of Christian belief, and was in a crude state of free-thinking. This is all I remember distinctly, as matter I could write down, of my dear aunt, whom I really loved. You see how she suggested Dinah; but it is not possible you should see as I do how entirely her individuality differed from Dinah's. How curious it seems to me that people should think Dinah's sermons, prayers, and speeches were copied—when they were written with hot tears, as they surged up in my own mind.

"As to my indebtedness to facts of

locale, and personal history of a small kind, connected with Staffordshire and Derbyshire—you may imagine of what kind that is, when I tell you I never remained in either of those counties more than a few days together, and of only two visits have I more than a shadowy, interrupted recollection. The details which I knew as facts, and have made use of for my picture, were gathered from such imperfect allusion and narrative as I heard from my father in his occasional talk about old times.

"As to my aunt's children or grandchildren saying, if they did say, that Dinah is a good portrait of my aunt—that is simply the vague, easily satisfied notion imperfectly instructed people always have of portraits. It is not surprising that simple men and women, without pretension to enlightened discrimination, should think a generic resemblance constitutes a portrait, when we see the great public so accustomed to be delighted with misrepresentations of life and character, which they accept as representations, that they are scandalized when art makes a nearer approach to truth.

"Perhaps I am doing a superfluous thing in writing all this to you; but I am prompted to do it by the feeling that in future years 'Adam Bede' and all that concerns it, may have become a dim portion of the past, and I may not be able to recall so much of the truth as I have now told you.

"Once more, thanks, dear Sara. Ever
your loving
MARIAN."

Through this letter we judge that from seeds as small as the winged maple came the intellectual growths that culminated in her loftiest work. "Silas Marner" reached the public in 1861, and admiration for the author was increased. All these works belong to the first period of the literary career of their author. Now she changes, not only the locale, but almost the whole character, of her writings. "Romola" was written as a serial in 1863; Marian Evans had then come under the influence of George Henry

Lewes. The accounts of their first acquaintance are somewhat contradictory; some assert that he induced the publication of "Scenes of Clerical Life," himself presenting the manuscript; others say that he was attracted by "Adam Bede," and wrote her offering his literary assistance, thus opening a correspondence which resulted in acquaintance. However this may be, the acquaintance ripened into an attachment which resulted in the justly-celebrated novelist becoming associated with Mr. Lewes in his home, and occupying a relation which impaired her reputation as a woman before the moral world. It is likely that the reasons for this step are not fairly known, but at any point of view its questionable character can not be altogether explained away.

Had Lewes loved Marian Evans with any high, pure devotion, we think he would not have asked her to take the position before the world which he did offer her, and which, we regret to say, she accepted. Her subsequent conduct clearly showed that she felt herself in a dishonorable, or at least very anomalous, position, and she sought seclusion and retirement. She received many affronts, and at length rarely went out save to musical parties or art exhibitions. That the iron entered her soul and made her life something different; yes, greatly different from what it would have been had she kept herself in the relation socially she had preserved hitherto, there is no room to doubt. "Romola" and "Gwendolen" but echo the cries wrung from her own heart. Intensely sensitive as she must have been, being the genius she was, if she sinned she suffered; and while we regret that she had not kept her life from shadow; while we wonder at the sentiment that bound her to the eccentric and egotistical author, we will try to think of her as doing evil innocently.

Writing books still occupied her time and thoughts. She read very many books. Lewes asserted that she read about a

thousand works, under his direction, as preparation for "Daniel Deronda." A young American lady once asked Miss Evans "if she enjoyed writing; if it was easy work?" She replied: "No; I am miserable when writing, but I am still more miserable when not writing." A sad confession of the emptiness of her life, in spite of her wonderful genius, her wonderful success.

"Felix Holt, the Radical" was published in 1866, "Middlemarch" in 1871, "Daniel Deronda" in 1876, "Theophrastus Such," which met no success, in 1879. These finish the list of her novels—a vast mass of work for a woman; even the physical labor of this writing was immense, the mental strain tremendous. In addition to these she translated Feuerbach's "Essence of Christianity" in 1854, and she wrote two poems, neither of them greatly admired; "The Spanish Gypsy" appeared in 1868, and "The Legend of Jubal" in 1871. It is said that she has left unpublished a "History of Ideas of Immortality" and a translation of Spinoza's "Ethics." What intense labor and thought so many writings have cost, only authors can comprehend.

These writings were quite remunerative to author and publishers. "Scenes of Clerical Life" brought \$5,000, "Felix Holt" \$22,500, "Middlemarch" \$40,000, "Daniel Deronda" \$30,000; and the other works brought sums in proportion. The aggregate of her earnings by her pen in about twenty years was \$150,000, a sum sufficient to furnish all the comforts and many luxuries to one whose tastes were never extravagant. In the autumn of 1878 Mr. Lewes died. As the executrix, "George Eliot" declared herself a "spinster," and instead of signing her name as she had for many years M. E. Lewes, she wrote herself Marian Evans. In May, 1880, she became the lawful wife of Mr. John Walton Cross, a merchant of London, many years her junior. She was married at St. George's church, Hanover Square, with the sisters of Mr. Cross as bridesmaids. Mr. Cross took his wife at

once to Italy, where they passed nearly the whole summer. On their return they lived at Chelsea in Mr. Cross' own house, instead of occupying her house, "The Priory," Regent's Park, where she had long resided with Mr. Lewes.

But the end is drawing near; death unseen hovers over the pathway of the writer who has now just passed her sixtieth year. Sunday evening, December 19th, she was taken with a sudden chill in the larynx. The physicians felt no alarm until Wednesday; at evening she found rest, passing quietly to "the beyond." She was buried at Highgate Cemetery. The coffin-plate bears the inscription:

MARY ANN CROSS,

("GEORGE ELIOT"),

Born 22d Nov., 1820; died 22d Dec., 1880.

Quella fonte

Che spande de parlar sì largo fiume.

The rain fell steadily upon the flower-covered coffin. Dr. Sadler, a Unitarian clergyman, spoke at the grave; after some touching remarks upon her womanly grace and gentleness, combined with breadth of culture, he concluded as follows: "To those present it may be given—though to a large number it is not given—to understand how a nature may be profoundly devout and yet unable to accept a great deal of what is usually held as religious belief. No intellectual difficulties or uncertainties, no sense of mental incapacity to climb the heights of infinitude, could take from her the piety of the affections, or the beliefs which were the mother-tongue of her soul."

Another friend writes in regard to her practical Christianity thus: "Whatever George Eliot's religious opinions may have been—and it may perhaps surprise those who did not know her intimately, to learn that the 'De imitatione Christi' was one of her favorite books, found by the writer lying on her table by her empty chair after her death—she possessed to a marvelous degree the divine gift of charity, and of attracting moral outcasts, whose devils she cast out, if I may be

permitted the expression, by shutting her eyes to their existence. In her presence you felt wrapped round by an all-embracing atmosphere of sympathy and readiness to make the least of all your shortcomings, and the most of any good which might be in you. But great as was her personality, she shrank with horror from intruding it upon you, and in general society her exquisitely melodious voice was, unhappily for the outside circle, seldom raised beyond the pitch of something not much above a whisper."

All who speak of George Eliot agree in the charm of her manner, which, with her sweet voice, made one forget her lack of grace and beauty of feature. She is described as "tall, gaunt, and angular; with a long face, heavy brow, and massive jaws."

A friend says: "In every line of her face there was power, and about the jaw and mouth a prodigious massiveness which might well have inspired awe, had it not been tempered by the most gracious smile which ever lighted up human features. The rest of her body was as light and fragile as her countenance and intellect were massive."

Opinions as to the relative merits of her books will always vary. Many prefer the rural air and homely charm of "Adam Bede" and "Mill on the Floss." The exquisite drawing of English rural life has a wonderful charm for some readers. Others give to "Middlemarch" the highest place. My own preference is for "Romola"; in my opinion, no writer since Shakespeare has drawn so lovely, so perfect a character as the Florentine maiden. The side-actors are as clear-cut as any of the great dramatist's. The street conversations are as fine as those in "Julius Cæsar." We feel confident while reading that we really are in Florence in the time of Savonarola. There is enough of learning and philosophy. In "Daniel Deronda" the reflections become oppressive, the atmosphere is heavy; we long to throw open doors and windows to look upon blue skies and sunshine.

AMELIE V. PETIT.

"FEARFULLY AND WONDERFULLY MADE."

SO thought I, as I read in a book recently published, whose title is "Our Coffee-Room," and which describes the work of a philanthropic English woman who established coffee-rooms for the degraded and laboring poor in her vicinity.

She relates how, among others, came a poor blind man to the rooms who enlisted her sympathy so much as to move her to obtain books with raised letters and try to have him learn to read. But she says "the nerves of his head were so affected that the attempt caused him such suffering he was obliged to desist." This fact occasioned me much thought, and brought at once to mind the text with which I preface this article.

That such a close connection should exist between the brain and finger-ends, that their use should cause distress in the head. What a center of suffering the brain may become to any of us by the loss of one sense! What a wonderful thing, too, it is that the loss of one sense causes another to become more acutely active in supplying the deficiency!

A few years ago I met at the house of a relative a woman who had been blind from her childhood. She was then nearly forty years old. After a little conversation, in speaking of her affliction, she said, "But I see in the night, oh, such wonderful things, but nobody believes me; they all laugh at me for thinking I *see*, but *you* (laying her hand on my arm) will believe me, I know."

"Yes; I don't doubt it at all," I replied; and I didn't. I had too long been a believer in this inner vision, as I call it—and that, I believe, all possess, or may, who will attentively watch their dreams—or rather, seeing with the inner eyes, before the outward ones open, as most dreams that are distinct and impress us occur just before waking. Not always do we see clearly. The flesh obstructs; but, as "through a glass darkly," there is

often presented in sleep what actually occurs immediately in waking or in the course of the day.

So saw I, not long since, just before waking, a strange-looking letter, large, thick, directed to, me, and on opening which I found a square of black silk. I said, on getting up, "I shall hear bad news, I think." The day after, a letter exactly like the one seen in my sleep, arrived directed to me, but which, instead of the black silk, contained a long obituary notice cut from a paper, of a friend. Then I saw darkly the black suggesting a funeral.

Long before that I had seen *clearly* in a dream. A locket containing the picture of a deceased friend had been lost while visiting at a relative's house, how, no one knew or could guess. I don't think we shall ever know how it got destroyed. Of course, feeling very badly about it, as the likeness was the only one of the friend in existence, I commenced to dream of it. In two dreams I saw it all defaced; in the third, I drew the remains of the locket by a bit of the chain out of the ashes thrown from a stove in the room I had occupied at my friend's house, and which had been thrown over the garden wall. I immediately wrote, asking her to search the ashes. She sent me a day after the heavy ring of the locket (that, being thicker than the case, had resisted the fire) and the top of a gold pencil, with an amethyst stone in it, that was attached to the chain. Of course, as I had dreamed, the picture was destroyed.

Here my dream "came to pass," as it is commonly said, exactly. I could relate many such that have "come to pass." Often I see the fact dimly outlined. That occurs oftenest when I am not as nearly awake, but just before awaking with these outer eyes is the time when I see the clearest with the inner ones. Can any one explain it satisfactorily? Have we dual vision? We can but fall

back on the declaration, "wonderfully made."

To go back to the blind woman who knew I should believe she could see in the night. What could she have discovered in the few words she had heard me speak to convince her I should believe? With her doubly acute sense of hearing, what tone of my voice had indicated to her that I too *saw* in the night?

This spiritual insight seems to me to develop every day in such degrees that really I think it almost impossible, or ought to be at least, for any one to be deceived. Even children, as well as adults, seem intuitively to divine the thought of others. This nervous influence, too, that flashes from one part of the body to the other, that can be transmitted to others. This gift of healing by the laying on of hands; oh, that it were always by pure hands! Alas, that this power is possessed by the bad as well as good! What discrimination, what care should be used in allowing oneself to become for the time the actor out of another! For myself, it has been declared I am of too positive a temperament to be thus influenced; all the same, I believe in it in the case of others, and that while some good has been done by it, incalculable mischief has been wrought. Should there not be laws enacted to restrain the practice of this, as well as to punish quack doctors?

To speak once more of dreams. Are they not made too light of? So assured am I that God reveals to me duties, discloses to me myself, my "besetting sins" in them, that it really pains me to hear them jested about. To me they are recognized in the Scriptures as an agency of God in teaching man. Job says: "In dreams, in visions of the night, when deep sleep falleth on men, then he openeth their ears to instruction." For what? "To withdraw man from his purpose." Was not the dream sent to Pilate's wife the last means used to withdraw that hypocritical ruler from his purpose? Surely we pigmies may not disdain to be taught as were those moral giants of old—Abraham, Job, Joseph. We may not be so full of the realistic, *common sense* of the present age as to refuse belief in the supernatural. Why, I hardly think I should wish to live, if there were nothing to *believe*—if everything could be reasoned out and settled.

Robert Pollok, in his immortal "Course of Time," says:

"Some dreams were useless, moved by turbid course of animal disorder.

Not so all; deep moral lessons some impressed that naught could afterwards efface."

And he goes on to show how in dreams the master passions of the soul were displayed, and certainly gives good evidence that he believed in dreams, or rather, as I prefer to call it, the seeing with the inner eyes. COUSIN CONSTANCE.

THE YOUNG FOLKS OF CHERRY AVENUE.

CHAPTER IX.

TRUMAN BURR IN A NEW LIGHT.

"AND do you know that even Truman Burr is to have a part in our exercises?"

"What! You don't mean to say, Sophie, that rough, uncouth fellow will be permitted to show his ignorance before all those people?"

Milly opened her eyes and raised her hands in astonishment.

"Yes, it's really so."

"Well, I do believe it's all Tal Manley's work; and if anything can go far toward spoiling the day it will be just that. Why, I can not believe that Miss Clem would permit it."

"Trude Baker told me," rejoined Sophie, "that Tal persuaded Truman to offer to do something, and Miss Julia

appeared actually pleased when he did."

"I should like to know what the fellow intends to recite. Why, he's so awkward he doesn't know how to stand properly; and when he walks, you know what a shambling, one-sided walk he has."

portant piece of information as a "last word."

"Edith says Tal said, when he told her this morning about it, that Tru Burr would disappoint some people after all; and he was going to do all he could to help him along."

"Well, all I have got to say," rejoined



MILLY GIVING TRUMAN BURR SOME CHERRIES.

"Oh, I suppose, Milly, Tal and he have cooked up something between them."

"Yes; and we may expect it will be the 'gem of the occasion,' as Dr. Miller so often says."

The two girls were loitering near the broad entrance to Mr. Sommer's grounds. They had walked from school in company, and Sophie had reserved this im-

Milly, "is that if it hadn't been for you and Lizzie Payton, and two or three others, I should not endure a school where such a boy is allowed to come, because he's a disgrace to the whole of us. I can get along with such boys as Alonzo Scott and Andrew Filmer, but as for that Burr he's a perfect boor and torment."

"Now, Milly, you must admit that

Truman has done much better since he pulled the fence down; and don't you know that just as soon as he could walk he went over to Mr. Faulkner's and told him about the affair, and offered to work for him after school hours and Saturdays to pay for the damage."

"That was Tal's work, I know."

"Well, if it was, I'm sure it shows that Truman is not so careless and bad as we've thought."

"Well," rejoined Milly, in a tone much softened, "I suppose if he does his part well, Miss Grace will be very much pleased, and people around here will compliment her on her success. I'm sure I like her."

"I think she's lovely!" exclaimed Sophie, "and does just about right."

"I shall do what I have to anyway, Burr or no Burr."

"So shall I, of course. Good-bye," saying which Sophie tripped down the avenue, while Milly walked a little pensively over the velvety lawn to the hall door. She called to mind, perhaps, some of the stories she had read of rude, mischievous boys who were neglected by their parents, they appearing to see in them only occasions for criticism and harsh rebuke, so that they were compelled to find at school or in the street agreeable companionship for the freedom they enjoyed; and being fortunate in happening to fall in with one or more associates who could pity them and give them a kind word now and then, they at length showed that there were good and noble traits under the rough surface, and these being developed, made useful and really eminent men of them. Whatever she was thinking about, she had only set a foot upon the first step of the piazza when a call from the gate broke in upon her reverie.

"Say, Milly?"

Turning around, who should she see running up the walk but the very boy who had been the subject of her talk with Sophie. The old disdainful spirit almost took possession of her, as she asked with some impatience:

"What do you want?"

"Oh! if yer please—that is—I've come to ask a question," half stammered Truman.

"Well, ask it quickly, as lunch must be waiting."

"Yer see, Mil— Miss Milly, I'd heard that some of the gals didn't like it, 'cause I'm goin' ter speak at the school-closin'. It's all Tal Manley's fault; and when I said I'd try, Miss Grace said she'd be glad to have me, and there I was just stuck. Now, I aint agoin' to speak 't all if anybody's against it; and I've come to ask yer if yer've any objections."

"Why, Tru," replied Milly in so gentle a voice, that she felt half angry with herself for so much condescension after all the pride and even contempt she had usually shown toward this boy, "I'm sure you have my consent."

"Much obliged, Miss Milly. If ye'r on my side I guess I sha'n't trouble myself 'bout the rest."

"I suppose you're coming to me now is Tal's work too?" returned the young lady with an accent of sarcasm.

Truman reddened with sudden anger, as he said:

"Yer can just think what you please, but I've come on this business myself, and I reckon I—"

"Oh, please excuse me. I am sorry that I said that."

"All right," responded the boy, his face clearing at once of the frown. "Tal's one of the cleverest chaps of his size I ever knowed; but Truman Burr don't never want any promptin' from anybody to do some things. Well, I won't bother yer any longer." Saying which he turned on his heel.

"Won't you have some cherries?" asked Milly, who was a little anxious to atone for her unfortunate question. "We've some fine black tartarians left, and if you will wait a few minutes you shall have some."

"Those big black fellows like what Deacon Scott has got in his court-yard?"

"I think so."

"Well, if yer don't mind the trouble,

I'll take a few," said Truman, settling himself on the piazza-steps.

Milly ran into the house and peered into the pantry, soon finding a dish of the luscious fruit which had been freshly picked. Procuring a bit of paper, she wrapped two or three generous handfuls of the cherries in it and hastened out to Truman.

"These, I hope, you will find nice."

"Thank yer. I guess I will, for I'm kinder death on cherries; so's Tip. She's down with a fever, and the doctor says fruit's good for her. Guess I'll take 'em home for her after tryin' the smack of one or two myself."

"Tip's one of your sisters, I think?"

"Yes. She jest keeled over on Wednesday with rimmittin' or some other kind of fever."

"I am very sorry. I'll ask mamma to send some fruit over to her to-morrow."

"Tip 'ill like it, yer can bet. Good-bye."

Truman's reflections on his way home were to the effect that Milly wasn't such

a bad girl after all, if she was so powerful stuck-up and sassy, and that a fellow did gain something worth having by trying to get on the right side of people.

Milly, on her side, re-entered the house and sat down to her lunch so thoughtfully, that her mother remarked:

"It seems to me, Milly, you have put on a close-fitting thinking-cap this afternoon."

"Why, mamma, I have come to the conclusion that people may appear rough and careless and yet have really kind and sensitive hearts."

"Ah, my child! and what has happened to give you that impression?"

Milly then related her interview with Truman at the door.

"The boy, then, has shown more character than you expected, Milly?"

"Yes, indeed, mamma."

"Well, the interest you have shown in him is creditable enough, and you may request Thomas to take a basket of cherries and plums over to the Burrs to-morrow."

CLARE.

"SOMETHING HAS GONE WRONG."

"WHY, that's not four o'clock! I'm certain that it can not be so late!" exclaimed Minny, starting from the seat on which she had been amusing herself with a book, while her work lay neglected beside her. "I looked at the great clock not ten minutes ago, and I'm sure that the long hand had not reached quarter past three."

"Oh! did you not know that something was the matter with the great clock?" replied her aunt, who, with her bonnet and shawl on, had just come down-stairs, prepared to accompany her on a walk. "Since yesterday it has gone quite wrong; it strikes one hour, and points to another. I think that the hands must be loose."

"Something has gone wrong, indeed!" cried the child, with impatience, "and I will never trust it again."

She looked up, and saw a quiet smile on the face of the lady. "Aunt, what are you thinking of?" she asked quickly.

Her aunt glanced down at the unfinished seam, from which the needle and thread hung dangling down.

"Did you not promise to have that ready before four?" said she.

"Yes," replied Minny, looking a little ashamed; "but—but—"

"But there is somebody, I fear, besides the great clock whose hands are in fault; who is swift to promise, and slow to perform—whose words say one thing, and whose actions say another. Shall I repeat your own words, Minny, and say, something has gone wrong, indeed, and I never will trust her again?"

Keep this in mind, young reader, that our words and our actions should agree together, as the hands of a good clock with the chime of its bell. Never make a promise rashly; but, if once made, let no pleasure, no feeling of indolence, tempt you for one moment to break it.



COLD WATER—NOTHING ELSE!

"DO you really think, doctor, you can cure everything with cold water alone? While ready to admit that cold water is good in its place, in many cases I think something more is needed. At any rate I should not feel quite safe to trust it alone in the more severe and critical forms of disease."

With this view of yours, my friend, I fully coincide. In many cases—in almost all cases indeed—cold water is not only insufficient, but it is too often positively injurious. The idea that we use it as a universal panacea is based upon a misconception of our theories. This misconception has led you into a very generally prevalent error—an error as to the value we place upon water without regard to temperature, and an error equally great in regard to temperature.

All healing power resides in vital force—the life principle within us. When vital action is disturbed we are sick. Whatever brings about its disturbance is a cause of disease. When all the demands of vital force are met we are in perfect health. When they are not met we are sick in a degree corresponding to the deficiency. The play of this force is not confined to the elaboration of water alone, of air alone, or of food alone. Whatever it can use for the benefit of our bodies is health-preserving, health-promoting, and health-restoring; what-

ever it can not so use has the opposite tendency.

Water—organized water—enters largely into the composition of the organic tissues. Hence the demand for water in proportionate quantities for the sustenance of the body. Its value depends upon the extent and variety of its uses in the vital economy. As a chemical constituent of all organic structures, as a diluent of the vital fluids, as a deobstruent of the skin as well as of the internal organs, as a regulator of temperature and a soother of pain and of nervous irritability, when wisely used, it stands unrivaled. But this by no means justifies the conclusion that it is a universal panacea, or a panacea at all. Only they who know very little of the true theory of life and health can so estimate it.

While recognizing the value of water in health and disease, and of temperature as modifying its utility, we are not to overlook the agency of other things equally important.

Water can not take the place of food, nor compensate for errors in its preparation, or in the time and manner of using it. If we eat to excess or eat too little; if we eat bad food, or if we eat too often, or not often enough; if we eat when either physical or mental conditions are unfavorable to good digestion, disorder will be sure to follow.

It requires no extraordinary breadth of intellect to see that the remedy for such disorder is not to be found in cold water, or in water of any temperature. Life and health depend upon a combination of many and diverse influences. We have referred to food which meets the demands of nutrition. We could not long live without it. All the tissues would waste and vital force would waste with them.

But food, important as it is, does not occupy the first place among things necessary to life and health. We may live twenty or thirty days without it. Dr. Tanner lived forty days. Without air, we could not live as many minutes. Complete suspension of the respiratory function for three to five minutes is usually fatal. Insufficient respiration or the breathing of impure air, or of air deficient in oxygen, though it may be less speedy, is always hurtful in proportion to the extent of its departure from the normal standard.* Bad ventilation, bad positions of body, tight clothing, and other causes of defective breathing, can

not be corrected, or their bad effects compensated for, by the application of water cold or warm, internally or externally, much or little.

The human body is a complicated machine. It is subject to a great variety of influences favorable and unfavorable to health. The study of these influences, the supplying of favorable, and the removing of unfavorable conditions, is the province of the intelligent and conscientious physician. His field is a wide one, embracing a thorough knowledge of the human body and of the laws to which it is subject physically and mentally. Nothing short of this can fully meet the demands of his office.

Need more be said to satisfy any one that his work embraces a much wider range than the cold-water idea gives him credit for? or must we concede the claim that drugs which poison and derange the body, if taken in health, are useful and necessary in sickness, because we think that cold water alone is insufficient? We do not so see it.

J. S. GALLOWAY, M.D.

A CHINESE LADY'S FOOT.

WHO has not expressed some curiosity with regard to the appearance of the little feet of Chinese ladies? We have, and although impressed that their naked deformity could be little or nothing short of disgusting, we nevertheless should be glad to have an opportunity for an inspection. A naval correspondent favored the publishers of the *Scientific American* with photographic views of the "golden lily," as the Chinese lady calls her compressed and distorted foot, from which the accompanying illustrations were engraved. They show the foot in the bandaged and bare conditions. The correspondent writes that "It is an error to suppose, as many do, that

it is only the Upper Ten among the daughters of China that indulge in the



A CHINESE LADY'S FOOT.

luxury of 'golden lilies,' as it is extremely common among every class, even to the very poorest—notably the poor sewing women one sees in every Chinese city and town, who can barely manage to hobble from house to house seeking work. The pain endured while under the operation is so severe and continuous that the poor girls never sleep for long periods without the aid of strong narcotics, and then only but fitfully; and it is from this constant suffering that the peculiar sullen or stolid look so often seen on the woman's face is derived."

The process by which the foot is reduced in size is related by Miss Norwood, an American missionary resident at Swatow, and is substantially as follows: The binding of the feet is not begun until the child has learnt to walk. The bandages are specially manufactured, and are about two inches wide and two yards long for the first year, five yards long for subsequent years. The end of the strip is laid on the inside of the foot at the instep, then carried over the toes, under the foot, and round the heel, the toes being thus drawn toward and over the sole, while a bulge is produced on the instep, and a deep indentation in the sole.

Successive layers of bandages are used till the strip is all used, and the end is then sewn tightly down. The foot is so squeezed upward that, in walking, only the ball of the great toe touches the ground. After a month the foot is put in hot water to soak some time; then the bandage is carefully unwound, much dead cuticle coming off with it. Frequently, too, one or two toes may even drop off, in which case the woman feels afterward repaid by having smaller and more delicate feet. Each time the bandage is taken off, the foot is kneaded to make the joints more flexible, and is then bound up again as quickly as possible with a fresh bandage, which is drawn up more tightly. During the first year the pain is so intense that the sufferer can do nothing, and for about two years the foot aches continually, and is the seat of a pain which is like the pricking of sharp needles. With continued rigorous binding the foot in two years becomes dead and ceases to ache, and the whole leg, from the knee downward, becomes shrunk, so as to be little more than skin and bone. The origin of this strange fashion is a complete mystery, at least to western civilization.

CURIOUS INDUSTRIES, WITH A CAUTION OR TWO.

THE work of the staff of officers appointed by the superintendent of the census to collect statistics relating to the industries and manufactures of New York city is, according to the *Evening Post*, approaching completion, and will show a very satisfactory growth since 1870.

In the course of the investigation by the gentleman who has charge of it, Mr. Hill, and his deputies, some singular industries were brought to light. It was found, for instance, that some use was made of old shoes, but exactly what use was hard to find out. Large numbers of old shoes were sold by rag-pickers to certain men who disposed of them at a good price. It is well known that bits of old leather make the commercial article

known as Prussian blue, but only a few firms manufacture it, and the new call for old shoes was evidently for some other purpose. In New York city and Brooklyn about three million pairs of old shoes are thrown away every year. Formerly old shoes were plentiful in the gutters of certain neighborhoods; now it appears that they are sought after as choice prizes in the rag-picker's line. By dint of persevering inquiry, it was discovered that the old shoes were used for three purposes. First, all shoes not completely worn out are patched, greased, and after being otherwise regenerated, sold to men who deal in such wares. Some persons wear one shoe much more than the other; these dealers find mates for shoes

whose original mates are past hope. Secondly, the shoes not worth patching up are cut into pieces; the good bits are used for patching other shoes, and the worthless bits, the soles, and cracked "uppers," are converted into Jamaica rum by a process known only to the manufacturers. 'It is said that they are boiled in pure spirits and allowed to stand for a few weeks, the product far surpassing the Jamaica rum made with essences, burnt sugar, and spirits. A gentleman who doubted the truth of this story stopped recently at a low grog-shop in the neighborhood of the factory spoken of and inquired if they had any rum from old shoes. "No," said the bar-keeper, "we don't keep it much now; the druggists, who want a pure article, all sell it, and the price has gone up. But we have had it, and we can get you some if you want it." How many old shoes go to a gallon of rum could not be ascertained.

It has been noticed by some deputies that while manufacturers are quite willing to put a valuation upon their manufactured product, they hesitate about stating the value of the raw material, and even return the schedules, with the space for the value of raw material left blank. In one instance a manufacturer of tomato catsup returned a report giving the value of his manufactured product at \$18,000,

and the value of his raw material as nothing. His explanation was as follows: Every year in the coming season he sends to all the wholesale houses which make a business of canning tomatoes, clean tubs, with the understanding that the women who trim and peel shall throw the skins and parings into these tubs; every day the tubs are removed, the stuff is then ground up, fermented, flavored, and sold as tomato catsup to the extent of \$18,000.

Another singular and decidedly pernicious business is the manufacture on a large scale of cheap candies from white earth or terra alba, mixed with a little sugar and glucose. The deputy who investigated the confectionery business reports that seventy-five per centum of some candies is composed of these substances, and such candy, notably "gum drops," contain still less sugar. And yet manufacturers of this stuff advertise their candies as "pure." The effect of white earth upon the stomachs of the unfortunate children who buy these candies, is yet to be determined by future autopsies. What is called a fine brand of castile soap has been found to be composed chiefly of this white earth and grease; but the evil effects of such an imposture are trifling compared to the results of turning children's stomachs into miniature pottery works.

DOCTORING CHILDREN FOR COLDS.

WHEN I was young and life was new, the most delicate part of my physical system seemed to be my breathing apparatus. The freezing cold, chilling winds, and pelting storms of dreary winter never affected any part of the body except the bronchi and lungs, which were always tender and delicate. The first manifestation of illness would be perceived in a hacking cough and disagreeable running of the nostrils, which would continue to increase until my breathing became laborious and cough

more and more severe. No physician was called, nor were repulsive doses of medicine taken. But my mother, who was a believer in *preventives* of illness, and in the superior efficacy of a little "herb tea," as soon as she perceived that the cold was rather on the increase, would heat a few pieces of bricks or stones to redness and put one piece at a time into a kettle of water, which, of course, produced a large volume of steam. I would sit on a chair near the kettle, with a sheet or two thrown over my head, to

retain the steam. This treatment would be continued for some fifteen minutes, or until the incessant cough had ceased, and my breathing had become perfectly easy and quiet, and just before I was about to retire to rest. As soon as this steaming process had ended, my skin was rubbed entirely dry until a healthful glow appeared, when I drank a few swallows of "sage-tea," sweetened with molasses, and was wrapped in genuine homespun flannel sheets and woolen blankets of that industrial age, and put to bed on some rural bedstead placed near the fire, where I could inhale the warm and *fresh* air the livelong night. No sleep on a royal bed of roses, fanned by the spicy breezes of Ceylon and Java, could be sweeter and more refreshing. That warm air was so congenial to the delicate bronchi and lungs, that, when the morning came, nature had won a cheering victory over the threatening ills of the system.

No medicine of the apothecary-shop and no treatment of the medical fraternity could infuse so much new life, strength, and buoyancy of spirits as those simple and harmless remedies. The next day I could defy the rigors of "Old Winter" and laugh at the raging snow-storms. Once or twice this simple

treatment carried me safely through one of our northern winters.

Now, at my advanced age in life, I experience no trouble or difficulty with any part of the body except the delicate bronchi and tender lungs, when the air is freezing cold. Last evening my breathing was very laborious, and the lungs did not perform their offices freely. After eating a hearty supper, smoking and fragrant, of sweet baked apples and milk, Graham bread, corn-meal mush and molasses, rendered doubly luscious by a generous smearing of golden cream, the fire in the stove was increased so that the air was almost hot, as it rose to the wall above. During half an hour or more, I bent over that stove and inhaled the hot air, until my breathing was done without an effort, and my bronchi and lungs seemed perfectly quiet and strong. While standing near the stove, the arms were kept in constant motion, up and down and every other way, which waked up every blood-vessel and nerve in the chest. Then I retired for the night in a warm room, and slept sweetly. This morning, with the mercury at zero, my breathing apparatus is all right, showing no indications of tenderness.

SERENO EDWARDS TODD.

Orange, N. Y.

"HOW WE FED THE BABY."

THIS is the title of a new book on the management of infants, which has already excited inquiry and discussion, and will prove, we think, a valuable addition to the stock of practical hygienic treatises adapted to popular use. A book of any character naturally suggests more or less speculation with regard to its author, and of him a brief sketch must now suffice.

Dr. Page has for ten years past paid great attention to the study of dietetics, or to be more exact, he has studied carefully the relation of alimentation to health and disease, as well as the influence of mental and moral culture upon the phys-

ical well-being of the body. For the past five years he has made infant dietetics almost a specialty. Unlike physicians in general, who from necessity take much of their information at second-hand from parents and nurses without personal verification, he has set himself the task of probing to the bottom this question of infant mortality, by personal experience and observation, to the neglect, largely, of general practice; from the feeling that in this much neglected department of research he could be of most service to his fellow-men. It has long been a source of wonder to him why farmers and others should regard the question of food and

feeding of such vital importance in its relation to the health and growth of the young cattle they raise, and pay such strict attention to their diet, and yet give the subject of the alimentionation of their own offspring scarcely a direct thought. Strangely enough it has come to be regarded as beneath the dignity of a man to enter the nursery for any higher purpose than to "toss" his obese offspring, or chuck him under the chin, or stick out his eyes and whistle for his amusement! He must not manifest even the curiosity to ascertain whether his six-months-old girl is not swallowing about as much of the same cow's milk every twenty-four hours as he finds ample for his calf's highest thrift; or to express his concern lest the nurse shall swelter his young hopeful's body with excessive wraps, or parch her face and injure her lungs with heated air in the immediate vicinity of the stove, upon penalty of being called a "hen huzzey." Not only this, but with rare exceptions, the father seems to feel neither interest nor responsibility as to the care of his children during this, the most critical period of their lives; having, apparently, in this one direction, if in no other, an abiding faith in the marvelous knowledge of "the women folks." It has been remarked upon as an anomaly, by such thinkers as Herbert Spencer, Huxley, etc., that in general it is considered altogether beyond the province of the male parent to know anything at all about what is going on in the nursery.

In view of this state of things, and at the risk of being misunderstood, Dr. Page has been a discriminating observer of the daily habits, customs, needs, and evolutions of the *genus* infant, not only in the nursery at home, but having been a great traveler, both in this country and Europe, he has never let slip an opportunity to add to his stock of lore in this direction. On railroad trains, in stages, at hotels or depots, or wherever a baby's face presented itself, whether white, black, red, or yellow, regardless of race or previous condition of servitude, our author has made it a point to make the acquaintance of the parents or attendants, and to ascertain, so far as possible, the history of the little one. The tape measure, always ready, has been used to ascertain his height, breadth, and depth; the age, weight, and height noted and carefully compared; and the facts drawn out as to its general health, physical traits, special sicknesses, methods of treatment, management, diet, clothing, are among the features of the work he has now brought out.

From this it will be seen that the book is of a different character from the customary type of books, which are supposed to be replete with "advice to mothers," and will most likely command the attention of the medical profession as well as that of parents, who are really anxious to know how to feed and train physically their young children, in order to secure the best development.

PLUMP OR LEAN AT WILL.

THE *Theosophist*, of January, contains an extract from the Yoga philosophy, a mystic system of Indian in which the following description of one of its exercises occurs:

Bhastrika Kumbhaka.—This is the fifth Kumbhaka. It promotes appetite, opens the three superior valves of the intestinal canal, and cures all pulmonary and hepatic diseases. It is an excellent substitute for exercise. The Bhastrika

Kumbhaka is thus practiced: Place the left foot upon the right thigh, and the right foot upon the left thigh, straighten the neck and back, make the palms of the hands rest upon the knees, shut the mouth, and expire forcibly through both nostrils. Next inspire and expire quickly until you are fatigued. Then inspire through the right nostril, fill the abdomen with the inspired air, suspend the breath, and fix the sight on the tip of the

nose. Then expire through the left nostril, and next inspire through the left nostril; suspend the breath, and expire through the right nostril. It is by this variety of respiration that the chameleon assumes the apparent conditions of plumpness and leanness. This animal becomes plump by inflating its lungs and intestinal canal with the inspired air, and then becomes lean by a single expiration from those organs. The long-continued hissing sound which serpents produce to alarm their prey, is effected by the expulsion through their nostrils of a great volume of air taken into the lungs and the intestinal canal by long-continued inspiration. It is by taking more air into the system than is employed in oxygenating the blood, that most of the reptiles are enabled to lighten their bodies, and to swim over lakes and rivers, or perform bounding motions on the dry land.

The act of taking in more air than is subservient to respiration, is the characteristic feature of all hibernating animals; and the ancient Hindu philosophers, observing this fact in nature, discovered this variety of respiration. An Indian yogi becomes plump by inflating his intestinal canal with the inspired air, and then lean by expiring the inspired air. He becomes light by introducing a large quantity of the inspired air into his system, and he becomes specifically heavier by compressing the inspired air within the system.

Such is the explanation of two of the "perfections" of the yogi. When a yogi fills the whole intestinal canal with the inspired air by the practice of this kumbhaka, he is said to acquire the property of casting his skin, and of altering his specific gravity at pleasure.

NOTES IN SCIENCE AND AGRICULTURE.

Glacial Periods.—Mr. H. B. Norton, in a recent lecture before the Kansas Academy of Science, gave some interesting calculations respecting the glacial epochs through which the North American continent has passed, based largely upon the theories of Croll and Geikie. In his closing paragraph he remarks: "It thus seems probable that there have been many glacial periods in each hemisphere, and that the ocean, like a mighty pendulum, vibrates from pole to pole through vast but regular periods. It is not necessary to suppose a cataclysm at the end of each period, as some of the earlier writers did; but rather an insensible drainage of waters, which so gradually submerges the land and pushes the human race before it as hardly to be perceptible in the course of generations, even uncovering new continents, and opening up fresh fields and pastures new to human industry, when the old are exhausted. The Southern hemisphere is now undergoing the slow refrigeration of its long winter. This began about 6,500 years ago; it will end about the year 4870. It has passed its middle, but not its culmination, even as the greatest average cold of our ordinary winter is nearer the vernal equinox than the winter solstice. It is probable that 2,000 years from now the southern continents will be still more deeply deluged; the Antarctic ice-cap glaciers will have extended several hundred miles to the northward, and the glaciers which have already appeared among the Andes will have covered the plateaus of

Patagonia and Chile. Nevertheless we need not expect that mankind will then witness the utmost possible degree of refrigeration, because the ellipticity of the earth's orbit is now less than it has been at certain periods in the past, and will be again in the remote future."

Nerves of the Human Retina.—In a recent note to the Vienna Academy, Herr Salzer offers an estimate (based on numeration) of the probable number of optic nerve fibers and of retinal cones in a human eye. The number of the former he supposes to be about 438,000, that of the latter 3,360,000. This gives seven or eight cones for each nerve fiber, supposing all fibers of the optic nerves to be connected with cones, and equally distributed among them.

Color Sensation.—White light being the sum total of the various colors, it has been generally believed by physicists that the sensation of white light is simply the sum total of the sensations of its constituent colors. On the ground that the sensitiveness of the eye for white light may be increased—as, for instance, by the previous absence of all light—without the sensitiveness for color being increased, Prof. Charpentier urges the novel theory that there is a color sense as distinct from that of light as is the sense of touch from the sense of heat. (The novelty of the theory must remain with those who have never heard of Phrenology. —ED. P. J.)

A Helpful Clock.—An exchange says a clock in a private residence at Providence, R. I., is situated near the front door, which as it is opened and shut, winds it up. In return the clock turns on the gas in the hall as soon as darkness comes on, and lowers it to a head at a particular hour fixed upon as bedtime. At the hour for the servants to be up, the clock rings a bell with persistence. An hour later it rings another bell for the family to rise. Half an hour afterward a third bell announces breakfast.

Development of the Tapeworm.—A common tapeworm begins life as a minute body, set free from its covering and investments, and provided with a boring apparatus, consisting of six hooks. This little creature will perish unless it gain access to the body of some warm-blooded quadruped, and the pig appears to be its most convenient host. But within the body of the pig there is no possibility of the little embryo becoming a tapeworm. The pig has merely to perform the part of unconscious "nurse," and to prepare its "guest" for a higher stage of existence. Being swallowed by the pig, the young parasite bores its way through the tissues from the digestive system to the muscles of the animal, and there develops around its body a kind of bag or sack. In this state it represents the "cystic worm" of old writers; and occasionally it may prefer the liver, brain, or even the eye of its first host to the muscles in which it usually resides. Here, however, it can attain no further development. But if, as is most likely, the pig suffer death at the butcher's hands, the little cystic worms may be bought by mankind at large with the pork. Such persons as partake of it, and in an imperfectly cooked condition, qualify themselves for becoming the "hosts" of tapeworms—since, when a cystic worm from the muscles of the pig is introduced into the human stomach, the little bladder or sac which the worm possesses drops off, and the minute head of the worm becomes attached to the lining membrane of the digestive system.

Once fixed in this position, the circle of development may be said to be completed. A process of budding sets in, and joint after joint is produced, until the adult tapeworm, measuring, it may be, many feet in length, is developed; whilst each egg of this full-grown being, if surrounded by the requisite conditions, and if provided with a pig-host to begin with, will repeat the marvelous life-history of its parent. The fact of a double host having to be provided for the due development of tapeworms is not peculiar to the production of the species inhabiting man. All these parasites pass through an essentially similar series of developments. The cystic worms or immature tapeworms, which cause the "meals" in the pig, become, when eaten by man, the common and adult species of human tapeworm. The cystic worms man obtains from underdone beef are developed within his economy into a tapeworm of an-

other kind. The young parasites which reside in the liver of the rabbit, and which attain no higher development than that seen in the pig or ox, become, when swallowed by the dog or fox, the special tapeworm-tenant of these animals. The cystic worm of the mouse develops into the tapeworm of the cat; so that the dog, fox, and cat do not enjoy an immunity from enemies, but actually acquire disease from the victims they so ruthlessly pursue.—*Dr. Andrew Wilson.*

Soil of the Sandwich Islands.—A traveler writes: "The soils upon the various Islands differ very materially, although all are very rich. The soil upon this island is a wonderful formation of great fertility; in color it is dark red, pale red, and bright red, and resembles fine brick-dust, or ground unmixed red paint in appearance, yet differs from both; it will dissolve in water like sugar, leaving comparatively no grit; it is neither sand, loam, or clay; sticky, beyond conception, and the soles of farmers' shoes never wear out, and horses want no shoeing; no plow, shovel, or hoe can be made to scour, not even the share or point of a plow can be brightened by use, although it may be forced through the dry or wets and by twelve mules or fourteen strong oxen; at intervals of accumulation it has to be cleaned from the plow with a two-handed iron or steel scraper, and strange as this may appear, this same accumulation when scraped from the plow blows into the workman's face a fine dust, and on windy days the whole atmosphere is reddened with clouds of dust that enters all places; it penetrates the lungs, eyes, etc., with an annoyance akin to the small dust of Egypt."

"Notwithstanding this soil is so light, and at the same time so sticky as to float on and with the wind in its natural state, it offers the strange anomaly that the waters of the streams have no power to wash or wear their channels larger."

Lieutenant Schwatka's search party for the remains of Sir John Franklin's expedition endured a cold which at one time fell to 71 degrees below zero. The lowest degree of natural cold ever observed was, according to Humboldt, 76 degrees below zero, recorded by Wrangell as experienced by him at Yakutsk, Siberia.

Working the Soil in England.—Professor Roberts, of Cornell University, says: "Herein, I am satisfied, lies the secret of England's success in raising larger crops. It would take away the breath of a prairie farmer to hear even an Englishman's enumeration of the 'spuddings,' the 'grubbings,' the 'twitchings,' the harrowings, the cross-harrowings, the rollings, and crushings that a heavy clay field is subjected to before it is considered ready for wheat. What is this all for? Simply to unlock the full store-house of nature. That it is full, has been proven time and again. By actual analysis, it is found that an average soil contains,

in the first six inches, plant food enough for from fifty to one hundred and fifty full crops of grain. I do not desire to discourage the purchase and use of fertilizers; but what I do protest against is, purchasing on time commercial manures, at forty dollars per ton, which are really worth only twenty-five, to enrich cloddy fields already fairly rich in plant food—locked up, it is true, but there, none the less—only waiting a little judicious application of brain and muscle to set it free.

"If these hastily-jotted facts and impressions are the means of inducing my fellow-farmers to remove some of the useless trees and fences, or to give the fields an additional cross-harrowing or two before casting in the seed and asking the Lord to bless the labor of their hands, my object will have been attained."

Our Agricultural Progress.—Mr. S. B. Ruggles, of New York, has completed a work on the agricultural progress of the nation in cheapening the food of America and Europe. It exhibits a growth in cereal products from 615,000,000 bushels in 1840 to 802,000,000 in 1850, 1,238,000,000 in 1860, 1,387,000,000 in 1870, 2,187,000,000 in 1877, and 2,431,000,000 in 1879. The annual product increased from \$3,965,000,000 in 1850 to \$7,977,000,000 in 1860, and \$11,000,000,000 in 1870, yielding, after paying for labor and wages, a net amount of \$2,170,000,000, being nearly 20 per centum on the total. The book states that there are 400,000,000 acres of land immediately available north of the Ohio River, which can produce in wheat or other equivalent cereals at least 4,800,000,000 bushels annually to meet the demands of a greatly increasing population.

The Origin of the Diamond.—M. J. A. Roorda Smit has in the *Archives Néerlandaises des Sciences Exactes* a paper on the diamond mines of South Africa. He states that the diamond is found in a primitive gangue of volcanic origin, the presence of a double carboniferous silicate being a characteristic of these mines, which he regards as extinct craters of volcanoes. His hypothesis is that the diamond is of Plutonic origin formed at the expense of organic matter under the influence of great pressure, and at a high temperature. The recent artificial production of the diamond appears to confirm this view. M. Meunier states in the *Comptes Rendus* that he has produced crystals of spinel, and he believes periclase and corundum, by the action of steam on the chloride of aluminium in presence of magnesium at a red heat.

Will Pigs get Drunk?—A California newspaper is responsible for this: All the hogs and pigs in Joseph Perrin's ranch, four

miles below San Francisco, went on a pig bender recently, which happened in this wise: Several casks of native wine had been placed outside the house and facing the barn-yard, and it is supposed that some of the hogs in rubbing against one of the casks knocked out the spigot and caused the contents to run out. The wine formed a pool in a depression in the ground and around it all the hogs, little and big, about the premises, to the number of about thirty, congregated and drank their fill, and before any person about the place was aware of what had happened, all the porkers were drunk and going through the queerest antics imaginable. Some were frisky and full of play, others belligerent and swaggering around hunting up fights; some maundering around in an imbecile way, walking in a cork-screw style, and tumbling over the least obstruction that lay in their path, while several of the larger hogs, that had managed to get on the heaviest loads, were drunk and incapable of motion. Those who saw the queer performance say it was the most apt illustration of the saying, "drunk as a hog," that they ever witnessed, while the inebriates acted wonderfully like human beings in a similar state of debauch. It seems that even pigs can give us a practical lesson in intemperance.

Gould's Comet.—Prof. Klinkerfues, of Gottingen, has published a letter on Gould's comet, discovered last February at Cordova. His object is to point out that the probable identity of this comet with those seen in 1843 and 1868 need not be rejected because it does not appear to have been seen, although so conspicuous an object between those years. So nearly does it approach the sun (within, indeed, about 100,000 miles of its surface) that the resistance to its motion when at perihelion is likely to be sufficient to produce a very considerable diminution in its periodic time, the case being, in fact, one of resistance from the sun's atmosphere itself, and not merely, as has been conjectured in the case of Encke's comet, from the ethereal medium existing in space. Hence there is nothing extravagant in the supposition that the resistance of the part of the corona within which the comet passes may be quite sufficient to diminish its period of revolution from 175 years to 37 years. Carrying this view still further back, Prof. Klinkerfues contends that it is probable that the same comet may be identical with one seen and described by Aristotle in the year B.C. 371, when that philosopher was only thirteen years old and still living in his birth-place, Stagira. He considered it likely that while the period of revolution from B.C. 371 to A.D. 1668 was 2,039 years, it was diminished by the resistance of the sun's atmosphere, first to 175 and then to 37 years; and, further, that it has at the late passages through perihelion been again decreased to 17 years.



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H. S. DRAYTON, A.M., *Editor.* N. SIZER, *Associate*

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THE MODERN PESSIMIST.

A CRITICISM.

EDITOR OF PHRENOLOGICAL JOURNAL:—I find in your February Number some criticisms on the Modern Pessimist that perhaps need a little criticising. You claim "that man has not deteriorated; that the average for mind and body, for character and capacity, for power and resources, is higher than it ever was before." "That the Modern Pessimist consults the statistics of crime and pauperism, disease and death, and makes them the text of gloomy reflection and discouraging predictions. The growth of population, the increase of wealth, etc., are practically disregarded in his calculations."

Now I would ask you, Mr. Editor, if the modern pessimist, as you are pleased to call the scientific investigator, does not consult the statistics of crime and pauperism, disease and death, where is he to go for data upon which to base his calculations of the progress of mankind? If there are any pessimists who disregard the growth of population, etc., their writings have not reached me; for in all the investigation of the subject that I have seen, "the increase of population, increase of wealth and business activity," have been placed alongside with "the increase of crime, pauperism, disease, and death," and the ratio of the increase of the latter

has overbalanced the increase of population. I think a candid investigation of man's progress in every State in the Union will prove this to be true. You may claim that the statistics are not reliable, and there is no question but this is true; but I think it is equally true that the statistics are more apt to be an under- than an over-estimate of the dark picture. In comparing the national statistics of 1860 and 1870, together with all the collections of State and society statistics, I find the increase of insanity during the ten years to reach 45 per cent.; idiocy increased during the same period 44 per cent. The increase of consumption, epilepsy, pauperism, and crime ranges from 45 to 60 per cent.; while the increase of population for the same period was but 29 per cent. Now these are the facts that I glean from all the statistics that have come within my reach, and from these data I can not feel jubilant with you over the great progress that man is making. Nor does this gloom come from a want of faith in the "life beyond" that you claim is due to "the philosophical teachings of the day." But I do claim "that men are miserable, brutal, and degraded by reason of their very constitutions," but that their very constitutions may be changed by a proper system of living in obedience to natural law, and if you do not believe this, Mr. Editor, then I have misread your teaching for the last two years.

If you will consult the exhaustive little work of Mr. Dugdale, of your State, on the Jukes, etc., you will find a pretty clear demonstration that intemperance, crime, and pauperism are all found in persons with deteriorated constitutions and with low vital power, and all the teachings of the PHRENOLOGICAL JOURNAL for the two years past (the time I have had access to it) has been directed to the enforcement of the thought that the tendency of our civilization is to produce deteriorated physical constitutions with low vital power, and for the manly stand the JOURNAL has taken against the vices and corruptions of the age, I have cher-

ished it above all the periodicals of the day.

And in your editorial on "Public Servants and Partisan Officials," I really believe you show a little leaning toward pessimism yourself, for you say: "We can conceive of a man being a good republican or a good democrat and doing official work well; but so far as experience goes, during the past half century, the history of our civil affairs presents so few of such instances, that we should not expect a scrupulous discharge of duty from any party man elected to office." Now, while this is as true as preaching, it is equally true that with all the great progress that man has made in this "land of the free and home of the brave," none but a partisan can be elected to high official position. The trouble with our nation seems to be, that our whole educational system is directed to securing mental discipline, to the great neglect of the physical and moral man, and while this is giving us precedence in mental culture and "business activity," the physical and moral development of the young is being neglected. Then, if we must disregard the pessimist, as you say, do not let us overlook his facts; but rather make them the basis of our investigations, and strive to remove the causes from society that are standing in the way of the continued progress of man.

Very sincerely yours,

DR. T. W. TAYLOR.

REPLY.

We publish Dr. Taylor's letter entire, because it is written with candor, and although on the pessimistic side, is without the bitterness we usually find in such deliverances; and at the same time expresses well the view of a large class of intelligent people. He appears to make a strong case, and appeals in a general way to statistics. We, however, except to his method. An eminent authority has said that one can prove anything by statistics, as it depends upon how you

select and apply them. This assertion is well illustrated in the controversy now going on in medico-scientific circles with reference to the nature of yellow fever, and also in the conflict on the subject of vaccination, both sides—the advocates and opponents of the Jennerian system—bracing themselves upon "the records."

Statistics, to be of value in an argument, must be employed discriminatingly, not by wholesale. Take, for instance, the statistics of insanity. We have known it to be publicly asserted by lecturers on social science that high education and mental refinement tended to the increase of insanity, especially among women. The officers of institutions for the insane tell us, however, that their patients are chiefly from the middle and unlearned classes; that men predominate; and that the proximate causes in the great majority of cases of mental unsoundness are not high education, but low habits, intemperance being the grand destroyer of physical and intellectual equilibrium.

Among the "Notes in Science and Agriculture," in the last February Number, was an item headed "Health of College Girls," which is of weight in considering the effect of liberal culture upon American women. Statistically it shows that those trained at a well-appointed college have a better prospect of health and longevity than the average school-girl.

At a meeting of an Eastern medical association recently, the subject of insanity was discussed, and certain of the members took the ground that mental derangements were largely on the increase, as compared with the growth of population. Reference was made to the returns of certain public institutions, and it was found that although there was an

increase in the number of patients, when compared with the actual growth of population, the proportion is less than it was ten years ago.

If we study the statistics of crime and pauperism in our own country, we should consider the influence of immigration, which has been for a half century, and still is, bringing annually to our shores thousands of vice and crime-bound wretches. We should compare our conditions socially and morally with those of European countries. Further, if we are desirous of knowing whether there is any general improvement, any advantage which the present day has over the past, let us scan narrowly the state of affairs politically, socially, and individually, a hundred years ago, or two hundred years ago. Let this be done with candor and intelligence, and the result we believe will certainly be that men to-day enjoy more personal freedom, are better educated, better governed, and have a higher appreciation of the uses and purposes of existence than in the centuries past.

It seems to us that one chief cause of pessimistic utterances, is the ideal view entertained by those who make them concerning human affairs. Things are not what they ought to be, and, therefore, the many gloomy and cynical laments over social conditions.

GREEN OLD AGE.

IF there be any indication of social advancement in these modern days which will compel the assent of even a cynic, if he could be brought to consider it frankly, we think it consists in the great number of aged persons, men and women beyond the proverbial three-

score and ten, who are alert and strong intellectually and able to do efficient work in public or private business or both. The really great men, especially in public life abroad, are old. At home, when we look around us and observe those who are at the helm of affairs commercial and political, we are surprised by the large proportion of heads mantled with silver.

A young man remarked to us the other day: "The old fellows don't get out of the way now as they used to, and give the young ones a chance." Our answer was, "Why should they, if they are robust and strong and enjoy their work?" No, the septuagenarian of 1881 is not the man so pathetically described as belonging to the day of the minstrel king of Israel. His strength is far from being "but labor and sorrow." In many cases he seems to be the strength and refuge of thousands.

New York's "first citizen" lately reached the twentieth mile-stone beyond his seventieth; and though from personal acquaintance we can testify to Mr. Cooper's mental freshness, it seemed to us particularly apparent in some remarks of his to a reporter of the *New York Sun*, who called at the aged philanthropist's house on his ninetieth birthday.

"First, tell me how you managed to live so long; what advice would you give to young people to help them to live to be ninety?" asked the reporter.

"I should put it in two words, live soberly and righteously," said Mr. Cooper.

When asked to amplify a little on those words, Mr. Cooper added: "One of the best lessons I ever got was from one of the oldest records of human events, where I find that man is the offspring of the Infinite Power which has given him the world, with all that in it is, to be rightly enjoyed. It is only required of

man that he should keep it and subdue it. I understand by that that the Infinite Power gives us all that is in the garden, to eat, to drink, to work, and to play. We are required not to eat too much, nor to drink too much, nor to work too much, nor to play too much. When a man eats too much, he appears like the prodigal son, who took all his portion of the loaves and fishes and went and spent it in riotous living and among harlots. He thus got into a deplorable state, and would fain have partaken of the husks that the swine did eat. That reminds me that man's very wretchedness will bring him to himself. His sufferings will teach him that he has done wrong. When the prodigal son returned to his father he was humble, and thought that peradventure his father would make him one of his hired servants. But he did not find his father harsh and unforgiving. His father did not say, 'You rascal, why have you been wasting my substance?' No; his father welcomed him, saying: 'This is my son who was dead and is alive again.' He called his people and killed the fatted calf, and gave the prodigal a welcome that even offended the son who had not gone from home. I infer from this that we are living here on earth under beautiful and beneficent laws—laws designed in infinite wisdom for the elevation of mankind. I infer that just in proportion as we live in obedience to those laws we shall have health and comfort. If we disobey those laws we shall pay the penalty. That rule holds good for man or city or community or State or nation. The penalty of disobedience must be paid somewhere, somehow, at some time."

Here is a sermon full of practical wisdom in a few words; offhand, sprightly, yet effective. Few young men could put it in a more forcible shape.

Our late friend Dr. J. V. C. Smith was another such man as Mr. Cooper as regards his mind. Ever buoyant and joyous in manner, and fresh and instruct-

ive in talk, no one, until his death, a year ago last summer, imagined him eighty-five years old.

Ah, commend us to such old fellows—we want them "in the way."

HOW THEY DECEIVE.

IT has been repeatedly stated in these columns that the object had chiefly in view, when the Institute of Phrenology was established, was the preparation of men and women as teachers of Phrenology, so that the principles of this science should be presented in accordance with the true showings of nature. For many years a horde of quacks and pretenders have been practicing upon the credulity or confidence of the public, reflecting discredit upon Phrenology, and making the work of the true teachers doubly difficult; and some are bold enough to represent themselves as students of the Institute.

We have received lately from the editor of a well-known Iowa newspaper a specimen of the dealing of one of these impostors. He offers the following as his chart to all who are willing to be deceived and pay for it:

CHART.

FOWLER AND WELLS' WORKS

Given by

PROF. D. D. ———

To

MR. ——— AND MRS. ———.

1. FORM.
2. INDIVIDUALITY.
3. MEMORY.
4. COMPARISON.
5. HUMAN NATURE.
6. BENEVOLENCE.
7. VENERATION.

8. FIRMNESS.
9. SELF-ESTEEM.
10. CONTINUITY.
11. INHABITIVENESS.
12. PHILOPROGENITIVENESS.
13. AMATIVENESS.

QUALITY.

SO MANY OUNCES OF BRAIN
ADAPTED.

THE STRENGTH OF THE NERVES.

PRICE ONE DOLLAR.

This, on its face, is a fraud, and can deceive only those who are uninstructed in the rudiments of physiological science and have never seen a standard treatise on Phrenology. A very brief handling by the Western editor soon drove this cheat out of the community in which our friend's paper circulates, and it has very likely impaired the fellow's prospects of gain in a wide region of country.

We wish it were understood far and wide that all those who claim to lecture under the auspices of Fowler & Wells, or the "New York Institution," or the Phrenological Institute, can show a certificate or diploma signed by the officers and instructors of the Institute and duly sealed. Of the two hundred and more who have attended the sessions of the Institute and received its diploma on their graduation, all have not gone into the field as lecturers and teachers in Phrenology, for many were settled in business or professions, and came to the Institute for the sake of its intellectual culture; but of those who have gone before the people in the character of phrenologists, scarcely one has been reported to us as an unworthy disciple of Gall, Spurzheim, and Combe, and, as a whole, they have helped to elevate Phrenology in the esteem of the people and done honor to the Institute.

There are some lecturers, not students of the Institute, whose intelligence, learning, and skill entitle them to general respect; but we have reason to believe that their number is very small. Such men win confidence wherever they go, and the people know them too well to need any admonitions on their account. As a rule, however, we would advise that when a traveling examiner claims to be connected with us, or to have been educated at the Phrenological Institute, he be required to show his authority or his diploma.

THE PORTRAIT OF MRS. HAYES.

THE stand taken by Mrs. Hayes regarding wine in the White House commanded our heartiest admiration, and we were disposed in the late canvass to advocate her possession of the executive mansion for a second term. But the vagarious ways of politics have otherwise determined. The question now rises, will Mrs. Garfield adopt the excellent policy so successfully carried into effect by her predecessor? We trust so; for such a noble and beautiful example in a matter involving most stupendous moral issues to a great people should not fail of practical imitation.

We are pleased with that portrait enterprise which the women undertook, for it shows their appreciation of Mrs. Hayes, and we trust that it will be so vigorously carried on that before long every American home will have added to its decorations an engraved copy of Mr. Huntington's presentment of the symmetrical and winning features of Lucy Hayes.

But a further effort suggested by this portrait affair is now entertained by the

Woman's National Christian Temperance Union. It is to found a grand memorial in the form of a permanent treasury, out of which temperance literature shall flow for the million, and to be known as "The Mrs. Hayes Fund." Among those just appointed to have control of this fund, are Neal Dow, Miss Willard, Gov. St. John, Mr. Joseph Cook, and Congressman Blair.

IGNORANCE OR PREJUDICE?

A CORRESPONDENT is much exercised over an article in a late Number of the *Christian at Work* on "Atheism in Colleges," because in it occurs the following assertions: "Physical facts are to be determined by patient investigation in the realm of the physical, just as Sir William Hamilton overthrew Phrenology, not by metaphysical speculation, but by showing that the brain does not conform to the convolutions of the cranium."

We can assure our anxious friend that the person who wrote this statement has simply avowed his ignorance, both of the facts in the celebrated Hamiltonian controversy, and of the nature of Phrenology, or he has given utterance to the prejudice which widely exists in educated but unscientific minds against Phrenology. If he will but take the trouble to read the voluminous correspondence between Sir William Hamilton, Dr. Spurzheim, and the brothers Combe, and the propositions which Hamilton laid down as the grounds of his attack, he will be astonished by the mistakes the Scottish metaphysician made with reference to anatomical science, and by the rancorous expressions which were prompted by his religious opinions.

The *Christian at Work* writer needs

to be told, it seems, that Sir William Hamilton "overthrew Phrenology" to so great an extent that most of the very facts of cerebral physiology which he repudiated, because they were advocated by phrenologists, are to-day recognized in anatomical and physiological sciences. We only ask him to read Spurzheim on the "Anatomy of the Brain," in an edition of forty-five or fifty years ago, and compare him with authors like Gray, Turner, and Dalton of to-day, and then, with the candor which is usually exhibited in the columns of the *Christian at Work*, express his opinion. We are confident it would relegate the assertion which we have quoted to one of the mental states posited in our title.

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.

MARRIAGE ADAPTATION.—Would you advise two persons to marry who are intellectually, morally, and socially adapted; but both have the vital-mental temperament, and are also fair?

Answer: The vital temperament is not an objection certainly, but the duplicature of the mental is not altogether favorable; and we are inclined to think that the other condition which you term fair, and which means light complexion, is not to be unfavorably interpreted. The best way to settle any doubt is by obtaining a phrenological description.

DISINFECTANT FOR CATARRH.—A. M. —If you mean a wash for the nose much care is necessary in what is employed, lest injury be done to the delicate tissues of the nasal passages. A very mild solution of carbolic acid

may be used, or weak sulphur-water. Care must be taken in preparing these, for if too strong, injury may result.

ROCKING THE BABY.—C., Boston.—We are opposed to the practice of rocking babies for the reasons: (1). It is unnecessary; an infant properly treated will sleep better in a quiet bed. (2). It induces habits of restlessness in most children, so that they must be carried about, amused, and interested to keep them in a cheerful temper. (3). It is not infrequently a cause of disease to the brain or nervous system. A robust baby may stand the jolting and shocks, but a weak, big-brained child is likely to be harmed by the methods of the ordinary nurse in swinging a cradle.

AVERAGE MEASUREMENTS.—*Question:* Will you please state in the *PHRENOLOGICAL JOURNAL* about what the average measurement is from the opening of the ears over the brow and over the top of the head of heads measuring 22, 22½, and 23 inches, respectively.—**READER.**

Answer: We do not claim to have an absolute proportion, for reasons stated in our last Number (see "Cabinet Colloquy," No. 11); but the average results of an extensive series of examinations may be tabulated thus: A head 22 inches in circumference to be in good proportion should measure between the ear openings and around the middle of the forehead 12½ inches; while over the crown, say at the middle of Firmness, 13½ inches. A 22½-inch head should be 13 and 14 inches; a 23-inch head 13½ and 14½ to 14½ inches.

DIET FOR BRAIN WORKERS.—L. R. W.—Brain workers need food which is abundant in phosphatic matter. Bread made from the whole wheat-grain, oatmeal, eggs, milk, fish, pease, beans, are well stored with such material. To reduce your flesh why not try the milk plan advised in the March Number? Or take but two meals a day.

MIND AND IMMORTALITY.—*Question:* What relation does mind sustain to matter? Is the brain the seat of the mind, and is the mind wholly dependent on the brain for its manifestations? If yes, then how can there be immortality, as we do not believe that mind and matter dwell together in the world beyond? If no, then where is the line of separation between body and soul, and how will mind act or find recognition?

Answer: The brain is simply the organ of the mind in our scheme of mentality, and the latter is only known through its phenomena. What its nature or essence is we have not been able yet to learn, and the more we study into that the more we become befogged. Why may not

mind and matter, the spiritual and physical, be associated in the other world? We see no impossibility in that. "With God all things are possible." No one has been able to determine the line of separation between mind and body; they are so interblended in our life that absence of mind is loss of consciousness and action to the body. The question of immortality we must leave to your own further study and decision.

ORGAN OF CONTINUITY.—*Question:* Please to let me know if the organ sometimes known as Concentrativeness has received a new name within the last year or two which is commonly accepted by phrenologists as the proper one. Is there any objection to calling it Ambition?—B. F. H.

Answer: The organ as described by Mr. George Combe, see "Brain and Mind" or the "System," is styled Concentrativeness or Continuity. Some late phrenologists think that the term Continuitiveness is better. As for calling it Ambition, you will find that by reading the description in the books of the action of Approbativeness and its neighboring organs, that the quality of Ambition grows out of them, Approbativeness furnishing the more important influence in the combination.

TYPE-WRITERS.—Two are used in this office, and have been for some years. They are of much service in expediting business which requires a great deal of writing; since an amanuensis, who is expert in fingering the keys, can write twice as many letters as he or she could in the old way. A tolerable degree of skill in using the type-writer may be obtained in three months. As for the wages paid to type-writers, that depends upon other qualifications as well as upon the mere ability to use the machine with speed. The best writers get \$10 and upward. A first-class machine costs \$125. We can supply them.

REDEMPTION OF MUTILATED NATIONAL BANK-NOTES.—A National Bank is required by Government to redeem its notes when presented, if in a mutilated or fragmentary condition; if less than three-fifths of a note are left, the person offering it for redemption must prove or give his affidavit that the missing parts are destroyed.



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

CONSCIENTIOUS LIARS.—There are many people who think they are conscientious, and who really try to be so, but are fearful

liars; and that, too, without being alive to the fact. If they would take a retrospective glance over their lives from their first days of accountability, they would be overwhelmed by the extent of their lying. I think one's first recollection of a conscientious lie will take him back to the time when he was a child with the mumps, measles, or whooping-cough; or, may be, only a hard cold, when an anxious parent mixed up a filthy lot of drugs, or possibly castor-oil, and told him to be a good little darling and take the medicine, for it was "nice and sweet," and would make him feel so much better. Of course, he believed this, and took down the horrid mixture. Then how he cried and "took on," yet after all not half so sick about the medicine, as he was angry in thinking he had been deceived. Then his Caution came in for a little unnecessary excitement. He was told there were rats in the cellar, or a big dog at the door, or an old beggar was out there ready to carry him off, or some other equally contemptible lie would excite his fears and make him keep still. Then there were promises of candy, nuts, or a toy, or something that would please his childish fancy if he would be "good." But having tried hard not to cry, and gone to sleep, dreaming of candy and toys, mixed confusedly with rats, dogs, heggars, and medicine, he awoke only to disappointment in finding all those promises a delusion. When he became a little older he was probably told that he must not do certain things, viz: not to eat any of those green apples he thought were so nice, or not to go near the currant-bushes or cherry-trees, if he did he would certainly get whipped. Of course, he went and came back after a while with his face and hands well stained, and was greeted with, "There, what did I tell you about going near that fruit?" And the boy, following the strongest impulse of his nature, namely, the imitation of his elders, replied: "I haven't been near the fruit." Then came a wrangle, and lies were exchanged on both sides; and finally he was sent from an angry parent's presence with some more lying threats, "That if he ever dared do such a thing again," etc. By this method his education continued until he became, we may say, the "boss liar" of the household. Finally his wrathful parents decided to redeem one promise; and they gave him a fearful thrashing. They taught him to lie, then whipped him for it.

I keep two stuffed birds in my gallery to redeem some of the lies of these conscientious liars. The children are generally told if they will sit right still and be nice, and have their picture taken, they will see a pretty bird fly right out of the man's box. Well, I can redeem such promises by producing the bird. But once in a while an extra nice liar comes in and the birds are nowhere. I remember some weeks ago a

minister came in with a bright little boy just old enough to notice things and understand what was said to him. The little fellow did not seem to have so much awe for the preacher as some older people do. Well, I prepared a plate and the preacher went to work to get that boy in position, was going to have him standing up, no other position would begin to do. The boy did not propose to stand. Then that preacher began to lie; told the boy to stay right there and the man would take a kitty right out of the box; but the boy did not have any use for cats just then. Then it was a rabbit, but the market was glutted; then the box was full of candy, and that changed to gum; then it was peanuts, then back to cats and rabbits; but it was of no use. Those lies were too old, had been told so much they were threadbare to that two-year-old boy. Perhaps we could have taken a picture if he had surprised the child with the truth. But who wants a picture of a child with a frightened expression?

With many children brought up by these conscientious liars, lying becomes a fixed habit and follows them through life, and they hardly realize what contemptible figures they cut. Take for example, a lady of fashion rigged out with her silks, satins, ruffles, gold, and diamonds; her wardrobe has the appearance of being worth a fortune; but what are the facts? The parts of the dress exposed may be composed of silk and satin, but the balance is sham; the gold is brass, and the diamonds paste. The idiotic fringe which is displayed on the forehead where reason ought to reign supreme, is not her own, but probably from the head of some poor girl who needed money more than hair. She starts out to make a fashionable call. Mrs. Bonton sees her coming, and says to her daughter: "I declare, Lucy, there comes that horrid Mrs. Hightone with all her gaudy, peacock airs. I wish she knew enough to stay at home. You don't know how I do detest her. But, sh—! here she comes. Why, how do you do, Mrs. Hightone (a warm clasp of the hand accompanies a kiss)? I am so glad to see you; why have you not called before? I really began to think you had forgotten us." Then Miss Lucy gives Mrs. H. a cordial greeting. Then they begin to swap lies. Mrs. Bonton says: "How nice and well you are looking, Mrs. Hightone; and how rosy your cheeks are! What a fine shawl you have; it is a genuine camel's hair, is it not? Now, dear Mrs. H., do tell me where you got it, and how much it cost." Mrs. H. replies: "Mr. H. was in the city a few days ago, and called at Field & Deiter's to get me something for a present; he happened to see this shawl, and as it was the only one of this quality and pattern they had, they let him have it at a bargain. Now, how much do you think it cost?" "Oh, really now, I could not guess,

but he certainly did not get it for less than two hundred dollars; now, did he?" "Well, yes, a little; it was only one hundred and fifty." "You don't say; well, that certainly was a bargain."

After some choice bits of scandal have been detailed on both sides, Mrs. H. takes her leave, refusing several very earnest invitations to remain to tea, and at parting is reminded of her promise to call again soon, and "make a good long visit."

When the front door has closed on the departed caller, mother and daughter drop their masks made up of pleasant smiles and gracious attentions, and Lucy is greeted with: "Well, now, isn't she the most deceitful, lying, contemptible old hag that ever you saw, with her false frizzes and painted cheeks, trying to appear young? I wonder if she thinks we are fools! Why, just see what a lie she told about that old shawl. There isn't a camel's hair in it, only an imitation that you can buy anywhere for thirty dollars. But it looks well anyway, and lots of folks don't know the difference. I wish I could afford to get us some."

"But, mother, what made you ask her to stay to tea? I was afraid she would, she was here so long."

"Why, Lucy, of course I had to be polite and treat her well; but I did not want her to stay any of the time."

Thus Lucy is being educated by example, and proves an apt scholar; for when John, her beau, calls she is smartly decked out, and has put on the mask she wears for company. And John has not smoked, chewed, or drank for half a day, and has perfumed his clothes and breath. He, too, has adjusted his mask, and calls dressed in the most exquisite torture. Now, see them; could anything be more lovely! There are no frowns on either face; no slang is used. And what a pleasure it seems for each to please the other. What a splendid pair, and how nicely mated!

John and Lucy marry. All goes well for a brief honeymoon. They begin to get acquainted, and occasionally get a peep under each other's mask. After a while they remove them altogether, and only put them on when they go away from home, or some one else is present.

Now, look at them, soured by disappointment; no longer trying to please each other. John chews and smokes, drinks and swears, no matter if Lucy does know it. And Lucy is no longer tidy, but appears in ragged gown, disheveled hair, and sour temper. They are both querulous, impatient, and miserable in each other's company.

All the adulterations of everything in commerce; all political chicanery; all misrepresentations everywhere, are merely an outgrowth of this curse of all educational curses—*deception*.

There is no excuse for it. If we can not tell the truth, let us keep still and not say anything. A habit commencing in infancy and strengthened by culture and example in childhood is hard to overcome. But when we see the effects of it everywhere, we ought so to teach the next generation the folly of deception that they, by a right education, may steer clear of the shoals on which their elders have drifted.

This picture is not overdrawn. We should cultivate charity for these conscientious liars; they are not so much to blame. The majority of them do not realize what liars they are. And yet the little "white lies" and common deceptions of every-day life are worse than the regular out-and-out falsehoods; because these acted lies are seeming truth, and pass for legal tender; while a big, intentional lie shows what it is on its face, and passes below par.

Moral: Never deceive the children. Make few promises, and keep them all. To a child's importuning, let your answers be, Yea, yea, and Nay, nay.

DE L. SACKETT.

RELIGION AND THE LITTLE FOLKS.—

There are few who see the necessity of wisdom or gentleness in dealing with the little ones, the impression is so general that one does not need to know much to teach children; and that to keep them warmly clothed, with enough to eat, and to send them to school, comprises all the duty of parents. Many consider them as blank pages to be written on at pleasure, making no allowance for ingrained virtue or fault, for peculiarities and diversities of temperament. Many zealously refrain from giving any religious bias or teaching whatever, believing that religion is one thing apart by itself, and the daily, hourly life another; and that when of proper age they "get religion," that's enough. Meanwhile, the little one has stored up thoughts, ways, and habits that are constantly warring, tempting, and conflicting with the spiritual life. It is easy to teach little children of Jesus. I do know whereof I speak, both as a teacher of children and as a mother. You can get the simple idea that *God* is so firmly in their minds, that no shock of infidelity can reach it; and their simple faith will often shame you, and you will think, verily, "out of the mouth of babes and sucklings He hath perfected wisdom." As soon as they realize that they are, or their minds begin to inquire, and their busy hands to handle the wonderful things around them, they can even understand that nothing comes by chance; that there is a loving Father in Heaven who doeth all things well. I have heard the idea of teaching children these things objected to on the ground, that we should not teach what we do not understand ourselves. Ah, poor human wisdom! What, then, can one teach? The wisest and

the most learned realized their ignorance, their helplessness. In the commonest things of life there are heights and depths that we can not explore; or, rather, have not explored. In teaching the little folks of God and devotion, we should not do it with mystery or superstition, but bring our religion into the daily life in a natural, easy way, without worrying about forms and ceremonies, that are only outward tokens; remembering, "That is not first which is spiritual, but that which is natural, and afterward that which is spiritual; for God is all and in all."

MRS. W. W. P.

SPIRITUAL TELEGRAMS.—The instances of spiritual intercourse related under the above title in the *PHRENOLOGICAL JOURNAL* of October, 1880, go to substantiate the firm belief that the bonds of fellowship must be close, such as can only exist between man and wife, parent and child, brother and sister, to convey a message on the mystic wire over one of nature's indissoluble problems. And it must be readily noticed that the consequent fulfillment of such messages appertain to a sad fate. In this we may be blinded, to a certain extent, as incidents of misfortunes are given to the general ear, while those of a happy nature remain with the individual. May it not be possible that dreams can prove true, in which the personages have shown no more than ordinary friendship, or even have never spoken to each other, but left impressions upon themselves by silent admiration? Let us see. Residing in Pittsburg, Pa., at the time, I was stopping at a house where I noticed a young man of a very quiet and pleasant disposition, and although we had never exchanged any words, my estimation of his bearing was not of a slight degree. I had contemplated becoming a member of the gymnasium, and made all necessary arrangements. The night previous to my initiation, while wrapped in profound sleep, the institution stood before me, and the young man sitting on a spring-board. I naturally passed the whole as a baseless fabric of a vision, proceeding from paying too much thought to so slight a matter. But how was I astonished on entering the place to find the different apparatus *precisely* as seen when the mind was wandering in a castle of deathlike silence. And there sat the young man on the spring-board, on the same spot, holding the same position, and looking at me with the same serene countenance as when I saw him in my sleep. This dream did not only differ from others in being realized, but that I witnessed everything with the utmost vividness. What I touched was touched with a firm and lifelike hand. There were no momentary visions; all was stationary and fixed. Nothing awayed, nor appeared any way unnatural, nor of such stuff as dreams are commonly made of. On my awakening I could have drawn the most accurate picture of the in-

stitution, giving every little article its allotted place. Had I to decide in which of the two visits I witnessed the gymnasium with the clearest sense of comprehension, I should prefer my night visitation.

HUGO WORCH.

ACKNOWLEDGMENTS.—Since last September I have been reading the *PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH*, and I feel that I have obtained more practical knowledge from that source and more common-sense than I obtained from all the newspapers I ever read. I am glad that there are such opportunities presented to those who are willing to learn. How little we know of ourselves! and there is so much to learn. I thank God for such men as Gall, Spurzheim, Combe, Wells, Fowler, Sizer, and Trall. I feel that all your work is work that promotes the happiness of mankind. G. F. W.

ANOTHER writes: I have little education, but a great interest in the study of Phrenology; having had the pleasure of being taught by a teacher who is a practical phrenologist, I have obtained considerable information on the subject. It is certainly the best and most wonderful system of mental philosophy, as it shows man his true relations to God and his fellows. To me the word Phrenology means morality and solid Christianity; show me a man who believes in Phrenology and obeys its teachings, and he will be a lover of the Being who formed him, and will have charity—that greatest of virtues—for his neighbors.

STILL ANOTHER: I am a young man of twenty-three, born in New Jersey, but am now a settler in Western Kansas. One of the greatest occasions in my life was a glimpse of a Number of the *PHRENOLOGICAL JOURNAL*. I studied it till I nearly knew it by heart. As I became older the *JOURNAL* became my companion and guide; it led me to abandon tobacco, which, from habit and boy's caprice, I had begun to use. It filled me with noble aspirations, and helped to make me a hygienist. I feel that if I ever know anything in life I shall owe it to the *PHRENOLOGICAL JOURNAL* more than to any other agency.

PERSONAL.

DR. E. H. WASHBURN, rector of Calvary church, New York, and one of the brightest intellects of the Episcopal Church, died in February last of malaria. A great loss to Christian society through that pest of city life—sewer gas.

MRS. MARY A. LIVERMORE recently lectured in Cincinnati with great success, and the *Commercial* says: "The impression she always leaves is one so good and wholesome, that it is to be

hoped she may return for many a year to delight and instruct her hearers."

MISS IDA LEWIS, keeper of the Lime Rock Lighthouse, Newport harbor, saved the lives of two men who broke through the ice recently. This rescue makes in all sixteen or seventeen lives that have been saved by the heroine of Lime Rock light.

DR. TANNER has found an unsuccessful imitator in a baker of Königsberg, Germany, who undertook to fast forty days, with, however, an allowance of a bottle of beer every fourth or fifth day. At the end of the twenty-fourth day he was so weak that the police interfered, and compelled him to take nourishment. Tally one for water.

MR. JOSEPH WHARTON, of Philadelphia, has given \$150,000 to the University of Pennsylvania to found a department to instruct young men in the theories and principles of business. Very good. Let the theories be practical and the principles of the highest moral honesty.

AT LENGTH the revolutionists of Russia have succeeded in assassinating the Czar. What a wretched life the poor man, despite the purple, has led! And is there no way to stem tyranny but by the slaughter of royalty?

WISDOM.

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

INDEPENDENCE is essential to true manhood.

HE who labors for mankind has already begun his immortality.

NEVER does a man portray his own character so vividly as in his manner of portraying another's.—*Richter.*

THE first condition of human goodness is something to love; the second, is something to reverence.

WICKED men stumble over straws in the way to heaven, but climb over hills in the way to destruction.

THERE never was a thoroughly happy marriage where the husband was master and the wife his servant.

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.

To rejoice in another's prosperity is to give content to your own lot; to mitigate another's grief is to alleviate or dispel your own.—*T. Edwards.*

If thou wouldst conquer thy weakness, thou must never gratify it. No man is compelled to

evil; his consent only makes it his. It is no sin to be tempted, but to be overcome.—*Wm. Penn.*

THIS world is so large, so full of good things, and there are so many avenues to prosperity for every man to walk in, that no excuse can be given for being envious of another's success.

ONLY half truths

Are dangerous! of them, my soul, beware!
Look to it that they cheat thee not with shams,
And flattering, specious forms of lower good,
When the supremest good is in thy grasp,
Or may be for the reaching after it.

TRUTH, when it is won, is the possession of the whole nature. By the action of the whole nature only can it be gained. The king must go with his counselors at his side and his army at his back, or he makes no conquest. The intellect must be surrounded by the richness of the affections and backed by the power of the will, or it attains no perfect truth.—*Phillips Brooks.*

MIRTH.

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

"SAY, John, is your sweetheart a factory girl?"
"Yes, William, satisfactory."

THE funniest patent medicine is the "humor pad," made expressly to tickle the ribs of the gloomy. We furnish an assortment of them monthly. N.B.—No quackery.

SHE said, "Oh, yes, I am very fond of little boys," and as a snowball struck in the back of her neck, she added, "I feel as though I could eat a couple this minute, boiled."

A DUTCHMAN says that his neighbors are "te vorst neighbors people dot never vas. Mine little pigs und mine hens come home mit dere ears split und todder day two of dem come home missing."

DR. ADAM CLARKE tells of a congregation that was amused by a break of the minister in reading one of the Psalms, "that he might take a pinch of snuff," as the lesson recommenced with the words, "my soul cleaveth unto the dust."

A LITTLE girl, the daughter of a clergyman, was asked: "Sadie, does your papa ever preach the same sermon twice?" After thinking a moment, Sadie replied: "Yes, I think he does, but I think he hollers in different places."

"WHAT? twenty-five cents a pound for sausages? Why, I can get 'em down at Schmidt's for twenty cents!" "Vell, den, vy didn't yer?" "Cause Schmidt was out of 'em." "Vell, uv I vos owit of 'em I sell 'em for dwenty cents, doo."

DIETETIC philosopher: "There stands the mince-pie; here sits the man. The former is intact; the latter smiling and amiable. Time passes. The pie has disappeared, but the man is still there. But where is the smile and amiability? Alas! they have disappeared—with the pie."

A GENTLEMAN was complaining on 'Change yesterday that he had invested a rather large sum of money in Wall Street and lost it all. A sympathizing friend asked him whether he had been a bull or bear. To which he replied: "Neither. I was a jackass!"

ONE of our wholesale dry-goods houses has a new clerk whose father from the country went in to see him the other day and was surprised to learn that all the salesmen had nicknames. He asked the floor-walker why his son was called "Jury"? "Oh," was the reply, "he is always sitting on cases."

FAITH.

"SURE, doctor, I be allin'

With the rheumatiz that bad,
I bates me poor auld wife
Till she almost makes me mad.

"Well, Pat, take this prescription,
Rub with it thrice a day.
And when it's used completely up
You may pass again this way.

"Could ye give me the likes o' that paper,
For, doctor, the pain, sure, has quit:
I've rubbed that same piece of paper
Till there's left of it sorra a bit."

E. P. WAIFER.



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.

ROSE CLIFTON. By Mrs. E. J. Richmond, author of "The McAllisters," "The Jeweled Serpent," etc. 16mo, pp. 426. Price, \$1.50. New York: National Temperance Society and Publication House.

In the opening chapter we are introduced to

the chief character of the book in the person of an orphaned, destitute little girl of twelve, who runs away from her dead mother's room in a New York tenement-house to avoid being taken to an institution. Gets into a baggage car without knowing what she's about, and is carried off many miles from the city. Wandering in the country town where she is set down, she finds a home with a seamstress, who discovers in her a rare talent for embroidery, which Rosa's mother in her necessity had trained. The relations of the seamstress are intimate with the leading towns-people; and in the course of a story, which brings out many thrilling incidents, in which the influence of intemperance upon society and individuals is sharply illustrated, the child she had befriended finds her mother's father, a rich and influential man, into whose home she is gratefully received as the only heritage of a lost daughter. A good deal of love-making and certain prosperous marriages are accomplished, but these we will take as sunny gleams in a good picture of real life, of which a great part is in deep shadow.

BURR'S LIBRARY INDEX, for Indexing Subjects, to aid the Student, Clergyman, Lawyer, Physician, Editor, etc. Quarto, pp. 820. half russia. Price, \$3.50. Hartford: The J. B. Burr Publishing Co.

This is certainly an admirable contrivance for the convenience of all persons who have occasion to use an index or a book of reference. It may be applied to several uses, but is particularly valuable to the lover of books. The arrangement shows a good deal of thought on the part of the inventor, and yet it is very readily understood. The letters of the alphabet are mounted on the edges of the leaves, and the subsidiary, or combination letters, are disclosed in thumb-holes and printed on the pages that are devoted to each letter. We wish to find, for instance, a note or memorandum entered under the head of Hygienic; with one movement of the hand, placing the thumb on the letter H, we open the book, run the thumb down to Y, and there we have the word. The three decided advantages of this book are the facility with which it can be used, the exact distribution of space to the words, and the perfection of its mechanical finish.

One of its chief uses is for indexing subjects, or references. We continually pass facts and ideas in reading which we wish to use again, but the place where they are written we can not recall. This is not a commonplace book, but a reference book. Supposing one to be studying Evolution, he can enter that name in the index and follow it by line references of articles and authorities, referring to such a book or such a magazine, such a page. Turning in a moment to the index we can find at once all the authorities to which we wish to refer. And the volume

is carefully calculated as to the space given each letter and each combination of letters, so that it will fill up *uniformly*.

THE DIET-CURE: An Essay on the Relations of Food and Drink to Health, Disease, and Cure. By T. L. Nichols, M.D., author of "Esoteric Anthropology," etc. 12mo, pp. 88. New York: M. L. Holbrook & Co.

To hygienists and to all who are interested in reformatory methods of eating and living, Dr. Nichols is too well known to require a special introduction. Few medical men during the past twenty years have written more sound advice for the public. "The melancholy fact that there are still people who eat and drink more than is good for them, as well as what is bad for them," prompts his efforts to instruct society in practical physiology. He writes to the purpose, and is concise in his style; hence this small treatise contains a fund of information which might easily be diluted into a volume five times its thickness, but without the slightest gain in clearness and value. He treats of the laws of health, and the conditions of its maintenance which relate to food, and drink specially; considers the best things adapted to nourish the human body. "Fruits and the seeds of plants" he claims are the natural food of man, while he does not question his capability to subsist on a great variety of food. He analyzes the character of the articles in common use, and indicates how the common habits of improper selection, cookery, and over-feeding produce sickness. Temperance, fruits, and bread will prevent most of the diseases common to people, and promote their cure when contracted.

LAWS OF HUMAN DEVELOPMENT AND PROGRESS. By T. W. Taylor, M.D. 8vo, pp. 316; cloth. Price, \$1.50. Published by E. H. Myers, M.D., Columbus, O.

In offering his book to the public the author acknowledges the fact that there is no want of treatises on his chosen theme, but alleges the not unusual reason for its appearance, that the people are yearning for correct and trustworthy information, and nearly all books on his subject have been written for the professional reader and the school-room, while the masses have been unprovided for.

The author does not, as one might infer from the book's title, treat us to long and platitudinous discussions of liberal philosophy, but furnishes a series of thoughtful chapters on the very practical subjects of training the young, physically and mentally. He deals with the life that is, and leaves teleologies to the theologian and philosopher. He sees vast possibilities of improvement and usefulness in the individual and society, and points clearly to many occasions of weakness and fault which wisdom and enlightenment could prevent.

In matters of sanitation Dr. Taylor is advanced, and his views are deserving of our respect. Among the topics, which, as a rule, are well handled, are the management of young children; ventilation of houses; food, and its preparation; the function of the skin, lungs, stomach, etc.; the organization of the brain and nervous system, school training, courses of reading, clothing; the domestic and social relations. Dr. Taylor urges the necessity of food which is largely farinaceous, and having an abundance of fruit elements to vigorous health; and also, the necessity of young men and women to know the facts involved in marriage, if they would secure that measure of happiness and high development to which a true domestic relationship is naturally conducive.

LIFE AND SERMONS OF DR. H. W. THOMAS, including the Discourses in which he is charged with heresy; and a history of the controversy with the Rock River Conference. By Austin Bierbower, A.M. Chicago: Smith & Forbes.

A very neat crayon portrait accompanies this well-bound volume, in the features of which we read the indications of a good intellectual development, large language, with ambition and self-reliance. The author of these sermons, it may be briefly stated, is a Methodist minister, well known in Chicago, being formerly connected with the Centenary church of that city, and whose liberality of opinion at length led to his impeachment for heresy in the Conference of which he had been deemed a prominent light. This collection of his sermons contains those which occasioned the charge of infidelity to the doctrines and teachings of Methodism, besides several others. Dr. Thomas evidently dislikes the constraints of rules and canons; his manner and views remind us somewhat of Mr. Swing; he aims at being undenominational, and his boldness in denouncing or diminishing sectarianism might well bring him under the displeasure of his pulpit fellows who cleave to the Church and believe in it.

PUBLICATIONS RECEIVED.

THE PICTORIAL NEW TESTAMENT FOR THE YOUNG, according to the Authorized version, with copious explanatory notes and references. Also, historical Introductions to each book; three maps; twenty-four illustrations, including a fac-simile of ancient manuscript, etc. Paper. This edition of the New Testament coming to us through the hands of a friend, is published by Benjamin West, of London. It is neatly printed and voluminous, yet sold at the extraordinary price of one penny, or two cents. A curiosity indeed of cheap printing.

FIRESIDE READINGS: A collection of Essays, Poems, and Sentences. By various authors. Devoted to the cultivation of the True, the Beautiful, and the Good. Compiled by H. A. Mumaw. Elkhart, Ind.: Mennonite Publishing Co. A good selection of pieces, quite fulfilling the statement of the title.

THE INDUSTRIAL NEWS is published by the Inventor's Institute, Cooper Union, New York. This Inventor's Institute is a worthy undertaking, now fully established, having for its object the bringing of inventors to the notice of the public, and helping them to make practical what is worthy among their devices. The *Industrial News* contains a description of the better class of patents under the control of the Institute.

AMERICAN ANNUAL OF THE DEAF AND DUMB. Edited by Edgar Allen Fay, under the direction of E. M. Gallaudet, of Washington; I. L. Peet, of New York; and others. The first Number for January, now in our hands, abounds with interesting sketches of deaf-mute life. Special articles are furnished with regard to methods in common use for the instruction of these unfortunates.

THE ILLUSTRATED COSMOS of Chicago is a monthly, having for its object the diffusion of scientific knowledge. We notice in the Number before us some notes on ancient mounds, with representations of the Engis skull.

FOURTH ANNUAL REPORT of the Society for the Prevention of Crime. A good showing of most valuable work in connection with the vice and crime of our city.

THE PURPOSE of the Civil Service Reform Association. This pamphlet contains a great deal of data affecting the manner in which public offices are conducted, and indicates the great need of reform therein.

THE LITERARY REVIEW and Eclectic Record of New and Old Publications, published quarterly by W. F. Seaman, of Omaha, is a monthly, which is conducted with much energy, and well deserves the notice of all interested in books, either as dealers or readers. The notes on recent publications are numerous, brief, and generally to the point.

FIFTH ANNUAL REPORT of the Managers and Officers of the State Asylum for the Insane, at Morristown, N. J. Our friend, Dr. Buttolph, has our thanks for the neat copy of the work done in his great institution.

THE AMERICAN ANTIQUARIAN and Oriental Journal. A late Number of this valuable contribution to scientific literature indicates prog-

ress. We are pleased that the editor, Mr. Peet, is sustained in his meritorious undertaking. A large amount of fresh data, both American and foreign, are within its covers.

APPLETON'S Railway and Steam Navigation Guide for March, is as complete, and useful to the traveling community, as ever.

PROGRAMME and Itineraries of Cook's Grand Excursions to Europe. The seasons of 1880 and 1881. Excellent opportunities are offered for visiting the chief points in England, Scotland, France, Germany, Switzerland, Belgium, etc., etc., at a minimum expense to the would-be excursionist.

WHEN the Dew-Drops Brightly Glisten, words by Mrs. Elmore, music by Joseph P. Skillee. Price, 40 cents. Speare & Dennhoff. A pretty song, expressive and sweet.

LATE Numbers of the leading juvenile monthlies—*St. Nicholas*, *Wide-Awake*, *Nursery*, and Harper's excellent weekly, *Our Young Folks*—are brilliant in illustration, and sparkling with reading of the sort that interests young people and many old heads.

PEACEMAKER GRANGE; or, Co-operative Living and Working. (The Peaceable Remedy). With Illustrations of the Familistere of Guise. By Samuel Leavitt. Price, 25 cents.

Many of our readers will remember the excellent series of sketches with the above title, which appeared in the *PHRENOLOGICAL JOURNAL* a few years ago. Mr. Leavitt has felt warranted in compiling them in a neat volume, as a contribution to social, reformatory, and co-operative effort. Copies may be obtained of the author at 5 Worth Street, or at this office.

A BUSHEL OF FUN. Gathered from the writings of Josh Billings, Mark Twain, Burlington Hawkeye man, Detroit *Free Press*, Max Adeler, and other Funny people. Price, paper, 10 cents. Published by J. S. Ogilvie and Company, New York.

THE CURRENT NUMBER of the *PHRENOLOGICAL JOURNAL* is at hand, and we find it richly laden with useful information for those who wish to study the phases of human nature. This is the best journal on phrenology published.—*Live Stock Journal*.

WITH ALL our magazine literature, our list would be incomplete without the *PHRENOLOGICAL JOURNAL* and *LIFE ILLUSTRATED*. The late Number hails us in bright clear type, and sparkling with gems of truth. Besides contributed articles are the editor's own valuable thoughts, and other excellencies "too numerous to mention."—*Wyoming* (Ill.) *Post*.

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*Very truly Yours
R. S. Storrs*

RICHARD S. STORRS, D.D.,
SCHOLAR AND HISTORIAN.

REV. DR. RICHARD S. STORRS was born in Braintree, Massachusetts, August 21st, 1821. He graduated at Amherst College in 1839, and finished his theological preparatory studies at Andover Seminary in 1845. The same

year he accepted a call to the Harvard Congregational church at Brookline, Massachusetts, and the year following he was called to the Church of the Pilgrims at Brooklyn, New York. Many New Englanders and other persons of wealth and culture gathered about him and organized one of the most influential and powerful churches in this country, and they erected on the Heights a substantial and beautiful house of worship. In the front hall of this edifice may be seen a piece of the veritable Plymouth Rock on which the Pilgrims landed. The interior of the church is splendidly decorated, and is often referred to as a model of artistic taste and elegance—a fitting temple for its handsome surroundings.

Dr. Storrs is one of the most accomplished scholars on this continent, and few men of letters are as familiar as he is with esthetic literature.

His lectures on biography and history are among the most fascinating and brilliant productions in the language, showing diligent study, comprehension of his subject, and a highly cultivated taste. His sermons, which are delivered without notes, are finished productions, fit for the most fastidious review, as they fall from his lips, and they deserve to be classed with the most polished of pulpit compositions.

His delivery is slow, distinct, emphatic, and impressive; his language is chaste and pure; his illustrations are drawn from nature, science, and history, and are strikingly poetical and beautiful; and his subjects are well-chosen and timely. Learning and eloquence, combined with great talents and a genius for the Gospel, have given him an enviable position among the foremost of our religious teachers and orators.

Fine thoughts, clothed in elegant diction, and decorated with happy and glowing illustration, attract and fasten attention. But his scholarly attainments and masterful command of thought and speech are not used for display. He is a preacher of the truth as he understands it, and aims with sincerity to bring sin-

ners to repentance. His sermons tend to make vice and all forms of meanness hateful, and to increase our love of honor, of virtue, of justice, and of piety. For nearly thirty years he has preached to an exacting and critical audience, embracing jurists, doctors, editors, and other representative men of the highest culture, and he never fails to command their attention and admiration.

When it is announced that he will lecture, no fee at the door prevents a full attendance, no hall is too large for his constituency of listeners, and they are not governed by the changes of the weather and the vicissitudes of the seasons. They know that he will have something to say, which they will be glad to hear. He has a marvelous memory; and he can readily call to his aid his knowledge of science, art, history, poetry, biography, and theology to illuminate and enforce his lesson.

Perhaps he is the best living type of the Pilgrim preachers who made Plymouth Rock their pulpit, where the waves joined in the chorus of their songs. Had he lived and preached in London in 1640, when John Milton took a hand in religious controversy, the great poet, I have no doubt, would have been one of his hearers. There are men whose loins are not so large as his [Storrs] little finger, who consider themselves infinitely superior to him, because they can make their auditors laugh and cry—laugh at them, and not at what they say, and cry, because they do not stop saying such nonsense! They mistake volubility for eloquence, and a frothy feeling of animal excitement for divine inspiration.

I can only point to a few facts which distinguish him and tend to make him distinguished. He is a born preacher—the son of an extraordinary preacher. He seems to have inherited the genius of Gospel preaching. Henry Ward Beecher said that he must be a son of temperance, because his father was the father of temperance. Dr. Storrs breathed the air of a religious atmosphere at his birth. Not a barrel of flour, but a

barrel of sermons, supplied him^o with spiritual food. The library may not have been tempting to him in his boyhood, but when he grew older and wiser, he saw the kind of pabulum on which the strong men feasted, and he fostered an appetite for similar fare. In looking at him we see the image of his father behind him, and the shadow of Elder Brewster in the distance, with the *Mayflower* tossing on a troubled sea, and a solid rock for a foreground.

He not only inherited a good head, with a fine texture of brain—and a taste for intellectual studies—but he also had excellent opportunities for the improvement of his mind in the best schools and colleges the country could afford.

Under the thorough training of the most accomplished teachers, he was well equipped for the life-task he had chosen. He did not consider that his diploma in college was a certificate of a complete and a finished education, only a draft upon the bank of knowledge, to be honored not at sight, but by earnest application in the future. Vast numbers of young men, who have enjoyed the advantages of a collegiate education, never get above their graduating honors. They are satisfied with their attainments, and without any special aim in life they ignore study, give the best books a wide margin, devour light novels with a relish, sneer at the workers who earn their bread by the sweat of the brow, and finally come to them for support. They are vessels launched from the literary dock, at Harvard or Yale, perhaps, with painted sides and white sails, but without ballast or rudder. They are not made of clear stuff. These men drift about at the mercy of events; some find refuge temporarily as clerks, as traveling agents, as reporters, as assistant teachers; but many of them are wrecked in early life because they had no star to steer by, and no strong hand upon the wheel, no ballast of general intelligence, no stout rudder in the ship.

This will not be considered a faithful sketch unless I find some fault. We all

have blemishes, and he is human. A little more emotion would give warmth to his sermons and speeches. The brilliancy in his efforts is more like the light of the Aurora Borealis than the golden light of the sun. His images too often are artistically carved out of Carrara marble, "and they are cold to the embrace, though sometimes the soul breathes from their lips." He has studied history so much he "is a contemporary with the ancients, and an ancient among his contemporaries."

Dr. Storrs, at this time, is in the prime of his manhood. In person he is large, tall, and stately, with a strong, enduring physical system. The compression of his mouth indicates stern resolution, determination, and courage. A few years ago a former classmate, now a country attorney, called to see him, and remarked, "Doctor, don't you remember me? I used to flog you now and then when we were chums at school." "That may have been so," said the Doctor, "but you could not do it now."

Several of his sermons and lectures have been published and widely circulated. He is the author of a very elaborate report of the revision of the English version of the Bible, also of a volume on the "Constitution of the Human Soul." He is a devoted friend to schools, and takes a deep interest in the welfare and progress of temperance, Sunday-schools, missionary work, and all institutions that tend to educate and elevate humanity.

He stands up straight and tall, unmoved by the changing winds of public opinion. Happily for him he has had no such storms to contend with as those that have assailed some of his cloth. Still what has been said of a mountain may be quoted here with appositeness:

"While he, like a stern warrior, stands unmoved;
When thunder smites him with its lance of fire;
When hail, shot from ice-batteries in the clouds,
Break on his unprotected head, as though
The sky were an exploding shell, when storms
Assail him rudely, with invisible wings.
He leans against the clouds and looks away
Beyond the storm, where heaven's calm still resigns."

GEORGE W. BUNGAY.

THE FUTURE LIFE.

SCHOPENHAUR gives what seems to us an insufficient reason why we should not trouble ourselves about a future life. He argues that it is no more reasonable to fear future dissolution than to worry over the dissolution that was before birth. But it is natural to grieve more over evils to come than over evils, or what are supposed such, which have had no perceptible influence on our present life. Above all, the chief cause of the sadness with which we look on future annihilation, is the fact that we form ties in this world which we can not think of as being forever broken. That we may see our friends no more, even such friends as nature alone can give, the babbling brook, the shady grove, the bright blue of heaven, is a thought that must fill any sympathetic soul with a shadow of melancholy. Perhaps to the pessimist who does not look so favorably on the present life, complete and continued death is an agreeable thought. But it should not be thus even to the pessimist. "With life there is hope," and the possibility of continued progress in intelligence and in the finer feelings is alone a sufficient reason why all should hope for life beyond the grave. Still, the part of the philosopher is to preserve a calm mind through all, and if he thinks death the horizon beyond which the eye of hope may not pierce, his duty then is to make the most of life. From the present he should derive all the pleasure he can, and share it with others. By pleasure I

mean that subtle influence which tends to give a peaceful and happy mind. This influence should flow from every part of man's nature, physical, intellectual, social, sympathetic. He who derives pleasure in this way will always possess a mind that can not be overcome, whether the sky of his death is clouded over, or whether it is lit up with a glory that betokens a coming day of beauty and sunshine.

G. D. MAXWELL.

WHAT MAKES LIFE HAPPY.—I have peeped into quiet "parlors," where the carpet is clean and not old, and the furniture polished and bright; into "rooms" where the chairs are deal and the floor carpetless; into "kitchens" where the family live, and the meals are cooked and eaten, and the boys and girls are as blithe as the sparrows in the thatch overhead; and I see that it is not so much wealth and learning, nor clothing, nor servants, nor toil, nor idleness, nor town, nor country, nor station, as tone and temper, that makes life joyous or miserable—that render home happy or wretched. And I see, too, that in town or country, good sense and God's grace make life what no teachers or accomplishments, or means, or society can make it—the opening stave of an everlasting psalm; the fair beginning of an endless existence, the goodly, modest, well-proportioned vestibule to a temple of God's building, that shall never decay, wax old, or vanish away.—JOHN HALL.

LIFE'S APRIL DAY.

ALL smiles and tears, and hopes and fears,
Are anchored close together.
The mortal heart seems but a part
Of April's captious weather.

Hours come and go, of joy and woe,
Our smiles and tears are blended;
Our wildest fears at last hope nears
And keeps them well attended.

While dreary clouds the world enshrouds,
The sunshine hovers over;

And oft the rain, though dark with pain,
Doth some new bloom discover;

Some blossom sweet the gold and heat
Had failed to give perfection,
Some grace of mind relieved to find,
Though late, its true direction.

Speed smiles and tears, speed hopes and fears,
Expand our best emotions!
Dissolve all doubt, and blossom out
To Heaven our soul's devotions.

S. L. OBERHOLTZER.

SPRING FLOWERS.

Oh, dainty baby foresters
That hide in silent nooks,
That linger by the cow-paths
And peep into the brooks,
Your dimples bring me back again
The merry days of old,
When every wood was fairy-land
And buttercups were gold.

By mossy rocks and nodding ferns
You lift your timid eyes,
And by the wounded maple-trees
In smiling groups arise.
No more the shrieking winter winds
Affright the naked woods,
But all the scented aisles are gay
With Flora's dappled hoods.

Tho' years have sped since first for me
You made the meadows bright,
And many a sunset-tinted dream
Has faded into night,

Still do I hail with boyish love
The violet's balmy breath,
Still joy to see the crocus burst
From winter's icy death.

I thrill to see the buds again
Upon the apple-tree,
Where every branch is eloquent
Of glories yet to be;
Where soon the winged Argonauts,
From lands beyond the main,
Will sing their merry songs of love
And build their homes again.

I trace the tints of deathless hope
In all your tender beauty,
Ye dewy-lipped interpreters
Of man's exalted duty;
Ye come as tiny prophets
Of a kingdom yet to be,
When only Truth shall conquer
And the spirit shall be free.

AUGUSTUS WATTERS.

THE SONGS OF HUMAN LIFE.

ABSTRACT OF A SERMON, DELIVERED IN ST. JOHN'S CHURCH, JERSEY CITY HEIGHTS,
BY REV. E. L. STODDARD.

And they sung as it were a new song before the Eternal, and no man could learn that song but the one hundred and forty-four thousand which were redeemed from the earth.—REV. xiv. 5.

THERE was a story in the papers some time ago of a terrible hurricane, in which an East Indian steamer was caught in the Bay of Biscay. The crew deserted their posts, the water flooded the decks and broke into the engine-room, putting out the fires and leaving the ship without headway to the mercy of the storm. Then the passengers were called to take the place of the cowardly crew. Mattresses were thrust into the leaks, and through the long night men stood baling the water out of cabin and hold, death leaping about them in the mad fury of the waves, and howling in their ears as the hurricane swept shrieking by. As long, we are told, as there seemed to be no hope all worked in gloomy silence, but when there seemed a possibility of salvation, they burst out in song. Despair was silent; joy and hope brought forth music.

There was formerly on the banks of the Seine in Paris a fearful dungeon, far below ground, where, in darkness, filth, cold, and hunger, men, chained about the neck and unable either to sit or lie down, stood as best they could through many a horrible week. Those, it is said, who could *sing*, lived; those who could not or would not, became insane or died. The torture of one portion went out in song and was relieved; that of the other class remained to consume those who felt it. To sing, to whistle, to hum, is natural to most men, and because it is usually a sign of joy or contentment we like to hear it. Of two men, we should be likely to employ the one who sung and whistled at his work rather than one who labored in heavy silence.

This naturalism of singing comes out in the Bible. When men whose lives are written there meet triumphantly any crisis of life; when a great blessing or gift is bestowed upon them, they burst

out into song; and so when heaven is opened on Christmas morning and the gift of the holy child is told to the shepherds, it is with a song and the echoing of heavenly music. In to-day's text, where we read of the future state of those who are redeemed and are able without fault to stand before the throne of God, we hear that it is a new and glorious song which they sing. Where there is light and music there is supposed to be joy, and heaven is represented as full of both.

SONG INDICATIVE OF CHARACTER.

There are two thoughts which come before us to-day—the songs of earth and those of heaven. Whether a man really has music in his soul; whether he has power to send it forth in articulate words or not, there is no question that in one sense each man as he passes through life sings in his own peculiar way his special song, and this song is the influence of his own character. He may sing it aloud or silently, still he sings it, and the life of each of us may be set to, or rather expressed by, music. Here is one who carols like a lark; her life, her presence, are like the inspiration of a spring morning; where she is, is cheerfulness and joy and harmony. But here is one who sings a dull, harsh song, a croaking, gloomy bass of discontent, and where he is there is sure to be discord. Here is one who sings a thin, poor, trickling song, the music of a vain and shallow life, an idle tune, an empty sound; and we pity her as we pass by and see her dancing to her fantastic and weak music. Here is another whose song comes from the depths of a rich and holy experience; it has the majesty yet the sweetness of a symphonic poem; it tells of sorrow vanquished, labors ended, victories won; it comes from a full, living, sympathizing heart. Now there breaks upon us a sharp, quarrelsome, petulant air that rasps the nerves and thrills the brain. Again there comes an utterly weary lamentation from a moaning sufferer or a shivering family among the poor. The world is full of

songs, though some are rather wails than songs. Listen and you will hear them: carols of joy and groans of discontent, sighing songs of weariness and gay ditties of pleasure-seekers; the harsh, grinding song of the tyrant, the deep sweet melody of the peace-maker.

OUR OWN SONGS—WHAT THEY SHOULD BE.

What songs, let us ask ourselves, are we singing? what song ought we to sing as we move in a Christian brotherhood through life toward heaven? First, I think it ought to be a song of gratitude. When Simeon saw the Lord that he had waited for so long, he sang out of his grateful heart, "Blessed be the Lord God of Israel, for he hath visited and redeemed his people." We, too, have seen the Lord; he has been with us these many years, and though the day of his festival is over, and the lights are extinguished, and we have come back from Christmas festivity to this real, hard-working world again, we know that the Lord has not left us; he is with us still, a personal friend, a personal Saviour, and we to-day from our inmost hearts should sing, "Blessed be the Lord God of Israel, for he hath visited and redeemed his people." Again, let us sing ever a grateful song. It is as easy as crying, if we will but learn the habit. Count blessings instead of disappointments, and learn to look on the bright spots instead of the dark ones; to thank God for what he has given rather than be covetous of what he has not. Grow in happiness yourself, and make the world sweeter by singing a song of gratitude. A man or woman with such a spirit is a very well-spring of satisfaction and contentment.

Then our song should be one of cheerfulness and joy. When the tidings of the birth of Christ came to this earth, the song then sung struck the key-note of all songs which redeemed men should henceforth sing. "Fear not," the angel said, "for behold I bring you good tidings of great joy which shall be to all people. For unto you is born this day a Saviour."

Now to whom did this message of joy come? To the rich, to the kings and nobles of the earth, to those whom we naturally expect to be joyful? No; to shepherds—and a shepherd was a man in very lowly circumstances, leading a rough life, poor, sleeping in cold and wet, exposed to constant hardships, watching all night with his dog against wild beasts of prey. There was not much joy in such a life. Men living so to-day would tell us, probably, that they had nothing to be grateful for; that they would leave the song of joy for other people who had the comforts of life, warmth, food, and money. So men argue now—let the rich sing of joy; we will have a song of misery. But to these very men came the angel; these were chosen above all others to be blessed in their very misery and lowliness, and to them came the words, "I bring you tidings of great joy." But Christ did not bring them the joy of the rich. After he came they had no more money than before; they still watched through the cold and darkness; they still lived their lowly life. Yet to them an angel said, "I bring you tidings of great joy which shall be to all people." The truth was that the new-born child brought power to make any life cheerful and joyful, because whatever the outward life may be, the Savior brings peace and contentment into the heart.

THE NATURE OF HAPPINESS.

True happiness, like true dignity, true courtesy, true gentlemanliness, must be internal. You can not turn a clown into a judge by putting him on the bench and calling him "Your honor"; you can not make a coarse man a gentleman by giving him a ring and clean clothes; nor a scholar out of a dunce by putting into his mouth a few great words. All this we know well enough, but we forget that the same rule applies to happiness. Oh, the sad and dreary songs that issue from the world's palaces and from hearts that outwardly have all they desire! Oh, the songs of jealousy and passion and foolish anger and covetousness which men

utter because they have not success, or honor, or gold—as if these could bring peace or joy! Happiness comes from what you are, from the state of your heart; and because your heart was made to be the home of Christian virtues, you can not fail of happiness if you will open it to Christ. When you have felt that inward joy, the outward will seem in comparison with it like paste to the diamond, like the gaudy gilding upon the walls of a theater to the burning words of the play. For your own sake, for the world's sake, try to sing a joyful song, whether you are a shepherd or a king.

Another of our songs should be one of thanksgiving over conquered sin. When Moses stood on the further side of the Red Sea and saw the Lord's people delivered and their enemies destroyed, he sang, "I will sing unto the Lord, for he hath triumphed gloriously; the horse and his rider hath he thrown into the sea." David's Psalms are full of rejoicing that God's enemies are scattered, and that right prevails once more. In one of the visions of heaven that St. John gives us, we read that the victorious saints sing the song of Moses and the Lamb, a song that is of thanksgiving for victory over sin, the enemy of God and man. It is, then, right and proper for us to rejoice when sin is discomfited. Perhaps it is here that many have erred; they have pitied a fallen foe, and have not triumphed over sin as they should, lest they should be guilty of a want of magnanimity. Pity for the sinner is right and just, unless it degenerates into a morbid sentiment which *only* pities and excuses instead of healing; but there must be no pity for or sympathy with sin. If a man be overtaken in a fault, that is, if temptation suddenly get the better of him, pity and save him, but have no pity for his sin—save him not by excusing his sin, but by helping him to root it out. Evil is a deadly thing, deadly to body, and soul, and to everything that decent men value in the world. You may pardon the *man* who speaks ill of you, but the *spirit* of malice and slander you must hate and

loathe, and at every victory over it, at every downfall it experiences, you must exult and rejoice. You may pardon the man who steals from you, if you do it for his good and follow your pardon by help and counsel; but the principle of thieving, in all its forms, petty larceny, forgery, gambling, you must hate and denounce, and rejoice and give thanks when it meets with an overthrow. It was sin, sin personal in the hearts of men, that nailed the holy child, Jesus, grown to be a holy man, to the cross of Calvary. Can you afford to have any dealings with that power? Wherever it shows its head then to-day, in politics, in trade, in social slander, in church quarrels, in vile literature, it is our duty to strike at it, to root it out. Whenever around in the world there come tidings of sin conquered, of malice dead, of tyranny ended, of falsehood exposed, and wrong grappled, we should rejoice.

THE HIGHEST MISSION.

Again our song should be one of peace and love. This too was the message to the shepherds. Christ was to bring peace and good-will to men. He himself announced that the great commandments, the summing up of the law, and the prophets are this—"Thou shalt *love* God and man." There is no song that man can sing that is so sweet and blessed as this, the song of peace and love, "Blessed are the peacemakers, for they shall be called the children of God." "He that loveth not knoweth not God, for God is love." I know it is a hard song to sing, the song of peace to him who has offended us, the song of love to one who does not love us; but after all is it not better for these few brief years to make the world, aye, and our own hearts as happy as we can? And does happiness ever come to the world or to self without peace and love? Is it not better every way to let insults and unkindness and hard words pass by us as the rude wind passes over a flower, and go on blooming and sending out perfume as before? There is a flower, you know,

which, when a rude hand touches it, shuts up with a snap, and goes, as it were, into sulks, and does not open itself to the sun for an hour. It is called the "fly-trap." A fly-trap may be well enough in a flower, but it is not very well in a human being. Life is too short and the world too rough for such sensitiveness. We must expect to get some hard rubs from that world, and it is a pity to spend much time in growing angry and getting even with our fellows because of them. How much better the world would be if it were not for these unfortunate people who are born fly-traps, who bristle all over with tentacles which we touch at our peril; who seem always on the lookout for a possible slight; who are afraid that they will not be appreciated or have all their rights and just the place they deserve. My jealous, sensitive friends, it does not pay. *You* are the worst sufferers after all, though you do manage in your misery to throw a little discomfort about you. Your disposition is not a strong one, not a noble one; it is born out of weakness and pride. Try to rise above these little trifles; go about your business and your Master's business in a cheerful way, smiling and singing as you go. Thus show yourselves greater and better than your enemies, and conquer those enemies by your character of peace and love. Some men say that it is inconsistent with honor not to resent these little things. But the only real honor man has he gets by doing God's will. The human fly-trap, the man with tentacles, the sulking and growling man, the man who goes off offended into a corner, all these cut a very poor and a very unhappy figure beside the cheerful, serene, loving gentleman described in the 13th chapter of Corinthians.

Now all the songs of which we have spoken, that of gratitude, of cheerfulness and joy, of thanksgiving over the conquest of sin, and of peace, we can sing on earth. But in the text we read of a new song which no man can sing unless he has been redeemed from the earth. I think we may suppose that this is a song

of innocence and purity. There are two ways of singing such a song. One by never sinning, the other by being redeemed from the power and stain of sin. Our text about this song is taken from the epistle for "Holy Innocents Day," because it was supposed to refer chiefly to them. Children that die in infancy may learn to sing that song of heaven, having had no consciousness or stain of sin. They know, doubtless, as the angels know, that there *is* sin; they see it as we might from some mountain height look down upon a tempest far below us and see the lightning play, and hear the howl of the thunder and the rush of the wind and rain. They know sin, but only by looking at it from without. We, alas, are in the midst of the tempest; about us the lightning is playing, and above our guilty heads the thunder roars. We, alas, know sin because we are sinners; not because we look at it from without, but because we have felt it within. The holy innocents sing the song and wear the crown of martyrs, but there are no stains upon their clothing, no dents in their shield, no tearful furrows on their cheeks, or scars upon their limbs. *We* must enter heaven and learn that new song as a

returning army enters its national capital and learns the new music of its victorious anthem. We come with garments torn and stained, with swords hacked and shields defaced. We bear sad marks of our conflict with evil; here we have lost an arm, there an ugly thrust has just escaped our heart. Our cheeks are worn with tears of penitence, and our voices falter as we try to learn the new song of innocence and purity. But, dear friends, if we try to sing those other songs of which we have heard to-day, we shall surely be able to sing that. We shall sing it not as those who have never sinned, but as those who are delivered from sin. Faithful here, we shall pass at last out of the battle; we shall mount up above the tempest; we shall stand upon the mountain's height, upon the walls of the eternal city; we shall lay aside our battered armor; we shall put off our stained garment, this earthly body, and be clothed with the glorious body given us by our Lord, and then redeemed and chastened by the fire of our discipline, we shall sing, too, the new song, the last song, the song born out of a consciousness of inward holiness and peace and joy.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER VII.

METHODS OF STUDYING THE HUMAN BRAIN—THOSE OF GALL AND SPURZHEIM.

FROM the time of Vesalius to the beginning of the present era, nearly all anatomists had followed one method of dissecting the brain, viz: that of examining its different parts as laid open to view by horizontal sections from the top to the bottom. That such a method is faulty has been recognized generally, but no other convenient way being known it was adopted from necessity. It is faulty because by it the connections of each part are destroyed, and a just idea of their proportional differences can not be obtained. When applied in the study of the brain in vertebrate animals the

errors of this process of slicing are more conspicuous, for the reason that the cerebral parts of animals so vary in form and situation, that one can obtain in that way no idea of the progressive development of the cerebro-spinal system. Varolius, of all the old anatomists, was first to consider it more convenient to begin the study of the brain at its base. Willis thought also that it was quite necessary to change the process of dissection from the top to the base. Vicq d'Azir employed generally the method of Vesalius, as the plates and diagrams of his expositions of the brain show.

The method which Drs. Gall and Spurzheim introduced was much superior to that which had been in vogue before their time, having the great advantage of not presenting the brain as a mere pulpy, homogeneous mass, but as composed of parts differing from each other, and increasing in elaboration and extent by reason of the number or activity of the intellectual or affective faculties. These observers, however, paid chief at-

having died, Gall had the opportunity to examine her brain with care. He found that its substance was not dissolved as he had generally supposed, but had the appearance of a membrane, that is, the convolutions were unfolded or spread out. This circumstance determined him to direct his researches in a way quite opposed to that which he had followed previously.

M. Nidas, who was selected by Gall to

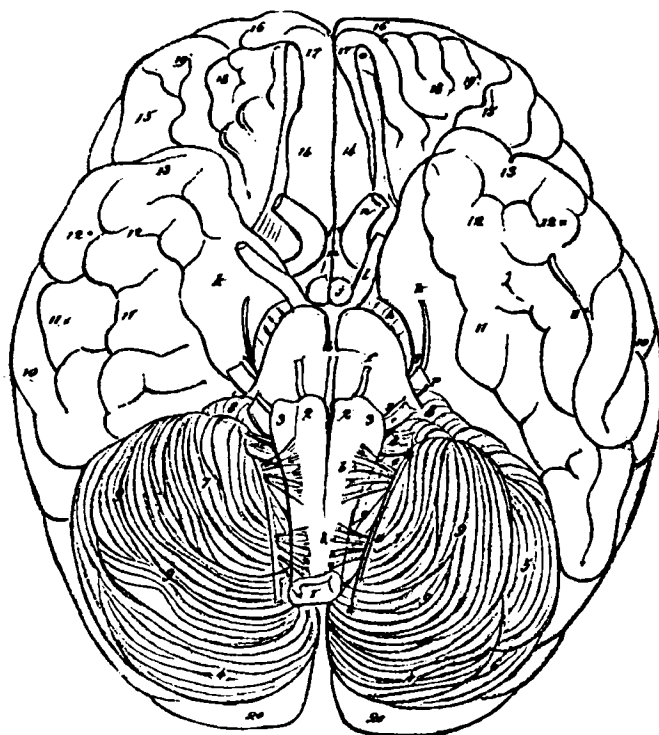


Fig. 196.—INFERIOR SURFACE OF THE HUMAN BRAIN. OUTLINE.

tention to the human organism, and but little comparative regard to the nervous system of animals.

Dr. Gall says that after having met several persons affected with hydrocephalus (dropsy of the brain), who, nevertheless, were in the enjoyment of their intellectual faculties, he presumed that the brain ought to have an organization other than that he had attributed to it. A happy circumstance enabled him to obtain a true idea of the case. A woman of fifty-five, affected with hydrocephalus,

give himself to certain researches into the structure of the brain, employed a method which consisted in scraping the cerebral substance, beginning with the parts where the cerebrum and cerebellum appeared to take their origin. It should be said that this procedure was similar to that practiced very long before by Varolius and Willis, but the results put on record by those old teachers are far from having the exactness and value of those published in the works of Gall and Spurzheim.

These anatomists admitted, with all eminent physiologists, that the encephalic mass is composed of two kinds of substance, one white and fibrous, the other gray and pulpy. The latter they regard as the source or origin of those bundles or layers of nervous matter which by their successive development make up the cerebrum and the cerebellum. In the number of these primitive bundles are the anterior pyramids (Fig. 196, 2), the posterior pyramids (Fig. 197, see February No.), the bundles which form the olivary ganglia (Fig. 197). These different ganglia communicate with the parts to which they correspond. The anterior bundles alone cross or decussate at the distance of twelve to fifteen lines from the pons-varolii, and after their decussation ascend, increasing in volume toward the pons-varolii.

On separating the pyramids below it will be observed that the innermost fibers form four or five bundles which decussate with one another; this decussation is not, however, formed entirely of fibers from the pyramids, but mainly from the deep portions of the lateral columns of the cord which pass forward to the surface between the diverging anterior columns. The outermost fibers do not decussate (Gray). Before these pyramidal bundles of fibers enter the pons they usually throw out fibers which wind around the olivary body. The pons-varolii shows two beds of fibers; one transverse, proceeding from the cerebellum; the other longitudinal, proceeding from the anterior pyramids, olivary body, and the lateral and posterior columns of the cord. These longitudinal fibers after traversing the pons, issue in a re-enforced form divergently directed toward different parts of the cerebrum, elaborating as they proceed, and obtaining more and more gray matter in correspondence with their elaboration until they disappear in the structure of the convolutions, chiefly of the anterior and middle lobes of the brain.

From the olivary ganglia (Fig. 196,) proceed fibers similar to those which originate in the anterior pyramids. With-

out decussation they traverse the pons-varolii, acquiring therein more volume, and bear off toward the optic couches, which Gall and Spurzheim considered as new ganglia. From the optic couches these fibers diverge and traverse the corpora striata, where they gather more volume, and then are absorbed in the structure of the posterior convolutions, and those which are situated in the superior margin of the cerebral hemispheres. Spread over the two hemispheres is a bed of gray substance from which proceeds, according to the anatomists named, other fibers, which they call entering or converging, and which go to form the different commissures known as the corpus callosum, the anterior commissure, etc.; these they designate as the apparatus of union or junction of the cerebral divisions. In a manner somewhat similar to the structure of the cerebrum, the cerebellum, according to Gall and Spurzheim, is formed. The two bundles on the posterior lateral parts of the spinal column (Fig. 198, 4, see February No.) known as the restiform bodies, they claim, are chiefly concerned in the formation of the cerebellum. As these ascend they diverge, assist in forming the lateral boundaries of the fourth ventricle, and then enter the corresponding hemisphere of the cerebellum, forming its inferior peduncle. The superior and inferior parts of the cerebellum send out fibers which unite the part known under the term superior vermicular eminence, with the quadrigeminal tubercles, and the inferior vermicular process or eminence with the restiform body or posterior pyramid.

Dr. Gall thinks that it is necessary to regard the parts known as the pisiform bodies, pituitary gland, pineal gland, as ganglia, having for their function the providing of fibers communicating with the transverse fibers.

Upon this brief resumé of structure is founded the method of dissecting the brain advocated by the two great phrenologists. For details we can only refer the reader to the work which they have published upon the subject.*

* *Recherches sur le système nerveux en general et sur celui du cerveau en particulier* Paris, 1809.

HEADS AND FACES.

THEIR EXPRESSION AND ITS MEANING.

[From one of a series of sketches published recently in that well-known and excellent juvenile weekly of our cousins across the ocean, *Young England*, we take the following:]

THERE is nothing so flexible as the face, and nothing so truly represents what is going on behind it. The feather in the air goes whichever way the wind blows. The hands on the clock show how fast the time passes. So the face, with its muscles, eyes and mouth, shows the business that is being transacted behind it. Behind the face is the workshop of life. Within the cavity of the skull everything is concocted, all desires are formed, all thinking, tinkering, contriving, loving, hating, aspiring, and all other kinds of mental operations are going on. Nothing is done in this world without brains, and they must be set in motion by a power still more important.

There is no seeing without the eye, and yet there is a power behind the eye that makes it see. All we desire to have and aspire to be, comes from the brain. Even the functions of the body could not act through their organs if they had no connection with the brain. The body is as good as dead without the brain, and the brain is of no use without the mind to set it in motion, and the face has no expression unless the mind acts on the brain so that the brain can reflect its action on the muscles and nerves of the face. There are many kinds of faces because of the various workings of the brain.

The same face wears several aspects at different times, because of the varied action of the mind on the brain. No person is in the same mood long at a time, and all the changes of his moods are seen in his face.

There is no piece of mechanism so constantly and variedly employed as the brain, and there is no specific surface of space that, from the cradle to old age,

presents such a variety of phases as the face. There is the long face and the short face, the wrinkled face and the smooth face, the laughing face and the crying face, the happy face and the unhappy face, the intelligent face and the foolish face, the joyous face and the somber face, the disappointed face and the gratified face, the lovely face and the hateful face.

The face expresses joy, despair, astonishment, calmness, curiosity, satisfaction, thoughtfulness, carelessness, anger, affection, self-satisfaction, humility, vanity, modesty, courage, fear, cunning, frankness, longings, mirth, sobriety, respect, boldness, despair, scorn, contempt, rage, firmness, fickleness, contentment, and disappointment.

Some put on a different face from what their own feelings would give, because they want to appear other than they really are. The Pharisees of old did, and their descendants of to-day do it. Some get their living by their ability to suddenly change the expression of their face. Some are able to put one kind of expression on one side of the face and another kind of expression on the other side. But no one can wear a false face long at a time, unless he or she is thoroughly hypocritical, and makes a business of appearing different from what they really are. I once knew a woman who would be scolding to the top of her voice, but as soon as there was a knock at the door she changed immediately into a bland, affable, smiling, pleasant-looking woman, very chatty, and glad to see the caller, but the moment the caller had left, the scold went on from where she left off.

The question may be asked why the face expresses the workings of the brain more than any other equally large surface of the body. Because there are more muscles and nerves, and they are more constantly called into action around the

eyes and mouth than elsewhere. How is it that the brain is able to act upon the muscles and nerves of the face so as to the mind is composed of a great variety of faculties, and each is different from every other, besides, the same faculty is

ILLUSTRATIONS OF FACIAL EXPRESSIONS.



produce such a variety of expression? Because the mind is not always in the same mood, but more especially because not in the same agreeable condition for action at all times. All these faculties have a special portion of brain set apart

for their particular use, the same as it is with the organs and functions of the body, for all the five senses have special nerves set apart for their use, for there is no hearing without the auditory nerve, and so of all the other senses.

All the nerves of the five senses are distinct and by themselves, and have a special location in the base of the brain, and each has its connection with its organ, for the optic nerve and the eye are connected, the auditory nerve and the ear are connected, and so of all the others. The same is true with the different faculties of the mind; for they are not only distinct and different from each other, but they act by the use of certain nerves, and these nerves always have their relative location in the head.

When a faculty is strong and active, that portion of the brain is large also, and gives shape and fullness of development to the skull where it is located. If the faculty is weak and feebly manifested, then that part of the brain it uses is small, and the skull will not be prominent in the locality of the faculty; so that those who know where the different faculties are located can judge of their natural strength by the shape of the skull, and by taking other conditions into account can tell much of the capacities of a man. Compare the heads of the men in the illustration; they are very different from each other. One is narrow at the base and very fully developed in the upper

portion, while the other is large at the eyes and the whole base of the brain is large; he has a retreating forehead and a narrow head at the upper part.

One is in a rage about something, and his fists are clenched and he is in an attitude ready for fight, and looks as though he wanted to. The whole appearance of the man indicates temper and a spirit of opposition.

The other has a mild, placid expression, is in the attitude to pacify, to excuse, to beg pardon, for he looks as though he wanted no difficulty. His expression, attitude, open hand, and shape of the head indicate love for peace.

The girl is different from either. She does not abound in intellect, but in feeling, emotion, impulse, and is under their control. She is leaving the company of these two men in disgust, to let them settle the matter as best they can, for probably they are trying to settle some question about her.

The study of the face is a subject of ceaseless enjoyment and instruction. To every one it is a matter of importance to be able, in some measure, to read character from the face. The most successful men in business, in professional life, in diplomacy, in every sphere, in fact, which brings them in contact with their fellows, are those who have the power of quickly perceiving the characters and motives of others and adapt themselves to them.

L. N. FOWLER.

RUDIMENTARY ORGANS IN ANIMALS.

THE striking similarity between the mental manifestations of men and animals has always been a subject of remark among thinking men and lovers of nature. It has given origin to fables and allegories, and their power to the doctrines of fetichism and transmigration. All savage and semi-civilized peoples are accustomed to regard the brute as occupying a higher place in the scale of intellect than is commonly vouchsafed him by us. And is it not possible that we

may have erred in this respect, and have arbitrarily placed too great a distance between ourselves and those humbler creatures that are our companions in the walk of life? Do we alone possess conscious voluntary intelligence and moral aspirations?

My position on this matter is briefly this: That every mental organ possessed by man—including the Intellectual and Moral organs—can be found existing, in some rudimentary degree, however slight,

in some one or more of the creatures below him. That *every* creature below man, possessing a brain, possesses every organ of man, is an assertion that I do not venture to make, and consider very improbable. Combe, in speaking of the Moral organs, says: "The convolutions which form the organs of Veneration, Hope, and Conscientiousness in the human brain, run transversely; and in the brains of the lower animals, so far as I have observed, no corresponding convolutions appear." This has been commonly considered as conclusively answering all questions with regard to the possession of moral organs by animals, but I can not so regard it. The mere absence of certain convolutions does not prove the absence of organs. Birds, rats, squirrels are destitute of convolutions, but as they manifest considerable mental power, they must, if Phrenology be true, possess organs. For it is one of the fundamental doctrines of Phrenology, that "each faculty of the mind has its separate or special organ in the brain"; therefore, to prove the existence of the faculty, is to prove the existence of the organ. To prove an act proves an organ that acted, and a faculty that incited to action.

As the brain cortex, or surface, is the part devoted to thinking and emotion, or conscious cerebration, it seems logical that the greater the surface, the greater the mental power, and the formation of convolutions appears to be nature's plan for increasing the extent of the surface without greatly increasing the bulk of the entire brain. While, therefore, the presence of deep, clearly cut, and numerous convolutions indicates great strength and activity of the mental powers, the entire or partial absence of convolutions, in any particular tract of brain surface, does not disprove the existence—in a rudimentary state—of the organs usually found in that tract. Phrenologists estimate the size of organs by measuring "from the *medulla oblongata*—the center of the brain—to the surface where the organs are located in a manner analogous to the estimation of the size of a wagon-

wheel by the length of its spokes." We are also told that "size is the measure of power"; therefore, to prove that there is any brain substance, however small, between the center of the brain and the location of any organ, is tantamount to proving the existence of that organ, and its possession of a certain amount or measure of power. Now, without doubt, a certain distance does intervene between the brain center and the parts of the surface where phrenologists locate the moral and intellectual organs in a large number of the lower animals, and they must therefore possess those faculties in a certain degree. So much for the anatomical evidence. Let us turn to the evidence of the functions.

We will commence with the Semi-Intellectual group of organs. Constructiveness is apparent in so many creatures that it is hardly necessary to attempt to prove its existence. Every treatise on natural history contains abundant examples; Wood's "Homes without Hands" is especially full. Not only do the building mammals, birds, and insects display instinct by building in certain definite forms characteristic of the species, but also a certain amount of reason in adapting and changing those forms to suit varying circumstances, and new and strange building materials. Modern naturalists, too, have shown that birds, etc., improve from year to year in the art of nest-building, which would seem to show that intelligence aids instinct in their construction.

Wood says of the Baltimore oriole: "The materials of the nest are, however, extremely variable, the bird having a natural genius for nidification, and being always ready to take advantage of any new discoveries in architecture." Wilson remarks of the nest of the Orchard oriole, that they "exhibit not only art in the construction, but judgment in adapting their fabrications so judiciously to their particular situations. If the action of birds proceeded, as some would have us believe, from the mere impulses of that thing called *instinct*, individuals of the

same species would uniformly build their nests in the same manner, wherever they might happen to fix it; but it is evident from those just mentioned, and from a thousand such circumstances, that they reason, *a priori*, from cause to consequence, persistently managing, with a constant eye to future necessity and convenience."

I could fill this article with such quotations; but the testimony of these two eminent naturalists must suffice. Imitation is actively exhibited by monkeys, parrots, and more or less by all gregarious animals. Mocking-birds are specially imitative. All domestic animals read human character well, so far as it has reference to their comfort and well-being. Fear, anger, kindness, or malice are detected in the human voice and countenance with a quickness that is astonishing, and this proves their possession of the faculty of Human Nature. Dogs display great agreeableness, and greyhounds and pointers are especially desirous of pleasing every one they meet. Gregarious animals often take great pains to please each other.

How much Ideality the lower animals possess, we may perhaps never know, but it is not improbable that the fondness of many creatures for the most beautiful parts of the landscape may spring—partly at least—from the exercise of this faculty. Birds appear to take pleasure in keeping their feathers clean and glossy, and in displaying them to their mates. Cats are fond of bright colors, and delight in laying on gorgeous rugs and mats; and they are also fond of some perfumes. This fondness for perfumery is shared by many other creatures. The Satin Bower bird delights in adorning its playhouses or bowers with feathers, bones, shells, brightly-colored rags, and any other bright or attractive object it may discover. A similar taste causes ravens, magpies, daws, and other birds of the crow family, to form hoards or museums of all the bright objects and trinkets they can obtain. Eagles, sea-birds, and carnivorous animals appear to delight in storms, and the

grandest and most sublime phenomena; and who shall say that there is not something in them that responds to these savage aspects of nature? It certainly appears improbable that the Creator should endow so many of his creatures with the desire to construct beautiful habitations in beautiful situations, and not at the same time give them some sense of the loveliness of those structures and surroundings. That they are happy in their work and enjoy it, can not be doubted.

It will probably surprise many to be told that animals have the organ of Mirthfulness, but I am satisfied that such is the fact. The playfulness that nearly all creatures display is only a form of Mirthfulness. Indeed the late Dr. Trall contended that the right name of this organ was Playfulness. Monkeys, dogs, kittens, and all young mammals are specially playful. Monkeys grin; dogs, when engaged in those romping sports in which they delight, will wrinkle the lips and show the teeth in a veritable *smile*; and domesticated parrots will laugh with great heartiness and enjoyment. Dogs will become ashamed, sulky, or offended when laughed at, and horses often become violently enraged under a similar ordeal. Every one must have noticed the fondness of monkeys and young animals for practical joking, and teasing each other; and it is hardly reasonable to suppose that monkeys, puppies, kittens, etc., would engage continuously in the most mirth-provoking antics and capers if they were entirely incapable of appreciating their drollness.

Now let us turn to the Selfish group. Here our work is easier. Cautiousness is active in hares, crows, deer, etc.; bull-dogs, asses, and mules are proverbial for excessive Firmness; and peacocks and magpies are equally so for Approbation. In fact, so apparent are the manifestations of this last organ in these creatures, and so great their enjoyment in exercising its functions, that it can not even be considered as rudimentary. Lions, bulls, large dogs, and nearly all

large wild animals, are remarkable for pride, dignity, self-reliance, and a desire to rule.

In considering the last or Religious group of organs, the reader must remember that *I do not assert or believe* that any animal has any idea of a Deity, a future life, or the refinements of modern morality; but I do believe that animals possess the rudiments of the moral organs, and manifest their functions, so far as they have reference to the life that now is. The lower forms of Veneration—respect, humility, and obedience toward superiors—can be readily detected in gregarious animals by any unprejudiced observer. It forms the basis of the “follow my leader” principle, so strong in them. And it is through the agency of Veneration that man, by substituting himself for the natural leader, has obtained dominion over them; for it is a noteworthy fact that only those quadrupeds and birds that naturally band together under a leader, have been successfully domesticated. The veneration of wild beasts for man makes them fear to meet his eye, and by acting on this faculty the “lion tamer” controls his fearful charge. The veneration of the canine race has been beautifully remarked by the poet Burns: “Man is the god of the dog; he knows no other; he can understand no other. And see how he worships him; with what reverence he crouches at his feet; with what love he fawns upon him; with what dependence he looks up to him; and with what cheerful alacrity he obeys him! His whole soul is wrapt up in his god; all the powers and faculties of his nature are devoted to his service; and these powers and faculties are ennobled by the intercourse. Divines tell us that it ought to be just so with the Christian; but the dog puts the Christian to shame.”

Who can doubt that animals possess Hope? To see a dog watch for hours with fixed attention for his master's return, and then to see him bound forward with tumultuous glee the moment he appears in sight, ought to convince the most skeptical. Or, if further proof is

needed, go view some noble steed, whose master is approaching with the coveted grain; his eyes sparkle; his ears are erect; his nostrils quiver; and he paws the ground and neighs aloud in an excess of delighted anticipation. Of course animals are destitute of the higher forms of Faith; but they are capable of great trust and confidence. A timid horse will, when mounted by a brave man, go through perils unflinchingly that he would shrink from in abject terror if alone, or mounted by a rider as timid as himself. A kind man can win the trust of almost any animal. Large dogs are noted for benevolence and magnanimity toward inferior canines, and to human beings, especially children. In fact, the Benevolence of dogs needs no exposition; it is known to all, and instances are recorded every day where dogs rescue drowning men, find those who are lost, protect the weak, etc., etc. The dogs of Mount St. Bernard are a noteworthy example. Dogs have also been known to give alms of food to sick or hungry companions, to human beings, and even to horses and other animals. Benevolence combining with Philoprogenitiveness causes many creatures to pet others who would usually be their enemies or victims, or else objects of indifference. Parrots have been known to pet mice; snakes, birds; lions, dogs; dogs, cats; and the Happy Families of the showman afford still stranger instances of these incongruous friendships.

It is usually denied that animals possess Conscientiousness, and probably most animals have a very weak idea of right and wrong; but so have many human beings, and some savages appear to be as destitute as the brutes, or more so; yet he would be a bold phrenologist who would deny their possession of this faculty in some degree. It is evidently by developing this organ that dogs, “those most Christian brutes,” are trained to that wonderful fidelity which has always excited the admiration of mankind. They have been known to suffer the pangs of hunger rather than devour food they had been told to guard; to resist temptations

to beguile them away; and to endure inclement weather, harsh treatment, danger, and even death, rather than abandon their charge. Fidelity makes the pointer stand like a rock, though his lips water, his eyes gleam, and his nerves quiver with an intense desire to spring upon his quarry. It causes the retriever to conquer his natural instinct, and oftentimes a keen appetite as well, and bring the wounded bird without mutilation to his master's hand, and the watch-dog to guard his owner's property. This faculty is evidently at the bottom of those striking displays of shame and remorse, often manifested by dogs who have violated some domestic law or precept. The fact that the best dogs are owned by the kindest masters, shows that fear is not the underlying principle of this faithfulness, as many claim. A desire to do right in the eyes of his master—man—is evidently the dog's desire; but what more can be said of our Conscientiousness than that it is a desire to do right in the sight of our Master—God.

Very few persons, after a little reflection and observation, will doubt that animals have the rudiments of the intellectual powers. But in case there are such doubters, I will devote a brief space to an attempt to prove this fact. Most creatures possess Individuality or curiosity, and the hunter lures the distant antelope within gun-shot by displaying a flag or other strange object. Goats have great weight or balancing power. Color, Size and Form are of course as apparent to the brutes as to us, and their Locality is in some cases far superior to ours. The comb of the bee, the geometrical spider's web, and the symmetrical flight of the wild geese and cranes, are beautiful examples of Order. The following anecdote from Wood's "Natural History" illustrates Calculation: "George Le Roy states that a magpie having stolen some game, it was resolved to shoot it. A man hid himself in a hut near its nest for this purpose. The bird flew away when he entered, nor would return. The next day two men entered and one came out.

Mag was not to be cheated; she waited till the second left also. Three went in and two came out, with the same result. Four then entered and three came away; the bird went back and was shot. So magpies, says George Le Roy, can count three, but not four."

Language and Tune need no comment, and birds, circus horses, etc., have been taught to keep excellent time to music. That animals have a memory, and an excellent one too—of facts and circumstances—is beyond doubt or cavil. Nor is Comparison wanting; the brutes compare good and evil treatment, heat and cold, comfort and discomfort, an inferior kind of food with a superior, and so on, in precisely the same way as we do. Causality is usually the stronghold of those who deny animal intelligence, and they assert, in spite of a thousand anecdotes to the contrary, that animals can not plan, reflect, devise, or reason from cause to effect. It is probably useless to argue with such, but I can not refrain from adducing a few illustrations for the benefit of those who may not be hardened in their convictions.

I have at present a dog who is usually allowed to remain in the house in cold weather. If accidentally or purposely shut out, he whines and scratches at the door in the usual canine way. If this does not secure admittance, he has recourse to the following extraordinary expedient. He rushes away from the door, and bays most furiously, as though confronting some intruder. But while barking so fiercely he keeps an amusingly close watch on the door, and the moment it is opened to discover the cause of the uproar, he bolts in, and complacently takes his place by the fire. Here is a remarkable combination of mental processes; the dog comprehends his exclusion, remembers that barking has frequently caused the opening of the door before, cogitates, and finally develops and carries out, to a successful termination, a plan of deception which requires cunning, imagination, and histrionic talent of no slight degree. He appears to

reason in this way—"I am shut out, but if I act as if some enemy approached—the cause—my master will open the door, and I shall be admitted—the desired effect."

We are told in "How to Read Character," that Causality consists partly in an "ability to adapt means to ends." This ability in animals has already been noticed, but proofs could be infinitely multiplied. The fox uses every means that his cunning and experience can suggest to throw his pursuers off the scent, such as burrowing in dung-hills, taking to water, doubling, leaping, etc. The

beaver builds a straight dam in still waters, but where the current is more rapid the dam is convex, with the bow up stream, the convexity being proportioned to the force of the current. The woodman is proud of his skill in felling trees, but the beaver does it with equal nicety and certainty, dropping them in the right direction. And in the construction of their habitations, in decoying or chasing their prey, and in the various expedients for safety or defense, most animals exhibit an adaptation of means to ends but little inferior to the human.

J. WILLIAM LLOYD.



THE CHILDREN OF "SOCIETY."

SITTING by my window this cold, frosty morning, I am looking out upon the troops of merry children on their way to school. How they bound and skip along with the springing, elastic step, the sparkling eye, the light-ringing laugh and the musical chatter of childhood. Ah, well may we almost envy them this period of unfettered joy, this season when not a single care comes to their hearts, when tears are wiped away by loving hands, and their hearts revel in the glorious fancies of childhood's happy fairy-land. It is a time that will *never come to them again*. I care not how smoothly their life-boat may glide over the waters of this earth-life, it must follow as the night follows the day, that somewhere on their voyage they will encounter gales of care and perplexity, of sorrow and disappointment.

Some who are passing my window now are apparently the children of wealthy parents. There is an air of luxury in the fur-trimmed cloaks, the dainty boots, and elegant bonnets. They are all *warmly clad*, if by that phrase we mean that the head,

neck, arms, and the upper part of the body are thoroughly wrapped in furs and flannel, while the delicate limbs from the knees to the ankles are encased in a *fancy web*, which is dignified by the name of *stockings*, but which is a poor protection against a chilly day in spring or autumn, to say nothing about the cold, piercing blasts of a winter's day. Now, my dear reader, you must bear in mind that I am simply jotting down the thoughts as they glide through my mind, so I may often stray from my text. I am led to think of the thousands of mothers who are so devoted to the goddess of Fashion that they are daily sacrificing the health and lives of their children upon her altar. It would seem that any woman who possesses the ordinary allowance of *common sense* and motherly instinct should know that the tender limbs of childhood should be protected from sudden draughts and chill winds, but dame Fashion says they must be almost naked; and so they will remain, until she takes another whim into her fickle head. And if some wise mother should revolt against her decrees

and stand up for the rights of her children, if the dainty skirts and frocks should chance to be a few inches longer than the prescribed limit, she is at once set down as "old-fashioned" and "prudish." So be it, then. Rather let us call down upon our heads the anathemas of an unfeeling world than wrap around us the heavy sables of grief, as we see our darlings lowered from our sight forever, when too late to rectify our errors. Not only may the *health* be affected by the mode of dress, but the keen sense of *modesty* and *purity*, which should form a prominent trait in girlhood, is apt to be blunted. Too much praise is lavished upon a pretty foot and a symmetrical form nowadays, and consequently they are brought forward as much as possible for exhibition. We do not deny that a neatly-turned ankle and a well-proportioned form are objects of beauty; but young maidens should be taught also to make them subjects of respect, and parents should regard them as minor points as compared with the inner adornment of a well-ordered mind.

But why may I not be satisfied with this panorama of youth, health, and beauty passing before me? Why must there come between that and me a vision of less pleasing aspect? I see the train of years as they pass on one by one, and note the changes they bring. I see those beautiful, well-rounded forms growing thin; I see those quick, elastic steps slowly losing their quickness; the round, dimpled hands growing slim and transparent. I see the white temples showing too plainly the blue veins coursing beneath the fair skin; those lovely eyes lose their brilliancy, and the heavily-fringed lids droop over dark bister circles; and sometimes, alas! I see upon the sunken cheek the bright hectic flush which follows the brush of the "artist of terror," who paints his victims but for the tomb. What is the cause of this change? By what thread may we unravel this terrible mystery? Well, I will try to banish this picture from my mind; but this afternoon, when the troop of fairies return, I

will follow some of them to their homes, and see if there I may not learn the secret of nature's grudge against them.

We will enter this stately palace. What a picture of beauty and luxury! The upholsterer has done his part in this elegant home. The feet sink into the velvet carpets as in moss. Luxurious chairs seem to embrace the forms that sink into them. Everything is *padded*, rounded, and *softened*, except tongues and tempers. If wealth could remove the asperities from these, as from material things, it might well be coveted. But this is beyond the upholsterer's art; nothing but divine art can wrap up words and deeds with a kindness softer than eider-down. In the dining-room a sumptuous repast awaits the boy and girl. Wine is served, and—do I see aright?—yes, both of them partake of it. O blind eyes that will not see the serpent lurking in its depths! O *cruel*, misguided parents, thus to put that poisoned chalice to those youthful lips! With all your wealth, you are poorer far than he who in his humble cot gathers his loved ones around the frugal supper of coarse bread and milk, accompanied only by nature's pure, crystal beverage; for Health and Joy will sit as guests at his table, long after Sickness and Care have visited you. The shadows of evening gather around, and still I linger, conscious that another scene is on the programme. Lights are flashing through the vast parlors and drawing-rooms; costly flowers are scattered hither and thither in wondrous prodigality, and their sweet aroma fills the air. Where are the boy and girl, who should now be disrobed, and quietly enjoying the sweet sleep of childhood? In pleasant dressing-rooms we may see them, under the care of skillful hands developing into a miniature man and woman. The fair young girl is dressed in a robe whose white, fleecy softness proclaims it a web from foreign looms; but its fairness and softness are almost rivaled by the round arms and dimpled shoulders which it displays only too well. Diamonds sparkle on neck and brow; a fan,

whose price would have fed many starving creatures, is placed in the plump little hand, and at last she descends to the parlors with the society airs of a young lady. To-night she is to act as hostess at a brilliant *child's party*. At an early hour dancing and flirtation begin, which continue until an early hour in the morning. I say *flirtation*, for truly the coquetry and affectation of their elders are faithfully copied by these children. At midnight dainty refreshments are served with wine, of which they all partake.

What wonder, then, that the carriages rolled away at early dawn, carrying many dispirited, weary children? Who can tell in how many of those young frames the seeds of disease were sown, as the heated dancers in their gauzy robes were exposed to sudden draughts of air? Of course no school is to be thought of now, but in dispirited idleness the day is passed, and at night, in splendid attire, they may go with their parents to theater or opera, and by the next day they will present as pitiable a picture of dissipated childhood as one could well find. No wonder, then, that as the years pass on, increasing rather than diminishing this dissipation, we find those who *were* healthy, robust children growing prematurely old. No wonder that domestic dissension increases, as we see these puny, fragile girls and boys uniting their destinies for life. What has there been in their train-

ing to fit them for the calm, unromantic duties of matrimony? What wonder if the seeds of disease are often sown in the frames of the infants who come to bless their union? Can we expect that girls whose tender forms are early molded to fashion's plate, whose waists are compressed by whalebone and steel into the wasp-like dimensions still too popular—should we expect such girls to rear strong and healthy children, when the very veins that must supply their nourishment are already poisoned by over-pressure and utter neglect of the laws that regulate their being? Let us rather wonder that so many infants of such parents survive and grow to manhood and womanhood. It is a beautiful sight to see a smiling infant in the arms of a mother, who by training and constitution is fitted thoroughly to rear it to a life of usefulness; but, oh! how sad to see a young life ushered into a home where a querulous and dissipated mother regards it only as an incumbrance which must be handed over to the care of nurses and governesses, lest her progress in *society* should be retarded. Let our American fathers and mothers awake to the terrible responsibility resting upon them, ere the black darkness of awful despair settles upon them, as they see their household treasures blighted by the avenging hand of abused Nature.

MRS. ETTIE H. DAVIS.

WIFE AND I.

[Now and then we meet with a poetical missive addressed by one friend to another, but rarely do we happen on such genuine poetry and true sentiment as this which Charles Kingsley addressed to his wife]:

THE world goes up and the world goes down,
And the sunshine follows the rain,
And yesterday's sneer and yesterday's frown

Can never come over again,
Sweet wife—
No, never come over again.

For woman is warm, though man be cold,
And the night will hallow the day,
Till the heart which at even was weary and old
Can rise in the morning gay,
Sweet wife—
To its work in the morning gay.



FRANK WITMARK.

(Engraved from a photograph by C. D. Fredricks, 770 Broadway, New York.)

A MUSICAL PRODIGY.

ONE day early in March, a gentleman called at the office of the PHRENOLOGICAL JOURNAL, having in his company a little boy five to six years old. He introduced himself as Mr. Witmark, a merchant of New York, and had come to obtain the opinion of a phrenological expert with reference to his boy Frank, who had lately exhibited a remarkable and singular mental power, which he proceeded to illustrate, so that we should have what data could be supplied in addition to the boy's head, which was offered for our examination.

Frank's talent consists fundamentally in the possession of a remarkable memory, which is, however, specially related to music, he being able to name any piece of music which he has heard played, when the score is shown him; and he can turn the leaves of music correctly for one who is playing it. He can give the names at once of upward of three hundred compositions when shown them,

and it matters not at what page the piece is opened, or whether it be held right or wrong side up. He gives the title, and insists upon its correctness if the attempt be made to confuse him. In our presence, selections were made from a large collection of musical works, both vocal and instrumental, care being taken in each case to prevent him from seeing the title-page; and the boy did not fail once in declaring the names.

He is not yet six years old, has never attended school, and does not know the alphabet. Neither does he know anything about musical notation, so far as any instruction is concerned, the manifestation of his unique gift being altogether spontaneous. Frank is a bright, quick child, as the portrait indicates, with sharp eyes and a rather dark complexion. He has a solid, substantial, enduring organization, is as tough as a whip, and if he have right training and proper food, and is not overworked mentally,

he will become a very solid, enduring, and substantial man. His head is well elevated from the eye and ear, showing strong Firmness, Conscientiousness, Reverence, and Benevolence.

He has quick observation, an intuitive intellect, a first-rate memory of words, facts, things, and conditions. He has good reasoning power, comprehends ideas, appreciates wit, and will probably make a very definite thinker and talker.

His musical talent, or musical development, is strongly marked (see upper part of the forehead, at the right margin), specially in the upward phase of the faculty, the theoretical; and if he be rightly trained, he will succeed well also in the practical. His ability to detect instantly the pages of music which he has heard once performed, and remember the name of each, is the remarkable feature of his musical life. We judge that he will take high position as a musician, and especially as a writer or composer of music. He seems to have inherited his musical gift, as his mother possesses musical ability, and he has two brothers but a few years older than himself who can perform well on the piano; but in its peculiar expression as has been described, he is a phenomenon of which we know no parallel; and if he does not become an eminent composer and musical celebrity, capable of comprehending all the conditions and characteristics of music, we shall be greatly surprised.

THE BROKEN GRAFT.—The late Dr. Spencer said that when he was a lad, his father gave him a tree that had just been grafted. One day, in his father's absence, he let the colt into the garden, and the young animal broke off the graft. It was mended, however, on the following day, and continued to grow finely. Years passed, and young Spencer became a man and a minister. Some time after he became a pastor, he made a visit to the old homestead where he had spent his boyhood. His little sapling had become a large tree, and was loaded with apples. During the night after his arrival at the homestead, there was a violent thunder-shower, and the wind blew fearfully. He rose early in the morning, and, on going out, found his tree lying on the ground. The wind had twisted it off just where the colt broke it when it was a sapling. Probably the storm would not have broken it at all if it had not been broken when it was small. The incident furnishes a good illustration of the fact that often those whose characters are broken in manhood were weakened in early life; that the fallen man who was religiously trained and has become corrupt, broke off his connection with virtuous ways by the same sin that enervated his boyhood. The tree was broken by accident, but we break our moral life by our own misdeeds.

A ROMANCE OF OUR OBELISK.

"THE Obelisk again!" I hear someone exclaim; "it's worn out."

Ah, no, my friend, not *worn out* yet, though it has endured some pretty severe discipline. Our climate may make some changes in its complexion, but it has borne so many vicissitudes, let us hope that it has many thousand years yet in store for it.

"All nonsense," says another, "bringing it to these shores—all humbug!"

Listen. During the Centennial Exposition we stood, one beautiful twilight, under the gas-light in the "Woman's Pavilion" where Caroline Brooks had her lovely creation in butter, and there, with eyes of delighted wonder, we gazed upon that "dreaming Iolanthe," so beautifully represented out of a simple lump of butter, the sculptor's only implements being a common butter paddle, cedar sticks, broom straws, and a camel's-hair

pencil. As we stood looking at this unique work of art, a rough-faced man jostled through the crowd, and giving a hasty glance, exclaimed: "Umph! what they makin' sich a fuss over that fur? Could make it myself if I had the mould." Ah, we thought, if you only had the mould. Why, to have that mould were to possess the poet-soul of the artist—the mesmeric finger-tips that could almost turn butter into human flesh: the imagination that could so behold a poet's idea as to shape it almost to human form. But for years, good man, you had milked your cows and wielded the dasher of your churn till the butter has come, and you never knew that an angel slept in that butter. While out on her lonely farm, Caroline Brooks, self-inspired, amid the prosaic requirements of her life, called into existence a new art idea, which all lovers of genius were ready to welcome and admire. "There are those," said Mrs. Brooks, one day, as we stood watching her in her fascinating work, "who have never cared to visit an art gallery or look upon a marble figure, that have come to see this face out of curiosity, and have gone away touched to the heart's core with a love for the beautiful in art awakened in them that they never knew they possessed. If I never accomplish anything more than this, my Iolanthe has not been made in vain."

Now, you practical people with temperaments like that of the farmer who could see nothing in butter except an accompaniment for bread, I should like to ask you a question. Is anything worthless which makes people think? Why, even Dr. Tanner's fast was worth something, for it created an *appetite* for science and gave birth to new ideas. So, I say to the dear old Obelisk, in whose shadow I have so often stood on the Egyptian shore: Welcome, stranger, to our land of liberty! You tell us of the old Pharaohs of Egypt and of Rameses' exploits and victories. Now, tell to future generations, yet unborn, something of the energy of our American race, which

caught thee up from thy long nap in the lap of Egypt, and brought thee, much tossed about by land and sea, to our great city.

A little romance occurred in Egypt, which, though not of much interest in general, becomes of note, connected as it is with the Obelisk of which so much is said and written.

Two very young tourists once met on the shores of the Nile, and as tourists will, sometimes, they fell in love with each other. Sailing along past the old ruins, where Cleopatra once floated on her golden barge in all her dangerous beauty, they plighted their troth and vowed to be true forever. Before they parted, he to journey still further East, she to return to our Western shores, they stood on the bank where once towered Cleopatra's Needle. It was there then, as unconscious of its future fate as were they.

"I will never forget you," was the young man's assurance. "No; as long as this old obelisk stands on this spot, so long will I remember you."

The maiden was satisfied; it was like a three-thousand-year bond, you see; and so, kissing the old monument, they sealed the compact and parted. Years passed by, and time makes many changes. The maiden forgot her lover, the lover forgot the maiden, or if he thought of her at all, it was a sort of Egyptian reminiscence, fading away as those shores had faded from his sight at parting. And now, lo! the old obelisk, which in its later years had witnessed this modern betrothal, with all the histories of three thousand years buried in its heart of stone, is lifted up and transplanted to our shores. On a bright spring morning, some weeks after its erection, there stood at its base, quite lost in thought, a gentleman gazing quietly upon its inscriptions, but reading something more in those hieroglyphics than had been deciphered by scientific men. He read the history of a day in his own life, suddenly flashing out from that piece of granite, and smiled in a half-amused way.

"Where is she now, I wonder?" he soliloquized. "Well, it isn't safe to make vows on anything, even an old obelisk that has stood three thousand years."

"Salaam alaikam! Tiebe, y'howagi?" suddenly said a merry voice, and, turning, he saw—yes, it was—could it be!

"Mashalla!" he exclaimed, advancing to the carriage where the lady sat. Yes;

the very object of his thoughts—she to whom he had plighted his vows of constancy in that sunny Egyptian land, with this old Obelisk looking down upon them. And, so, Fate had brought them together again. There is to be a wedding this summer, and the Obelisk—safe confidant—knows all about it.

SARA KEABLES HUNT.

FROM THE GERMAN.

O, count in all the year,
How long a heart is glad,
Only a few short hours;
How many more are sad!

O, count in all the year,
How long the sky was blue,

Only a few short days;
The rest were sadder through.

If even Heaven itself
In tears we often find,
Why grieve'st thou, my heart,
At any cloud of thine?

LYDIA M. MILLARD.

OLD-TIME DINNER MANNERS.

NOT long since, while turning over the dusky contents of a box of books labeled "all at 6d.," my attention was drawn to a rusty little 12mo bound in well-worn sheepskin. A short examination showed it was complete, and for the small sum of sixpence I became the possessor of a literary treasure which has since afforded me much gratification and amusement: "The Rules of Civility; or Certain Ways of Deportment observed in France, amongst all Persons of Quality upon Several Occasions. Translated out of French." Such is the title of the work which has brought up this train of ideas, and its perusal goes far to convince me that our ancestors were not to be envied. Of the instructions given for behavior at table, the following are the most curious of those that are fit for general perusal:

"In eating observe to let your hands be clean; feed not with both your hands, nor keep your knife in your hand; dip not your fingers in the sauce, nor lick them when you have done; wipe your mouth, and keep your spoon clean. Gnaw not bones nor handle dogs, nor spawl upon the floor; and if you have occasion to sneeze or cough, take your hat or put your napkin before your face.

Drink not with your mouth full nor unwiped, nor so long till you are forced to breathe in the glass. He must have a care his hand be not first in the dish, unless he be desired to help his neighbors. If you be carv'd, 'tis but civil to accept whatever is offered, pulling off your hat still when it is done by a superior. To give anything off your plate to another to eat of, though he be an inferior, savors of arrogance, much less an apple or a pear that hath been bit by you before. Have a care likewise of blowing froth from off a cup, or any dust from roasted apple or toast; for the proverb saith, 'There is no wind, but there is some rain.' We are to wipe our spoon every time we put it into the dish; some people being so delicate, they will not eat after a man has eat with his spoon and not wiped it. When dinner is going up to any nobleman's table where you are a stranger, or of inferior quality, 'tis civil and good manners to be uncover'd. If it so happens that you be alone together with a person of quality, and the candle be to be snuffed, you must do it with the snuffers, not with your fingers, and that neatly and quick, lest the person of honor be offended with the smell."—*The Antiquary*.

LONGFELLOW HELPING IN THE KITCHEN.—There is a lady living in a little four-roomed cottage in the environs of Boston whose name is well known to literary people. She depends wholly upon her own exertions for the support of herself and children, and does all her own housework, yet her cottage is the focus of the best society of the locality. A gentleman calling there recently was received at the door by a daughter of the lady, who told him her mother was too busy to be called, but that he could see her in the kitchen if he pleased; and he followed her to that room. The lady greeted him without the least embarrassment, though she had on a big apron, and her sleeves were pinned back to her shoulders. She was cutting a pumpkin into strips for pies; and there sat a venerable gentleman gravely paring the strips to the accompaniment of brilliant conversation. I was asked to guess who this gentleman was, and, after several fruitless attempts, was told that it was the poet Longfellow. While the pump-

kin-paring was in process, another distinguished poet called, and he also insisted upon being impressed into the service. It was a dreary day outside, and no one cared to leave the pleasant cottage, so they all stayed to lunch, one of the pies forming the *piece de resistance* of the occasion.

Speaking of this incident afterward, the lady said: "My friends are kind enough to come to see me, though they know I can not leave my work to entertain them. Visiting and work must proceed together, and when I set my callers at work with me, we are sure to have an agreeable time."

To be sure, some would say this is not society, understanding by the term pretentious drawing-rooms and elaborate entertainments; but if that be not society where men and women of solid culture meet and hold "high talk," where wit, humor, and good-fellowship create a bracing, elevating moral atmosphere—if that be not society, we had better invest the term with nobler meaning.—*Lippincott's*.

WILLIAM H. TODD,

THE WESTERN POULTRY BREEDER.

MANY of our readers are interested in those useful contributors to the provision closet, chickens, and will be pleased to see the face in print of a well-known authority in matters gallinaceous. A Western lady friend, one who believes in the egg-producing and other virtues of the cackling biddy we naturally presume, has supplied all the necessary materials, and here we place the gentleman. By the portrait we judge Mr. Todd to be a man of active temperament, quick in feeling, strong in emotion, ready in judgment. He has large perceptive faculties, a good base of brain, and generally superior practical faculties. He is high in the crown, Firmness, Approbativeness, and Conscientiousness are very influential qualities, rendering him ambitious to take good

position and win respect, considerate of responsibility and steadfast in conviction. He has very marked mechanical abilities, and is very appreciative of the picturesque and beautiful in the world of nature. He has, we think, a good degree of imagination, a readiness of idea and suggestion, so that he should indicate power of invention in some direction. His memory should be excellent, retaining the multitude of facts which his active observing organs are constantly gleaning. He is thorough-going, disposed to cleave directly to the point of a subject, to be brief yet clear and decided in judgment. He should be a good critic in his field of activity, whatever it may be, that of the poultry fancier, or business; his large Form, Individuality,

Size, Comparison, Human-nature, Constructiveness, etc., endowing him with special qualities for the office of criticism.

WILLIAM H. TODD resides at Vermilion, O., but was born May 28, 1837, at Wakeman, Huron County, O. He is of English and Scotch descent, his father's family being from Yorkshire, Eng., set-

had experience with, "blooded" cattle, sheep, and the best fowls that could be found at that time. Rabbits, dogs, wild birds, animals, etc., were his special favorites. Trained to habits of perseverance and industry, our subject was thorough and unusually successful in whatever he undertook. At ten or twelve years of age he had, by care and selection, bred a



tled near New Haven, Conn., in 1639, while his mother's, from Stratford-on-Avon, settled in Stratford, Conn., in 1640, of which place they were among the founders. His immediate parents emigrated from Connecticut to the Western Reserve, Ohio, where they were among the early pioneers.

Mr. Todd is a natural-born fancier of fine stock and poultry. When quite young he took a lively interest in, and

flock of fowls, uniform in color, comb, and shape, from the common stock of the country; he also improved them in size and other good qualities. He exhibited them at a fair, where they drew much commendation and attention. Upon the advent of the "Shanghai" breed, Mr. Todd gave them a trial, but did not like them for practical purposes. Black Spanish came next, and were much admired for beauty and laying qualities. As new

and different varieties came out, they were procured and tested until there is scarcely a variety with which Mr. Todd has not become familiar.

During the more recent periods of the fancy poultry interest he has played a very active part as breeder and exhibitor. No other breeder in America, if in the world, has continuously bred and exhibited on a scale so extensively and successfully. In 1870, after exhibiting at State and other fairs, he, with others of his State, organized the Northern Ohio Poultry Society at Cleveland, Ohio, of which he was elected director and member of the executive committee. At the first show, in 1871, he "gobbled" the "lion's share" of prizes, including the sweepstakes for the best collection of poultry. Since then he has exhibited in some twenty-five shows and fairs, and won an aggregate of over 1,200 prizes, amounting to upwards of \$6,000. Within one year, at three poultry shows and three State exhibitions, in 1873 and 1874, he exhibited, and won 368 prizes, amounting to \$1,332, exhibiting at the Detroit and Youngstown shows at the same time 120 coops of fowls in twos, and winning 148 prizes amounting to \$524, in one week. One of the warmest contests he ever had was at Cleveland, in November, 1871. A powerful rival had declared he would "beat Todd" on collection sweepstakes at the next show if it cost five hundred dollars. Hearing of this, Mr. Todd mustered 60 varieties, 100 coops strong. The collection of his rival outnumbered him by 20 to 30 coops, but the better classification and superiority of Mr. Todd's stock enabled him to carry away the grade prize.

He has bred 40 varieties successfully, and has now stock in what he calls the little collection of about 30 breeds. At the International Centennial Exhibition at Philadelphia, he exhibited 15 varieties, winning the highest award on each, and also the grand sweepstakes of \$100 for the best display of poultry. At the International at Buffalo and the National at Chicago he exhibited in force, and

won, including the awards at the Centennial, against the strongest competition in America, 159 prizes, 81 first and special, amounting to \$1,300 in cash. For a year or more previous, he did not exhibit for competition, but served in the capacity of judge for several societies. In view of his great experience as an exhibitor, and his long familiarity with so many varieties as a breeder, he is peculiarly fitted to act as judge, and his services are now in great demand. He has a diploma from the American Poultry Association, commissioning him a regular judge on nearly all the breeds recognized as standard.

He believes in giving his fowls plenty of range, and his farm enables him to do so, having at his command hundreds of acres of land. Personally he makes poultry-breeding his chief study and profession, and superintends all the details of the business, which he carries out with the help of experienced assistants. He annually raises from three to five thousand birds, marketing the inferior ones for the table, and also for layers and mothers. For years the demand for good stock has been very large, and with him it has not at any time depreciated, as for several years his sales have exceeded \$10,000 per annum. He has served as an officer of the A. P. A., till rendered ineligible by the occupation of the editorial chair of the *Poultry Nation*. He is also a member and officer in the National, and an honorary member of the International, besides being connected with several other poultry organizations. In the winter of 1879 he was honored by being chosen to judge the great Dominion Show at Guelph, Canada, and unanimously elected to serve in the same capacity in 1880. He has added pure-bred swine, sheep, and cattle to his business latterly, and is meeting with his usual success.

From this rapid sketch of Mr. Todd's life, the city reader may gather some idea of the importance of the poultry interest in American commercial affairs. It is said that upward of four million eggs are used daily in the city of New York alone.

THE BEAUTIFUL SHEEP.

Who has the most beautiful sheep?

The golden Moon has these,
Who dwells in the quiet skies,
There behind our trees.

Softly and still he* comes,
When goes the world to sleep
Out from his little house,
To tend his little sheep.

* In German the term for moon is given the masculine gender and not the feminine as in English.

On his blue meadow there
He doth his sheep-fold keep,
All the while stars so fair
Are all his little sheep.

They do not harm each other,
They do each other love,
Like sister dear, and brother,
Are all the stars above.

[From the German.]

LYDIA M. MILLARD.

THE YOUNG FOLKS OF CHERRY AVENUE.

CHAPTER X.

TAL SICK.

THE next morning the breakfast bell had rung in the Manley home before Tal had quite finished his customary task of cleaning his own and his father's shoes.

"Heyo, I am late, aunt Nettie."

"Yes, dear," said that lady, who had come into the kitchen for some of the breakfast service. You did not come down as early as usual, this morning."

"I felt real lazy somehow, and didn't want to get up at all."

"Well, if you're done, clean your hands, my professor of the shoe-brush, and come in."

Mr. Manley was a stickler for promptness, and wished all the family at the table within four or five minutes after the bell had been rung; the tardy ones were required to give a reason for their want of punctuality, and he made it a point of duty to be among the first in the dining-room after the signal. This morning, however, an early caller detained him at the door, so that he was the last to sit down.

"Excuse me, wife, sister Nettie, and children," said he, "for detaining you, and I regret to say that Mr. Bartholomew is very ill, so that I shall not be able to go to Wheeling to-day."

Mr. Bartholomew was Mr. Manley's partner. He was ten years or more older

than Mr. Manley, yet a very active man, by trade a millwright, and he attended to the working of the mill, while Mr. Manley was chiefly concerned in the marketing of its products and the money matters.

"Mr. Bartholomew ill!" echoed Mrs. Manley, while the others looked at the head of the family with an expression of anxious inquiry on their faces.

"Yes, day before yesterday he insisted upon going into the flume to examine the planking, which needs some repair. I advised him not to do so, as it was quite unnecessary that he should risk another attack of rheumatism. Yesterday I noticed that he did not appear as brisk as usual, and asked him if he were ill. But he laughed off the matter, saying that he believed he had caught a little cold, that was all. This morning Mr. Dobson stopped to tell me that Mr. Bartholomew had a severe congestive chill last night, and this morning there are symptoms of pneumonia."

"Is there anything I can do, father, before going to the office?" asked Horace.

"Yes, my dear boy, I wish that you would go to the mill immediately after breakfast, and request Lane to be sure to send off that Spottsville order as soon as possible. I must go to Bartholomew and

will get down to the mill as early as I can. Was it not your turn, Clara dear, to go to Wheeling with me this time?"

"Yes, my papa; but as you must postpone the visit, do not think that I feel much disappointed. Can I not be of some use to you? Perhaps Mrs. Bartholomew will need me, and if mamma permit—"

"Yes, my love, mamma permits you to go over and make yourself as useful as you may be to Mrs. Bartholomew," interrupted Mrs. Manley.

"Well, my daughter, get ready and come with me after breakfast," said Mr. Manley. "They have only the servant girl besides themselves, you know, and in an emergency like that of sudden illness, an extra head and a pair of hands never prove amiss."

"Dear me, poor Mr. Tholomoo, I hope he isn't goin' to die," sighed Paulina. "That would be too, too bad, I like Mr. Tholomoo so much."

"Oh, I hope not," exclaimed Tal, "and, papa, folks often look sicker than they are, don't they?"

"Yes, but in Bartholomew's case it is different; he would not give up unless he were seriously ill. Just now, too, when the farmers are sending in their new wheat we are more than usually busy."

"Can't I do something for you, papa, after school?" asked Tal.

"Thank you, my little knight of the willing heart. I think you will not be needed specially. On the way from school at noon, you might stop and see if Clara has any word to send mamma."

"Oh, I'd like to do that," said Edith.

"Well, then, Tal, you may run down to the mill after school, and see how we are getting on. But, my boy, what makes your face so red this morning? What have you been doing?"

"Why, nothing more than usual, papa."

"He aint eaten scarcely anythin' neither. He's sick, too, now," said Paulina, "'cause he's hung'y every time at b'eakfast."

"I fear, my child, that you are not well," remarked Mrs. Manley, getting up and going to the boy. "His skin and hands are hot with fever."

"Just as like as not he's got the measles. All the Gibson children have it, and then I'll have it, and—"

"Edith," spoke Mr. Manley very sharply, "enough of such childishness. Go to the sitting-room and look over your lessons."

He then examined Tal's pulse and asked, "How do you feel, my boy?"

"Oh, I'm hot and my back aches, and I feel tired—that's all, papa."

"His pulse is rapid and excited, indicating a disturbed stomach, and debility. I think, dear, Horace had better stop at the doctor's on his way down and have him see Tal. It may be the measles, and if so, the sooner treated the better. I must leave the case in your hands, however;" saying this Mr. Manley hastened out.

"Oh, dear," sighed Tal. "If I must be sick now I'll lose all the fun at the entertainment. Paulie, don't come near me—should she, mother?"

"I isn't a'fraid of the old measles, Tally," said the little girl, looking affectionately at him.

Mrs. Manley gazed at the children with an expression in which a trace of doubtful anxiety was manifest.

"They say, mother," remarked Clara, "that people who're not afraid of diseases don't take them."

"That is in great part true, my love; but for Edith and Paulie's sake we must be careful not to encourage too close contact, whatever is the trouble with Tal."

"I'm very thirsty, mamma. Won't you make some lemonade for me? That's just what I want now," asked Tal, who was walking around the room in an uneasy manner.

"Certainly, my boy."

"Let auntie give him a warm foot-bath, and then he can lie down on the lounge, in my room, where it's quiet, and drink his lemonade at his leisure," said Miss Manley, the elder.

"All right, auntie, if it's the measles and it must come out, the sooner the better."

Half an hour later Tal was stretched

in the cosy room of aunt "Nettie," as she was called by the children, in imitation of their father, who had always styled his sister "Nettie," from his boyhood, although her true name was Eunice. That active little woman had bathed his feet, sponged his feverish skin with lukewarm water, and now feeling greatly refreshed, he lay ensconced in a blanket. Shortly before noon the ruddy face of Dr. Whipple, who, it will be remembered, took part in the conspiracy against the lecturer on Phrenology, burst into the room.

"Hey-day, little fellow, what now? Trying to be sick? Pshaw. Not much, we think," exclaimed he, and taking Tal's hand with a gentleness apparently in strong contrast with his energetic and jolly manner, Dr. Whipple examined his pulse, then looked at his tongue, and asked a few questions.

Mrs. Manley had followed the physician into the room, and after his brief inspection of the patient, he turned to her and remarked:

"Not much trouble here, I think. May be measles; there's a good deal of it in the lower neighborhood. If so, only a light attack. What's been done for him?"

Mrs. Manley stated the simple treatment.

"Good enough; don't know any better medicine than that," rejoined he, touching the pitcher of lemonade, which stood on a chair near Tal, "and the weather's so fine, I think he will not be likely to take cold. Don't wrap him up too closely. Let him be comfortable, and if his throat's sore a water bandage is as good as anything, and a little gargle."

"Oh, doctor, won't I get out by next Thursday, when school closes?" asked Tal, anxiously.

"Ha! ha! ha! boy—that reminds me. Was over at Burr's this morning. One of the girls is down with the remittent—and she asked me the same question. You're going to have a fandango or something as a wind-up? That's it. Well, I'm a little sorry, my son, I can't encourage the

idea, but (tapping Tal on the forehead compassionately, for the boy's eyes were filled with tears), "it will be all right. If you lose something you would like to have very much, on account of sickness, keep up a stout heart and you will gain something else of greater value."

"You're not sure about its being the measles, then, doctor?" asked Mrs. Manley.

"No, not positive, but the symptoms are like it. A little cold, a little congestion in the liver would produce similar phenomena, but we'll probably know to-morrow. At any rate it's a very light attack, and he'll be out in a week, it's likely.

"And that'll be two days after the entertainment. Well, anyway, I hope Edith won't be sick too, 'cause she'd make such a fuss if she couldn't go," said Tal, with an effort to be cheerful.

"That's a good fellow; that's the way to take misfortunes, big and little, and you'll wonder that you can so easily get over them as you grow bigger, my boy. But I must be off."

"You have seen to Mr. Bartholomew, doctor?" inquired Mrs. Manley.

"Yes, saw him last night; am going there now. Why doesn't the fellow take better care of himself? I've told him two or three times about keeping out of the water. Now he may have to lie by for a fortnight, and suffer a good deal with his chest, and, perhaps, wind up with rheumatism, besides putting Mr. Manley to so much inconvenience. Oh, these great workers, ma'am, they *will* get themselves into a hobble before they know it. Good-morning."

The doctor gone, Tal took a good mouthful of his lemonade and stretched himself out for a nap, which lasted until after the dinner hour. Then aunt Nettie brought him some nice milk toast and a dish of blackberries, which, he said, tasted splendid, and were just the things he felt like eating. Toward four o'clock he heard a shout from the street, and his aunt, who was sewing by the window, answered his look of inquiry. "It's Truman Burr, Tal, he's coming in the gate."

"May I look out of the window, auntie?"

"You can that closed one, for I don't want you to be in a draught."

Tal sprang to the window indicated, and signaled to Truman to come near.

"Sick, ole feller, eh?" was that worthy's first salutation.

"Yes. Guess it's the measles, too."

"Huh, that's nothin'; had 'em long ago. But it's kind er bad ter have 'em jest now, when that gran' show's agoin' ter be—yer can't git out for a week—can yer?"

Tal shook his head sadly.

"Well, I'm sorry," returned Truman, in a tone of sympathy. "Never mind, ole feller, I'll see that yer git yer share of the good things they're goin' ter have. Though, I guess, some other folks'll look after that, too. It's all right 'bout my speaking. P'raps yer know."

"Oh, I knew it would, Tru."

"So yer said, but when a feller has so many down on him he doesn't know what ter think or do, sometimes."

"I'll bet you'll be one of the best in the whole party."

"Huh, now, git out," replied Truman, with a gesture that expressed both pleasure and doubt. "But I'm goin' ter do my level best now, I tell yer."

"Oh, I wish I could hear you."

"I wish yer could come, I want yer--en--encouragement. But we'll have good times in vacation, won't we? I tell yer I was down in Perkins' medders this mornin' after drivin' the cow, and I never saw such crowds of blackberries in my hull life. They'll be just ready to drop week after next."

"I guess I'll be out then."

"Of course yer will. Pshaw, yer aint much sick."

"So the doctor says, and I feel pretty good now."

"Well, I must be goin'."

"Come over to-morrow afternoon, won't you?" asked Tal.

"Why, yes, if yer want me to, and every afternoon till yer's well again."

"Yes, do come."

"I'm off!" was Truman's departing exclamation, and he had scarcely disappeared around the curve in the street, when Edith and the girls of the neighborhood came to the gate. Seeing Tal at the window they waved their hats, and then flourished their handkerchiefs grotesquely, pretending to weep, in mock sympathy for his illness. Tal was compelled to laugh, and then shook his fist in a very threatening manner at them. On this they all but Edith screamed, with a great appearance of terror, and ran off.

CLARE.

WHY BROTHER GARDNER REFUSED AN OIL PAINTING.—"I hez accidentally l'arned," began the President of the Lime Kiln Club, as the meeting opened, "dat de local member of our club am makin' up a shake purse to buy me an ile paintin' as a present. I hope the scheme will stop short. Not dat I wouldn't feel honored—not dat I wouldn't feel grateful—not dat I wouldn't 'preciate de kind motives of de givers, but kase it would be money frown away. I lib in a humble cabin. We hev got some green stuffed chairs in de parlor, and some chromos on de wall dat cost two shillin's apiece, but it am no place dar fur an ile paintin'. It would be just as much puter place in my cabin and wid my surroundin's as lace curtains ober a smoke-house winder. My green chairs now harmonize wid my ingrain carpet; my chromos doan look bad 'longside of a plaster-of-paris bust of Shakespeare; my three-dollar clock hain't any too gorgeous for the chintz lambrequino which de old woman made. We are only old slave-folks up dar, but we know better dan to w'ar \$7 worf of hat wid \$2 worf of butes. If white women want to come down town wid a \$100 cloak on, and go back home to carpets full of holes an' baker's bread suppers, dat's no guide fur my ole woman. If white men walk aroun' like lords, an' yet owe fur last winter's coal, dat's no guide fur me. No, gem'lem, doan make up no present, nor nuffin, but keep yer change down in yer pockets, fur sore froats, or a tech of fever."



BABY: or, A YOUNG MOTHER'S EXPERIENCE.

I HAD expected a little red squirming thing, with its head wobbling helplessly from side to side, with eyes shut tight in the exertion of making the squall which issued from its wide-open mouth as loud as possible, and little clenched paws beating the air aimlessly.

But when the first ablutions were over and the doctor bade me look, what did I see?

A perfect little figure sitting erect, upborne on the doctor's palm, beautiful in all its nude proportions, every muscle seemingly well knit, holding itself erect, the head carried high and firmly, the face rosy, smiling, happy, with not a trace of pain or temper on it, and the wide-open blue eyes peering about as if they saw and understood everything, though your scientific folks insist upon it that a new-born baby does not see.

From the height on which she sat she looked down upon the world, the personification of the infant genius of Health and Happiness, so fresh and serene.

She weighed ten pounds; every movement was firm, decided, and graceful. The unconscious gestures of her finely molded little hands were full of pretty meaning; independence and activity were shown by her rolling over on her back after she had been laid on her side, when only a few days old. She showed how sensible she was by going to sleep in her

little pink-draped crib, soon after her triumphal advent into New York City, and sleeping all day without a sound.

During most of the time for the next few days she slept. Babies do not always come into the world with as little disagreeable noise and fuss as did this one. Signals were given at about seven o'clock one pleasant Sunday morning early in May. Preliminary preparations were so quietly made that no one in the house knew what was going on. Active operations began about eight, and at nine o'clock Miss Baby made "her first appearance on any stage" in the manner above described. At ten o'clock, while she was calmly sleeping in her rose-leaf tinted bed, the little household world were notified of the new arrival. Baby's safe advent had a most blessed effect upon her mother. There were no moans of pain in that room after the ordeal was over. The face upon the pillow was not a pale, spent one, but a rosy, cheerful visage, over which smiles broke from time to time. This was a birth-chamber, but not a sick-chamber.

Every one had been promptly at their appointed posts, all working together, without a single hitch in the machinery, and everything had gone on like clock-work, without the least confusion, unpleasant racket, or hurrying to and fro. I said every one—but I should have ex-

cepted the nurse, that most important personage, whose absence, however, is never so severely felt when your doctor is a motherly and womanly woman, doing out of the abundance of her kind heart a multitude of things for you that your gentleman doctor can't do.

When the nurse at last arrived at noon she was installed at the side of the crib, where she sat smiling benignly, shedding the rays of her benevolent countenance on all around. She was certainly a handsome though expensive piece of furniture. Your very ideal of a model nurse, outwardly. She was a robust woman of middle height, soberly and cleanly dressed, with a comfortable look about her; a healthy face with good features and kind expression and a stately double chin. It seemed impossible that her voice should take any but a soothing tone, or her blue eyes ever have any but a motherly look in them. Yet a keen observer might have noticed she was not in a hurry to do anything but sit benignly by the cradle.

But the happy mother resting among her pillows, blessed in her inexperience, began to think that the worries of motherhood were the exaggerated flights of fancy of old-maid writers. The only trouble was that baby slept so much, and there was no excitement to break the monotony that now settled down upon things.

How little do we know when we are well off!

Three days of spare diet for a hungry stomach was the only trial during that period, Baby being very reasonable, and though growing hungrier all the time, still sleeping a great part of it. When put to the breast, she tugged away according to the most approved scientific principles, as if she had always been doing it.

Preparations were made for anticipated milk fever and other troubles incident to the period; but, as heretofore, things went on in the natural way; no fever, no gathered breasts; Baby would not show the least sign of sore mouth, nor of any

other infant trouble excepting a robust appetite hard to appease. The navel cord was the largest the doctor had ever seen; as thick around as a good-sized forefinger, and did not come off till the ninth day. Nurses and doctors say these things prognosticate an unusually healthy baby.

Now up to this time, behold the results of attention to hygienic rules on the mother's part during the preceding nine months; and a determined effort to be cheerful and active as far as she was able, avoiding, however, excesses in all things; and abstaining entirely from drugs. Behold how a doctor who is opposed to drugging, reduces the situation to so fine a point that her visits are made merely out of precaution to oversee bandages, etc., and the general welfare of mother and child. Ponder these things well, and take in the happy situation, which lasts until the tenth day, when the good doctor's precautionary visits cease, and the benign-looking nurse is installed as the highest power, and the welfare of the inexperienced and unsuspecting mother and the innocent child are left to hands that abuse the privilege. The substantial fact of a professional monthly nurse of the old school has been allowed to invade the maternal Eden and the reign of error is about to begin.

Things began to go wrong after the tenth day, when all the danger seemed over. The greatest danger, in fact, was just at hand. Baby slept so long at a time—indeed sometimes almost whole days—that the mother began to be alarmed—these slumbers were so death-like. But they did not seem to be refreshing as at first, for Baby began to display a new character, crying, as if in pain, whenever she roused out of this torpor, and began also to be restless and sleepless at night. Though the doctor had warned the mother against keeping the child at the breast at night, the nurse insisted that she ought to keep it with her all night, and did not seem to get up with a good will when called in the night.

Then the nurse thought the mother

ought to drink all the tea and coffee she could swallow. The mother, on the other hand, was set against drinking either, and refused to have anything more stimulating than cocoa nibs and milk, in spite of the affirmation of the nurse that tea was the great milk producer in mothers. The answer was that a smaller quantity of healthy, pure milk was better for the baby than a sloppy product with no nourishing qualities. Nurse said no more, excepting to suggest, whenever the baby cried, that it must be hungry. The mother, however, made a discovery which explained some of the crying.

She had noticed with uneasiness that Baby was kept exposed entirely to the air for an unreasonably long time when being washed and dressed, instead of being kept covered as much as possible, and was put to sleep in her crib immediately afterward. Asking to have her in the bed one day as soon as Baby was dressed, she found that the little hands were cold and blue, and on feeling the little feet they were like ice. It was asking too much, of even a healthy baby, to get warm all alone in a room where the temperature was somewhat chilly, as is usual in city boarding-houses in spring. After that, the mother took the little thing into her bosom every day as soon as it was dressed, and warmed the poor feet and hands; but serious injury had already been done.

Discovery the second: Nurse having occasion to leave the room while the baby was lying awake in the crib, the mother asked to have it brought near the bed so she could watch, and with the mother's instinct, as soon as she was alone in the room with it, managed to reach out and draw the crib up so that she could fondle the little thing, and in so doing discovered that there was something in its mouth, at which it was sucking. Examination proved this to be sugar and cracker, flavored with something, and was tied up in a rag. She took it away and hid it without saying anything to the nurse. Examination afterward proved that the baby was suffering with sore

mouth, owing to this practice. The discovery of several other things quite as objectionable—and who would have believed it possible, seeing her crooning to the baby or holding it affectionately in the presence of visitors?—caused Nurse to get her *congé* one bright morning, before Baby was two weeks old.

So exit, your excellent, reliable, most highly recommended Sairy Gamp!

"She did not go a moment too soon," was the verdict of the doctor, who sat examining the poor little writhing creature that had been screaming all the night before with colic, though the nurse persisted it was nothing but hunger and wakefulness. It was undressed, and on examination showed terrible-looking raw places in both armpits, from lack of proper ablution and thorough drying of the parts—at which sight the mother burst into nervous tears, and her confidence in hired nurses vanished then and there. For the next two days Baby was in a weak, pining state that was almost lethargy. Volunteer aid was not lacking. But kind hearts, willing and tender hands, could not avert the consequences of prolonged neglect and wrong treatment, and one night Baby woke suddenly, screaming and almost in convulsions, and grew so much worse that the doctor was sent for. For a great part of the night we worked over her unremittingly, but it seemed as if she would die with pain, her little body writhed about in such agony. This was the effect of exposing her naked to cold air while washing her in warm water until the whole body was chilled, and then putting her to bed with ice-cold hands and feet, leaving her to get warm if she could, and also of giving her surreptitiously sugar-cracker, and the doctor thought opiates, to keep her quiet in the crib. Poor baby! It took her, even with all the advantages of a vigorous constitution, a long time to recover from the effects of this treatment.

But the unremitting attention of friends saved the little sufferer, and such recurring attacks of indigestion and colic became less frequent.

I will acknowledge it; I used to think before I was tried in this way myself, that mothers were far too fidgety about their babies, and that they exaggerated the importance of constant watchfulness on their own parts. *I* was going to do things in such a superior way! There was to be a perfectly faithful nurse who was to take an angel's care of the baby all night, only disturbing *my* slumbers when it was necessary for it to be fed!

In the daytime I was to give my directions about baby, which were to be carried out understandingly and with reverence as implicitly as if I were the queen of heaven and earth, and everything would go on perfectly. Baby would have nothing to do but eat, sleep, smile, and grow fat, and *I* would have nothing to do but fondle her and exercise a general supervision over things!

How different was the reality! Before I was well able to sit up part of the day, I had to learn to do everything for Baby (for practically I knew but little), because I dared not trust her to a hireling. Worn out with night watching, I used to sleep toward morning, when some compassionate friend came in to sit an hour or so and tend her, and then awaken suddenly, screaming, from a frightful dream that Baby was gone, and throw myself over to the side of the bed where the crib was before my eyes were open. Worn out with anxiety, watching, and weakness, I went out of my head a very little at one time; but as I said constantly, even then, I could *not* be sick, for then Baby would be taken from me—and how could I trust any one who was *paid* to care for her, after my experience?

When she was four weeks old, a little, quiet, patient, subdued thing, so different from the bright, healthy baby who came to us on the third of May, I decided to make the effort to go to our own home in the country, for the heat in New York was so excessive that I felt she would not get well there. It was a long journey for her. Leaving the Grand Central Depot at six o'clock in the evening, we reached our stopping place about the

middle of the next forenoon. A carriage drive of four miles on a raw, damp, rainy morning was before us. She had borne the trip well so far; but in spite of all my care she became chilled before we reached home, and for weeks was in a very low state—and a poor, puny, little thing she was to look at.

Now I was to be tried in another way, and new perils were to beset Baby. Nothing so appeals to the heart of a good woman as a sick and suffering child, and all the good women in the neighborhood knew that this was my first, and that it seemed to be pining away. Every one, almost, was ready with suggestions. With one voice all declared I must give her catnip tea. "It will make her sleep," they said. "It will make her fat and peaceable," they added. Said I, "If it makes her sleep it is because it has opium in it, and I will not drug her, and I should run the further risk of injuring her mind in some way by constantly stupefying her."

One worthy woman went away seriously offended because I objected to giving Baby saffron tea to clear her complexion! She had only one or two attacks of colic after we came home, because the first article of my creed was to keep her comfortably warm, night and day, and never let her hands and feet get chilly. But time and vigilance were required to combat tendencies to disease already formed. When she was in pain I put a cloth wrung out in hot water over her little stomach and a warm flannel over that, and wrapped the whole lower part of her body in warm flannel, and then laid her over my shoulder till the pain abated. The person who believes that a young baby is to be handled like a block of wood or a doll, has no vocation to tend babies. The little things are keenly alive to sympathy from the very first, and take a great deal of comfort when suffering, just from being caressed, tenderly handled, and nestled in kindly arms.

I tried at first taking her out regularly every day for a drive, but found she was

too weak to bear it till later. All summer she suffered with weakness of the bowels and stomach; two or three times her situation was very critical. But nothing could induce me to give her medicine, with the exception of a little *camomilla*, in homeopathic quantities, as directed by our excellent lady doctor in New York, the only person whose advice I took in treating Baby. One evening a kind neighbor was over to see me just when Baby had a bad turn. She urged me strongly to give her Godfrey's cordial, and shook her head ominously over the quiet, patient little thing. After she had gone I noticed that my nurse, a pretty and kind quadroon girl, who had accompanied her to the door, was weeping. On inquiry she at last said that Mrs. G. had told her that the baby had "cholera and—*phantoms!*" There was something so dreadful to the girl in this mysterious phrase, that she shivered with superstitious dread. It was far more terrible to me, when guided by the sound I arrived at the deduction of cholera infantum.

Certainly, bowel disease is the young lady's direst foe. And there were several occasions on which I might have lost mine, almost before I knew it, if I had not formed, from her first attack of illness, the habit of inspecting and counting every passage, day by day. It was in this way that I discovered early one morning, when she seemed well and I was about to start away, to be gone an hour or two on important business, that she really showed alarming symptoms. Upon the usual evacuation followed a discharge of blood and mucus. All idea of leaving the house was at once given up. Poor Baby was laid very gently in a horizontal position, and moved as little as possible all day. Warm compresses and a little *cammomilla* were resorted to. But above all else, she was prevented from crying, or in any way becoming excited. The disease taken so early was easily checked. By the next day she was out of danger. For a long time I was obliged to keep her as quiet as possible, and all my energies were directed to prevent fretting on

her part; but they were successful, and gradually her bowels became more regular as she became stronger. When she was over two months old I got a little carriage for her, the best that could be found, and getting her gradually used to it, I at last kept her out of doors nearly every hour of the day between sunrise and sunset, of course taking all proper precautions. After the first weeks at home she never had colic at all. The looseness of the bowels was owing to weakness and warm weather. She gradually became strong, lively, and singularly sweet-tempered, but such was the activity of her body and mind that she did not gain flesh rapidly. Here my kind friends again intervened and insisted that she was not sufficiently well nourished by my milk, and that I must give her something else in addition. One suggested milk and water sweetened; another spoke of prepared food, to be bought; another wished me to give new milk, undiluted; still another advised cracker, softened with water and sweetened. But I had a firm conviction that a child's food must not be changed or varied in hot weather, while it is under four months old, so long as it seems to thrive and be strong, even if it is not very fleshy; and so Baby got nothing excepting mother's milk until the end of that time. Then the weather was cooler and her digestion so much improved that I began to give her a wheat preparation, first with water, then with water and new milk, and at last entirely with new milk. She throve rapidly as soon as cool weather came on. I continued to nurse her and to give her in addition all the prepared food she wanted. As she grew stronger I gradually accustomed her to be fed only at regular hours, say once in three hours. That is not too often to feed an exceptionally active child, and one of unusually developed mental faculties as she was. I also began to give her, at intervals, pure, fresh milk, warmed, and slightly sweetened.

As she grew older, stronger, and fuller of vitality, she developed an unusual ca-

capacity for keeping warm alone at night, and I gradually accustomed her to sleep in a little basket crib—not a cradle—at my bedside. At first she would wish to be fed several times in the night, but as she grew older and stronger her sleeps became longer, until at last, when she was nine months old, the habit was already well formed of going easily to sleep at seven o'clock in the evening, after being well fed, and sleeping uninterruptedly until seven or eight in the morning. She would then awaken, quietly smiling, and crowing, as perfectly good-natured as a baby ought to be after a good night's rest, and I would feed her at once. Her improvement was so rapid that at six months she began to creep, and was put in short dresses. Before she was seven months old two lower teeth made their appearance together one morning, without any of the usual fuss or trouble. At nine months she began to climb up to chairs, had four teeth, and two others just coming through; could jabber and say several little words, and was accustomed to amuse herself for hours together on the floor.

She had forgotten what colic was. Her food never seemed to make her uncomfortable, though she took regularly over a quart of milk daily besides what she got from her mother. Part of it with the wheat preparation; the rest, pure cow's milk. She seldom threw up her food. I allowed her in addition, after careful experimenting, to have a mellow, well-pared apple after her first teeth came. She would munch at this contentedly for hours, lying upon the floor. She ate, on an average, one every day, care being taken as to seeds and cores, and was not feverish over two or three times with her teeth, which, I think, is owing to the cooling properties of the fruit.

I never allowed anything made of rubber to be used about her, not even a rubber ring to cut her teeth on, for I believe it is hurtful. I preferred in all things to take trouble and have a healthy baby. And that is the secret of keeping babies alive and well. You must think about

them and watch them all the time and not depute this office to any one else. The first symptoms of anything wrong are to be attended to, and you can not discover these without constant watchfulness. Prevention is a thousand times better than cure. So I put my hand on the back of Baby's head several times a day to be sure she has no approach to fever. She perspires profusely about the head, and this is always a good thing, provided you are careful to avoid checking it by exposure to drafts. Still, babies are so different, one from another, that discrimination is required in their treatment. Mine has a healthy physical development, united to a very sensitive, nervous organization. Up to nine months I did not find that I could give her full baths. I wished to do it, and I tried it two or three times, but the results were unfavorable, and I concluded to postpone it till she was older. I found that a sponge bath, washing her all over piece by piece, and in the meanwhile keeping her covered, and being careful not to let her get chilled, agreed best with her. A great drawback was that I could take her out for an airing but seldom during the winter, we have such bitterly cold, sunless days in this latitude in winter. But at every favorable opportunity she was taken to drive, warmly wrapped up, and during the rest of the day was kept in a room with an open fire and southern exposure, and clothing not perfectly dry was never allowed to come near her. At night she slept in a well-ventilated room, warmly but lightly covered, the temperature not over 45 to 50 degrees, as a rule, and bed-clothing regulated by the temperature. She was so wrapped about that she could not get her hands out, which would be very injurious in so cool a room, and of course it is necessary to wake and examine a child often during the night when it sleeps in a cool room. She was singularly free from colds during the winter.

I think I have proved that even a babe, made delicate by mismanagement, may become healthy and strong again without

medicine or teas, or soothing syrups—that in fact these are the things that hinder. Keep its temperature well regulated, dress it comfortably, give it all the fresh air and sunshine you can, and all the wholesome food it will digest. Avoid changes; accustom it to regular hours

for food and sleep; let it see always calm, smiling faces, and leave the rest to nature; and ten to one you will lay the foundation for a good physical and mental constitution. But you must do, and see that these things are done, yourself.

HOWARD GLYNDON.

WOMAN THE BEST SANITARY REFORMER.

I PRESS this office for the prevention of disease on womankind, not simply because they can carry it out; not simply because it pertains to what Xenophon describes as their special attributes, their watchfulness, and their love, but because it is an office which men can never carry out; and because the whole work of prevention waits and waits until the woman takes it up and makes it hers. The man is abroad, the disease threatens the home, and the woman is at the threatened spot. Who is to stop it at the door, the man or the woman? The house is her citadel. The majority of women will ask, By what process of training can we help toward a triumph of science so beneficent? I devote myself from this point of my discourse to give some answer to that question. I state at once that the training required is simple—beyond simple; that every woman who wills to go through it may go through it and may become mistress by it of the destinies of the world. Not the Fates themselves were more the mistresses of the destinies of the race than the women of an educated commonwealth who were conversant with the art of the prevention of disease and premature decay. A woman should master physiology so far as to understand the general construction of the human body. She should be rendered fully conversant with the different changes of food that are required for the digestive process in different periods of life; the extent to which the digestive powers should be taxed in infancy, childhood, adolescence, maturity, first and second decline, and old age.

She should be made aware what substances, taken as food, are of real, and what of spurious quality. She should be taught the relationship which solid foods hold to liquid foods or drinks. She should be told what drinks are foods, and she should specially understand what are the particular foods required for the young during the periods of active growth. In illustration of the value of this last-named fact, it may be stated that if woman only knew what foods were requisite to feed the skeleton or bony framework of the living body while that skeleton is in the course of growth, and if she would act upon her knowledge, as she almost certainly would if she possessed it, there would hardly be one deformed child left in the land in one or two generations. Rickets, with all its attendant miseries of bowed legs, crooked spines, and humped backs, would pass away as if by the spell of an invisible enchantress. . . . DR. B. W. RICHARDSON.

CONSTIPATION.—A contemporary says that it is doubtful if the victims of consumption number as many as those of the various diseases that result from habitual constipation. True consumption is generally an inherited disease. It may remain always dormant, but when aroused to action, decay commences at a point circumscribed, and gradually extends—unless arrested—until so much of the lungs becomes involved that vital action ceases. The evils of constipation result from inattention to the calls of nature,

and usually commence with children whose habits are not closely looked to by their parents.

The process by which this disease—for it is a disease in itself—is developed is briefly this: when effete matter is retained a moment beyond the time its expulsion is demanded, the system commences its efforts to get rid of it through other than the proper channels; the absorbents carry the more fluid portions of the poisonous mass into the circulation, and it becomes diffused throughout the body. The more solid or clay-like portion is forced into the lower rectum, where it becomes firmly impacted, thus cutting off the circulation in the small blood-vessels, causing

after a while those painful engorgements known as piles and hemorrhoids. A continuance of these troubles often results in fissure, fistula, or cancer. But the trouble does not end here; for as a result of this blood poisoning we almost invariably find more or less dyspepsia, with decided derangement of the functions of the heart, liver, and kidneys, accompanied by headache and nervous debility. These derangements, with their accompanying congestions, if not relieved, tend to the development of local or general fevers and inflammations, acute or chronic diseases of which the name is legion. Even consumption may be a resultant of disordered alimentary function.

POPULAR FALLACIES.

NIGHT air and damp weather are held in great horror by multitudes of persons who are sickly or have weak constitutions; consequently, by avoiding the night air and damp weather, and changeable weather, and weather that is considered too hot or too cold, they are kept within doors the much largest portion of their time, and as a matter of course continue invalids, more and more ripening for the grave every hour; the reason is they are breathing an impure atmosphere nineteen-twentieths of their whole existence.

As nothing can wash us clean but pure water, so nothing can cleanse the blood, nothing can make health-giving blood, but the agency of pure air. So great is the tendency of the blood to become impure in consequence of waste and useless matters mixing with it as it passes through the body, that it requires a hogshead of air every hour of our lives to unload it of these impurities; but in proportion as this air is vitiated, in such proportion does it infallibly fail to relieve the blood of these impurities, and impure blood is the foundation of all disease. The great fact that those who are out of doors most, summer and winter, day and night, rain

or shine, have the best health the world over, does of itself falsify the general impression that night air or any other outdoor air is unhealthy as compared with indoor air at the same time.

Air is the great necessity of life; so much so that if deprived of it for a moment, we perish; and so constant is the necessity of the blood for contact with the atmosphere, that every drop in the body is exposed to the air through the medium of the lungs every two minutes and a half of our existence.

Whatever may be the impurity of the outdoor air of any locality, the indoor air of that locality is still more impure, because of the dust and decaying and odoriferous matters which are found in all dwellings. Besides, how can the indoor air be more healthy than the outdoor air, other things being equal, when the dwelling is supplied with air from without?

To this very general law there is one exception, which it is of the highest importance to note. When the days are hot and the nights cool, there are periods of time within each twenty-four hours when it is safest to be within doors, with doors and windows closed; that is to say, for

the hour or two including sunrise and sunset, because about sunset the air cools, and the vapors which the heats of the day have caused to ascend far above us, condense and settle near the surface of the earth, so as to be breathed by the inhabitants; as the night grows colder, these vapors sink lower, and are within a foot or two of the earth, so they are not breathed. As the sun rises these same vapors are warmed, and begin to ascend, to be breathed again; but, as the air becomes warmer, they are carried so far above our heads as to be innocuous. Thus it is that the old citizens of Charleston, S. C., remembered that while it was considered important to live in the country during the summer, the common observation of the people originated the custom of riding into town, not in the cool of the evening or of the morning, but in the middle of the day. They did not understand the philosophy, but they observed the fact that those who came to the city at midday remained well, while those who did so early or late suffered from it.

All strangers at Rome are cautioned not to cross the Pontine marshes after the heat of the day is over. Sixteen of a ship's crew, touching at one of the West India islands, slept on shore several nights, and thirteen of them died of yellow fever in a few days, while of two hundred and eighty, who were freely ashore during the day, not a single case of illness occurred. The marshes above named are crossed in six or eight hours, and many travelers who do it in the night are attacked with mortal fevers. This does, at first sight, seem to indicate that night air is unwholesome, at least in the localities of virulent malaras, but there is no direct proof that the air about sunrise and sunset is not that which is productive of the mischief.

For the sake of eliciting the observations of intelligent men, we present our theory on this subject.

A person might cross these marshes with impunity, who would set out on his journey an hour or two after sundown,

and finish it an hour or two before sunrise, especially if he began that journey on a hearty meal, because, in this way, he would be traveling in the cool of the night, which coolness keeps the malaria so near the surface of the earth as to prevent its being breathed to a hurtful extent.—*Exchange*.

PRACTICAL VEGETARIANISM IN FRANCE.—A vegetarian society has been founded in Paris, and has just issued its first *Bulletin*, in which we are told that the object of the society is to discover the "elementary régime most advantageous to the human species." Vegetarianism ought to commend itself to many French people, with whom "rosbif" and "bifteck" are not the institution that they are in England. Indeed the great bulk of the French lower and lower middle classes, like the peasantry and the bulk of the working classes in Scotland, are vegetarians without being conscious of it, and probably more from necessity than choice. The Paris society has been founded by Dr. Hureau de Villeneuve, who, as he tells us, in an eloquent article in the *Bulletin*, became a vegetarian on account of repeated attacks of rheumatism, from which several of his ancestors had died. After some years of exclusively vegetarian régime, the Doctor has got rid of all traces of rheumatism, and his health is completely restored. In his article he presents the usual, and some additional, arguments for vegetarianism with much force, maintaining that of this system, and with due attention to exercise, we should be healthy, strong, vigorous, and intelligent. Many men, he points out, notable for their moral and intellectual energy and physical vigor, have been vegetarians; among others, Pythagoras, Plutarch, Newton, Milton, B. St. Pierre, Franklin, Monthyon, who all lived to an old age. President Lincoln, he tells us, whose stature was gigantic, his muscular force colossal, and his energy indomitable, eschewed all animal food. [Of this we were not aware. Is it

true?—ED. P. J.] The moral seems to be that each man ought to find out what suits himself. No doubt vegetarianism, with which M. de Villeneuve includes milk, butter, cheese, and eggs, would make life much brighter for many dyspeptics and rheumatics.—*Pall Mall Gazette*.

VIRTUE OF A TEMPERATE LIFE.—Mr. P. T. Barnum, whom everybody

knows, has just recovered from an attack of illness which would have proved serious enough to a young man, and would have consigned to the "narrow house" nineteen out of twenty men over sixty years of age. But Mr. Barnum is over seventy, and attributes his convalescence to his regular, abstemious life. He says: "I have kept clear of liquor and tobacco through life, and have not an organic disease in my whole body."

NOTES IN SCIENCE AND AGRICULTURE.

The Lunar Display in Colorado.

—Western papers have given full accounts of the extraordinary lunar phenomena of February 14. A correspondent of the *Illustrated Christian Weekly* describes it vividly thus:

"The evening of February 14 found the thermometer at nineteen below zero. The fire companies of Denver brought out their engines in early evening to extinguish a fire that was raging at the eastern verge of the city, only to find the conflagration down across the plains—the fire of a glorified full moon. For hours thereafter thousands of people forgot the keen, still air in watching a panorama of meteoric marvels spread in the sky.

"Mock moons stood sentinel by the queen of night, two on either side, more intense in color than the moon itself. After a little each of these was surmounted by a brilliant bow. These bows faded, to gradually give place to double halos of lovely violet tint.

"By the time the moon had reached two-thirds the way to the zenith, these phenomena were all gone, and another appeared of far greater brilliancy and magnificence. Faint bands of pink stretched horizontally from the moon to two mock moons in whose huge blazing fires played the prismatic tints of the first rainbow. Then a distinct band of pink outlined a circle round the zenith which enclosed one-fourth of the visible heavens; the narrow band passing directly through the center of the moon itself and three other moons, a faint one at the farthest western point on the circle, and two others at equal distances from these, the circle being thus intersected by four moons and the two slanting prisms on either side of the actual luminary. From these prisms an occasional loop of faint light drooped to the edge of the horizon.

"In the center of the large circle about the zenith, in the very holy of holies, hung a small crescent in the seven colors—a perfect lunar rainbow.

"So impressive a scene has rarely been painted on the always wonderful heavens. And though we may calmly study it and recognize only physical cause and effect—though

savants may analyze laws of optics and meteorology, and put this phase here and the other there, is it not all the more surely and beautifully true of the Creator and Lawgiver, that the firmament showeth his handiwork?

"M. J. T."

Antiquities in New Mexico.—The

walls of some of the old ruins at Abo are six feet of solid stone—lime and red sand; the walls in places are yet six feet in height, and in a state of perfect preservation. In the ruins are found vessels of various designs and sizes made of pottery, some representing birds and animals. Stone hammers are found there, but no indications that sharp-edged tools were used in this ancient period. In digging down one place the remains of an old aqueduct were found, which was probably used, as in the present day, by the Mexicans for supplying the inhabitants with water.

It is thought and believed, from specimens of ore found, that gold, silver, and copper were found in paying quantities. All the rock is more or less copper stained, and some of it is so much so that some of the "country" rock has run as high as 37 per cent. copper.

Surely our bright, sunny land has been enjoyed long before the Anglo-Saxon made his appearance upon the scene. The future of New Mexico can only be surmised.

New Mexico is perhaps the most noted country in the world for research. The historian, the wealth-seeker, and the "curious" can here find a rich field and reward for their labor. The Abo and Gran Quivira counties are perhaps the most renowned in the territory for research. In the former there are evidences of great volcanic eruptions which overwhelmed cities and buried the inhabitants in ashes and lava long ages ago. It is evident that these people, who are perhaps older than the Aztecs, were a prosperous race, with not a little advance in civilization, as the Abo ruins in the Manzana Mountains indicate; also some indications of fine-art; rude figures and the images of animals being found upon the interior of the walls of the structures beneath the debris.

It is evident that this non-historic race were seekers after mineral, and evidences also exist that mineral was obtained by them in paying quantities, there being the ruins of many old smelters and acres of slag found near Abo. Here mines are found with the timbers so rotten with age that great difficulty is experienced and danger incurred in going down into the old shafts, where shafts are formed.

Petroleum in Italy.—According to a recent report, mineral oil similar to that of Pennsylvania has lately been pumped in the Valley Cocco, in the Abruzzi, and also at Riva-Nazzano, near Voghera, in Piedmont, and it is believed that after a few months' digging the oil springs themselves will be found. The American mode of extracting the oil is used, and some expert Canadians are employed on the work by an Italo-French company formed at Paris. The pumps are worked by steam, and the whistle of the engine is now heard where not long ago the shepherd's pipe was the only sound that broke the silence of the valley. As long ago as 1866, some Italians were ready to seek for petroleum in these localities, but were forced to desist from want of means. An illustrious geologist has asserted that there are many valleys in Italy rich in this oil, and several specimens of native petroleum exist in the geological cabinet of the museum at Milan. Companies are being formed to prosecute this industry, which must prove very profitable, for there is a tax of fifty per cent. on the American oil, and expenses of transport equal to twenty per cent.

Unappropriated Lands in the UNITED STATES.—There remains yet unsurveyed over one thousand million acres of public lands, enough to furnish one-hundred-acre farms to ten million families. Last year 9,655,936 acres were sold to settlers. At this rate, one hundred years will elapse before the entire area is appropriated. A vast domestic commerce will grow up in these new States, in the development of which, rather than foreign commerce, is to be found our true and permanent national greatness. To contest with other nations for a share of the world's commerce, means to reduce labor to the lowest point of subsistence, rather than to elevate it to the highest possible plane of development. One consumer in our own country will buy more than ten consumers gained in a struggle for foreign trade.

Two-striped Apple-tree Borer.—One of the greatest pests of the apple orchard in almost every locality where apple-

trees are cultivated, is the insect thus commonly named, says A. S. Fuller, in the *Hub*. It was described by Thomas Say, some fifty years ago, under the name of *Saperda bivittata*, or two-striped *Saperda*, but our entomologists have since ascertained that this same insect had previously been described by Fabricius, a European entomologist, under the name of *S. candida*. According to the laws of priority, therefore, adopted by scientists, the latter name must stand, although the name given to it by Mr. Say, *bivittata*, appears to be the most appropriate. The beetle is slightly less



TWO-STRIPED APPLE-TREE BORER.

than one inch long (see *c*). The body is white; thorax and wing-covers light brown, with two white lines extending from the head the entire length of both, as shown. The female *Saperda* deposits her eggs near the base of the stems of the tree, where the bark is thin and soft. These eggs hatch, and the young borers penetrate the solid wood, and, if not disturbed, will sometimes entirely girdle the tree and cause its death. It is supposed that the grubs or borers (see *a*, representing their caterpillar stage) remain in the tree three years before reaching maturity, passing the while through their metamorphoses, and then again emerging as beetles. This pest does not confine itself to the apple-tree, but infests the white thorns (*Crataegus*), quince, and mountain ash. Both nurserymen and orchardists must be on their guard, therefore, lest this pest should become too numerous. Trees standing in an orchard can be protected by keeping the lower part of the stem encased in tar-paper or some similar protector.

How to make a Comfortable HOUSE.—A Western correspondent of the *New York Tribune* offers the following good suggestions to those building houses in our changeable climate:

"Having erected a balloon frame, and adjusted the studding for the reception of the door and window frames, with a firm foundation, nail boards to the foot of the studs outside and in, not driving the nails so that they can not be readily drawn, and fill in between the boards with a mixture of one part lime to sixteen parts coarse gravel—the mortar containing, of course, no stones of larger diameter than the width of the studs or the space be-

tween the boards nailed to them—and so continue to do, nailing on boards and filling in till night. The next morning the nails may be drawn, and the boards raised and nailed on again if the weather has been warm and dry, as the mortar by that time will have set, so as not to need their support; if the weather has been damp, a longer time will be required. Continue in this way until a height has been reached equal at least to that of the first story. Next nail strips of lath to the studs on the outside, insert the door and window frames, and proceed to side up the house. A cheap, warm, and durable siding may be made from first quality fencing, matched, and nailed on with the tongues up.

"Having sided the house, plaster, without lathing, upon the wall, which by this time will have become a solid stone. We now have a house with a space of about one-third of an inch between the stone and the siding (too narrow for mice), filled with dead air. The heat of the room during the day, of course, warms the stone walls, about four inches thick, and the warmth is retained during the night, the dead air between the wall and siding preventing the escape of the heat. I have tested the above, in the house in which I now live, for about ten years, during which I have kept no fires at night, and have found no frost gathered upon the wall, even in the coldest weather, except white specks upon the heads of the nails driven into the base or mop-board. As the mortar can be mixed and filled in by the cheapest kind of help, the extra cost above that of an ordinary balloon frame house will not much exceed what is saved in the expense of lathing, and this is richly repaid in the increased comfort of the occupants of such a house.—C. C. BAYLEY, Grant Co., Wis."

President Garfield on Agriculture.—In the course of his inaugural, our new President said:

"The interests of agriculture deserve more attention from the Government than they have yet received. The farms of the United States afford homes for more than one-half our people, and furnish much the largest part of all our exports. As the Government lights our coasts for the protection of mariners and the benefit of commerce, so it should give to the tillers of the soil the lights of practical science and experience."

SONGS OF THE SCIENCES—GEOLOGY.

Say, Mastodon, say, how you wandered of yore,
'Mid the Red Crags of Suffolk on Pliocene shore;
The Ichthyosaurus was gone when you came,
With the strange Pterodactyls, what wonderful game!
But the mild Dinotherium rose on your view,
And the festive Rhinoceros lived with you too.

Did you ever conceive with a sort of a shock,
Eozons had lived in Laurentian rock?
And then came the fishes with very fine scales,
While the Trilobite waltzed in the waters of Wales.

In the oolites large Labyrinthodons walk,
Till the Ammonites came with the oceans of chalk.

O Mastodon, tell when your troubles began,
From the flint-headed arrows of cave-dwelling man;

Those swells of the Stone Age were *gourmets*,
One owns,
For we've proved that they often enjoyed
marrow bones.

While the size of their joints would make
modern men stare.

How Sirloin of Mammoth would please the
Lord Mayor!

Now we'll bid you adieu, and we'll read how,
in sooth,

The Odontosaurus could boast a queer tooth;
How Darwin has told us, with labor well spent,

That live types and old fossils have common
descent;

With our Lyell we'll learn how man first
had his birth,

And with Murchison study the crust of the
earth!
—Punch.

The Health of Cities.—Statistics compiled by the National Board of Health show that for the year ending October 31, 1880, the more important cities of the world rank as follows in comparative healthfulness. The death rate shows the number of deaths to each 1,000 persons during the year:

City.	Population.	Death Rate.
Cincinnati	280,000	18.7
Chicago	503,298	17.9
Philadelphia	850,000	18.3
St. Louis	333,577	18.8
Boston	375,000	20
Baltimore	393,796	20.9
London	3,254,260	21
Leeds	318,921	21.8
Glasgow	589,598	21.9
New York	1,203,223	23.4
Paris	1,988,806	24
Brooklyn	556,889	25.8
New Orleans	216,359	27.7
Lyons	342,815	27.7
Berlin	1,096,644	29.3
Dublin	374,666	32.9

To Cheese Eaters.—In the New York Legislature it was lately stated by a member that cheese was now largely adulterated with lard. This pig product is substituted in place of cream or butter oil. To 100 pounds of milk are added $1\frac{1}{4}$ pounds of lard. Steam-rendered lard is considered better than kettle-rendered. By the best process it requires six to eight hours to render it. One will get 4 pounds of cream from 100 pounds of milk and this 4 pounds is one-third caseine, so that about 2 pounds out of 100 is real oil. Therefore, 100 pounds of skim milk and $1\frac{1}{4}$ pounds of lard will make 10 pounds of cheese.



FOWLER & WELLS, *Proprietors.*
H. S. DRAYTON, A.M., *Editor.* N. SIZER, *Associate.*

NEW YORK,
MAY, 1881.

SCHOOL EXAMINATIONS.

A CORRESPONDENT of a New England paper complains of the harmful influence of school examinations on children, and we think with excellent reason. The methods in practice in most of the public schools of our Eastern cities appear to have for their chief object the forcing of pupils along the curriculum of study as rapidly as possible, giving their immature and sensitive minds no rest, no opportunity for healthful reaction. We have children who have attended several "crack" schools, and know therefore something about how matters are. One leading aim on the part of a teacher is to carry a class, it may be of forty or fifty children, over a certain number of pages of arithmetic, geography, history, spelling, etc., within a certain number of weeks. And success in this grand effort against the laws of mind and body is measured according to the number of scholars who can worry through the examinations which follow that certain number of weeks. When the time for closing a half year's work comes, and promotion is in view, how

excited the girls and boys are! They can think of nothing but the examinations, and their homes are made scenes of anxiety and dread for a week or two. We have known highly organized children to be thrown into serious illness from sheer exhaustion at this period. And we have advised many a parent not to risk the health of a delicate girl in the unnecessary and injurious strife.

We believe in moderate processes for the education of the young. A child can not be hurried through a text-book and become well-grounded in its rules. What is quickly learned with the young is quickly forgotten, because such learning is usually but memorizing without understanding. Our children bring home fine reports of their standing, the hundreds predominating, but we have found when we questioned them that the rudimentary principles of arithmetic or grammar and their early studies in geography were by no means clearly defined in their intelligence.

The important work of education is to develop the youthful mind into a vigorous and active perception of truth. It seems to be regarded, however, by those who manage the affairs of most of our schools, that education means crowding the young mind with a miscellaneous jumble of rules, names, numbers, and phrases; graduated, intelligent progress in study being, as it were, counted out of the question.

We are not opposed to well-conducted, appropriate examinations; not at all, they are essential to thoroughness; but we certainly deem the customary examinations of public schools inadequate and harmful, morally and physically, to the majority of the children who are forced to submit to them.

MAGNETIZING THE ORGAN OF LANGUAGE.

ONE of our medical exchanges, *The Independent Practitioner*, of Baltimore, notes certain experiments of M. Charcot (the eminent physician of the Salpetriere, in Paris), which appear to demonstrate the locality of the speech center. M. Charcot operated upon some of the hysterical patients in his great hospital, producing for his purpose the two nervous conditions of hypnotism and catalepsy in the same subject at the same time. The difference in the phenomena of these conditions is briefly stated thus: "Hypnotism is characterized by the following peculiarities: 1. When the limbs are elevated they do not remain in position, but fall when the support is withdrawn; the muscles and nerves are, however, in an excitable state, and irritation of any particular nerve induces contraction in the corresponding muscles with as much precision as the localized electrization of Duchenne of Boulogne. 2. The faculty of speech remains, the patient replies to questions, counts, or recites verses, as he is commanded; he is even able to write, or communicate with those about him by gestures.

"While in the hypnotized condition the patient may be, with facility, thrown into the cataleptic state. 1. At once the hyper-excitability of nerves and muscles disappears; the limbs remain in whatever position they are placed. 2. Every external intellectual manifestation is abolished; the patient no longer speaks or answers questions."

We are informed that M. Charcot found that he could induce catalepsy in the hypnotized subject simply by lifting his or her eyelids, and permitting the

light to influence the retina. Now, by alternately lifting the eyelids, he produces catalepsy in either hemisphere of the brain at will, while the other is in the hypnotized state. Of course, owing to the decussation of the fibers of the optic nerve, it is the hemisphere corresponding to the uncovered eye which becomes cataleptic.

To illustrate. A hysterical patient is hypnotized, or, as we commonly say, magnetized. She speaks, reads, and writes while in this state; the left eyelid is raised, and the right hemisphere thrown into a cataleptic condition, but the patient continues to speak and gesticulate. But if, on the other hand, the right eye be uncovered, thus placing the left hemisphere in the cataleptic state, the patient becomes suddenly silent, no longer answers questions, or makes sign or gesture.

We are entirely willing, if the doctors insist, to accept this as a fresh demonstration of the existence of the organ of Language, but must except to it as proof of the organ's limitation to one hemisphere. Authorities are not agreed on the subject, and the general duplicature of organ and function is against such a conclusion; besides, it should be considered that in hypnotic or magnetic experiments, especially with persons nervously diseased, the opinions of the operator have a marked influence upon the subject, and therefore a conviction of the existence of the speech center in the left hemisphere only would go far to produce the unresponsive condition.

We shall be glad to hear from some of our American experimenters in magnetism with reference to this very interesting phase of the subject.

A TRUMPET BLAST!

THE lecture of Chancellor Crosby in the Boston Monday course on the 10th of January last has aroused an expression of sentiment and opinion scarcely without parallel in the annals of American Temperance reform. It has precipitated a revival of earnest discussion of questions affecting the nature of alcohol and the character of true temperance work, not only in the circle of recognized temperance advocates, but also in circles where the idea of total abstinence has received little encouragement, while the desire for an improved social and moral condition in the community, if candidly entertained, had not been actively promoted. We think there was urgent need for some emphatic expression from a high authoritative quarter to stimulate the moral sense of intelligent and law-abiding people, and point their attention to the great drink evil. There has been too much indifference to the matter in Church and State, hundreds and thousands of excellent people being always ready to affirm all one might say with regard to the misery wrought by intemperance, but indisposed to active steps toward checking its course.

Dr. Crosby has been for years a conspicuous figure in the struggle against vice and crime; his personal work in New York city compels our hearty gratitude. Hundreds of dram-shops and "dives" of the lowest character have been suppressed through his efforts, which have hesitated not against the prejudice of class, the turpitude of officials, the chicane of courts. His record in connection with the "Society for the Suppression of Crime" is a noble one. Then for him to stand up in one of the most noticeable

places of the country and avow himself an advocate of moderate drinking and to throw his gauntlet at the feet of the temperance men was a most astonishing act. We can not wonder at the surprise of Dr. Hopkins, Wendell Phillips, Dr. Hunt, and the thousand editors of our religious and moral press. Yet we thank Dr. Crosby for his bold and vigorous assertions; we thank him for his challenge to the learned and the philosophical. He has done society a great kindness in awakening it from its lethargy and bringing it face to face with the dragon that infolds within the dreadful coils of its slimy tail more than a third part of our population. And we are hopeful that now the awakening will have for its result "the union of all good men who desire to stop the fearful drunkenness of the land with its attendant crimes and misery."

LIVING TO ONE'S SELF.

MAN is endowed a social or gregarious being, the organism *per se* having relation to the maintenance of the social state forming a considerable part of the brain mass; while it may be said, without fear of mistake, that every mental faculty has a bearing and influence more or less direct upon the social nature. The importance then of this social organism in the economy of human life must be too manifest to require argument; and the necessity of its harmonious development, if we would secure a high degree of happiness, is also manifest.

When, therefore, a man withdraws from association with others and lives apart, to himself, hermit-like, he violates a cardinal principle of his organization, and in time suffers the retributions of offended nat-

ure. He becomes narrow in his views of life, cold, morose, peevish, unsympathetical, selfish.

To be sure men are differently endowed with the social feelings, and it must be expected that they will exhibit differences in their expression. Nevertheless, every man should exercise what he has according to the promptings of his better judgment or the teaching of experience. "No man liveth unto himself," said the great apostle of Christianity; inferentially the misanthropical recluse affects society in a way which is injurious, and for which he can offer no sufficient plea.

Many doubtless think that they can withdraw from the world if so minded, and live in solitude without incurring the slightest blame. What a mistake! The world needs all, and all need the world; its variety of relation is adapted to every variety of faculty and power. It has work for every rational man and woman, and the performance of that work contributes to the welfare and progress of society. Let us only look around and we shall see that the happiest are they whose social views are generous and broad, and whose labor of brain or hand has some adaptation to spheres beyond the walls of their own houses.

There is a social dyspepsia as well as a dyspepsia which affects the organs of digestion, and the so-called "exclusive" has it, as they who are compelled to come within his narrow sphere know. He is a pitiable object to the joyous, company-loving, free-hearted soul, and his cynical, suspicious estimate of society renders him a bore in his own house. Such people are too much encouraged in their pettish notions, and we think no better remedy could be applied than an introduction to themselves, so that they

may see how much they have departed from that mental state which they themselves are accustomed to picture as befitting human integrity.

THE "BALL" ROLLING.—The "important movement" noted in our March Number has awakened attention. Already the donation of one hundred copies of "Brain and Mind" to clergymen has been exhausted, and there are further applications coming in from "gentlemen of the cloth," which we are happy to say we are enabled to entertain, since a philanthropic friend of the cause has replenished the fund by a donation sufficient to furnish five hundred additional copies of the work. Letters have been received from ministers, who have read the work carefully, which strengthen the conviction that "Brain and Mind" is the treatise best calculated to instruct educated and intelligent people with regard to the true character of phrenological principles. In the department "What they Say," one of the more recent expressions of opinion about the book is printed *verbatim*, and it is notably worth a thoughtful reading.

EVEN SPAIN.—It is a matter of much personal gratification that we are enabled to state that Spain, which has been so long torpid and effete, despite the tremendous intellectual activity of her near neighbors, has taken a step in the direction of civil and religious liberty in appointing anti-Roman and republican instructors in schools and colleges, and in proposing religious toleration. The Papal Nuncio at once protested against these new measures, but the Government replied that it claimed the right to determine what is best for the interests of the country.

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.

GREEN INK.—An English correspondent wishes to know how to make green ink. Presuming that he means it for the use of the pen, we suggest the following recipe: Calcined aceto-nitrate of chrome, diluted with water; or sap-green, in powder, dissolved in very weak alum-water. Perhaps one of our readers who is well informed in chemistry can suggest a better method.

MAGNETISM.—*Question:* We have lately heard a good deal about magnetism and hypnosis, all classes of people, doctors, lawyers, and clergymen showing interest in the experiments and discussions. Is not this a revival of the old so-called psychology, which about thirty years ago produced so much excitement here?

NEW YORKER.

Answer: Yes; the subject is the same, but its revival appears to have occurred under different circumstances. Many of the very men who decried magnetism or mesmerism as humbug and nonsense are now taking ground in its behalf and indicating its utility. As was urged by Mesmer, Deleuze, and others years ago, some of our physicians now admit its importance as an aid to the physician and surgeon in the treatment of disease and the performance of surgical operations. "Practical Instructions in Animal Magnetism" is one of the best treatises on the subject published, being very full and adapted to the use of physicians.

FRUIT DRYERS.—In reply to several correspondents we would state that the Alden Dryer and the Zimmerman Fruit and Vegetable Dryer and Bake-oven have been used extensively in this country, and are considered among the best of late apparatuses for the purpose.

LIME IN THE EYES.—[We are pleased to give space to the following communication from one who has had experience in the line he treats on. And we say generally that suggestions for hygienic treatment in accidents and

emergencies, founded on experience, will be welcome from our readers.—ED.]

To the question in the PHRENOLOGICAL JOURNAL for March:—What should be done when particles of quick-lime get into the eyes?—I would take the liberty to answer. Plunge both hands quickly into clean, cool water, dash water into the eyes and wash out every particle as fast as possible; then, if the membranes of the eyes are very sore or much irritated, go to bed in a dark room, apply cool, wet cloths to the eyes, changing them as often as agreeable to the feeling, and sleep as long as you can. After awakening, you will find yourself relieved of most of the soreness, with very little inconvenience to the eyes. The writer, who has had much to do with quick-lime, in all its different forms and uses, has never failed in relieving himself by merely going through the washing process thoroughly. Clean lime, however, even if hot, provided plenty of water is near at hand, is not near so troublesome as lime mixed with sand, because in your effort of ridding the eye of both sand and lime, you scour or fret the membranes, and make them sore. It takes a much longer time to get rid of the grains of sand than of the lime, because the lime dissolves, but the sand does not; yet I have never failed, even without discontinuing my work, to rid myself of even the sand, and after a good night's rest, despite some soreness, felt just as eager for operation the next day as ever. I have had men to work for me, however, who would almost go wild with excitement and pain, and would not be able to help themselves; but with my aid and direction, they had but little trouble in getting relief. Thinking that perhaps this simple remedy might be of use to others, I have ventured to pen these few lines, for I have seen men who have lost their eyes by not knowing what to do in an instant.

Titusville, Pa.

F. Y. ARNOLD.

GRANT AND LEE AS GENERALS.—*Ques.:* From a phrenological standpoint, which of the two great generals, Grant or Lee, is considered as possessing a superior quality for generalship?

Ans.: In quality of organization and symmetry of development, General Lee was superior, and therefore it naturally follows that the tone or quality of his mind was of a superior mould. We think there is little doubt entertained on this subject by those who have carefully reviewed the history of Lee. Grant possesses an eminently strong organization. His head is broader, there is more of emphasis in his mental make-up than Lee possessed. In some respects he may be said to possess more tenacity of purpose, and the character of his military operations was distinguished chiefly by that. Lee had brilliancy as well as breadth, a cultivated mind, and generous elements of character which draw people closely to one.

SIDNEY SMITH.—S. H.—This celebrated wit, humorist, and divine, and the original projector of the *Edinburgh Review*, was born at Woodford, Essex County, England, in the year 1771.

WHO IS R. B. D. WELLS?—Ques.: There is in England, lecturing on Phrenology, a man by the name of R. B. D. Wells. Is he Mr. Wells, the husband of Mrs. Wells, or a relation of the Wells family? Have you ever seen him, or has he ever been in New York City?—**ENGLAND.**

Ans.: The correspondent who makes the above inquiry is very respectfully informed that the said R. B. D. Wells has no connection whatever with the house of Fowler & Wells, publishers and phrenologists, of New York City. Mr. S. R. Wells died in the spring of 1875. He visited Europe in 1860, traveled there for more than two years, and then returned to this country, and re-entered upon the prosecution of his business. He made no subsequent visit to Europe. We have never seen said R. B. D. Wells, although we have had business with him in the way of supplying an occasional order for our publications. We are not aware that he has ever visited the United States. The name is certainly the same, and we can scarcely believe that he would make representations which would lead people to think that he was connected with our house and business.

ORGANIC ACTIVITY.—Ques.: Can two organs of the same brain both be of the same relative size, say full, and have different degrees of activity?—**J. C. C.**

Ans.: Yes; for the reason that activity of brain depends upon stimulus physiologically given by the circulation of the blood. One organ may be exercised more than another by being more frequently brought into use. Exercise of an organ indicates circulatory movement in that part of the brain, just as the exercise of an arm stimulates the flow of blood into it; and the more exercise the more activity.

BLONDE AND BRUNETTE.—Ques.: Is not a blonde considered more lively disposed than a brunette?—**J. G. S.**

Your question is answered by the definition of temperament in the works on Phrenology, while it is extensively discussed in the special work on Temperament. The blonde has more of the Mental temperament, which conduces to nervous activity. We infer that your term, lively, has special mental significance. Blondes, as a class, are sprightly and off-hand, brunettes deliberate and self-contained. The brunette may possess, however, a good degree of the Mental temperament, inclining her to liveliness or "gush" when her associations are stimulating, but she will not show the spontaneous flow of mental feeling of the blonde.



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

WHAT I HAVE GAINED FROM PHRENOLOGY.—I wish to tell the readers of the *JOURNAL* something of what Phrenology has done for me. Had I the language, space would forbid me to tell of all the benefits and pleasures that I have derived from it, but this I will say:

A few years ago I was an entire stranger to Phrenology. The first thing that attracted my attention relative to this science was "Combe's Constitution of Man." This I read with great interest, making memoranda of the most interesting points. Shortly after, through the instrumentality of my brother, I became a reader of the *PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH*, and also of other publications on the subject.

With these I began to search for a practical knowledge of the science, in order to test the truth thereof for myself. "Seeing is believing." So by closely observing the heads and faces of those with whom I came in contact, I was soon a firm believer in the art of reading character by external appearances. As I progressed in my studies, I began writing out delineations of character from photographs. This I have repeatedly done with universal satisfaction to the parties, and have in some cases been able to tell something of the leading characteristics by autograph only. Now I can truly say, that I know Phrenology is useful; that it teaches us, as nothing else does, in what human happiness consists, and points out the way for its attainments.

A knowledge of it enables us to read our own characters as plainly recorded on our physical systems; how to judge accurately of our strength and our weakness, our virtues and our faults, and thereby enable us to reconstruct ourselves on an improved plan. Through its teachings I have been enabled to improve my mind. It has given me new hopes, new aspirations; enlarged my views, and given me a higher and truer appreciation of human life and human responsibilities. All in all, I can truly say that I consider the knowledge and benefits which I have already derived from Phrenology, of vastly more importance than all else I possess or ever can.

Some time ago I sent pictures of myself to the New York office for a description of my character, and it was given very accurately, pointing out among other things my ability to succeed in that which I previously thought I had no ability for. But as I had gone to the teachers of the science for advice, with a determination to abide by their decision and to follow their instructions as best I could, I at once proceed-

ed to do so, surprising myself and friends by very good success. Had I received these instructions in early youth I would have been happier and healthier, and been filling a congenial position in life, with honor to myself and usefulness to society, instead of groping my way with no definite aim or object (just as nine-tenths of girls do, unless their principal object is matrimony).

I most earnestly solicit every young man and young woman to avail themselves at once of the benefits of Phrenology—that they may not in after years look back to a youth misspent, and mourn over lost opportunities—possibilities discovered too late—or, in trying to pierce the vail of futurity, see naught but a life of discontent and perhaps of wretchedness before them. Procure a chart from a sound phrenologist. It will be a beacon-light to guide you safely over the shoals of temptation and the rocks of iniquity; and steer your barque into the clear and placid waves of happiness and prosperity.

To every parent in the land I would say: Be thoroughly instructed in Phrenology; make the best of yourselves and your children; understand the organism of each child and its cause, and how to suppress or actuate every organ that deviates from harmony. Train and conduct the education of each to fill positions best suited to their mental and physical development. Then we will have the right man and the right woman in the right places, where failure is next to impossible, and soon we would cease to hear the sad strain,

"I wonder why this world's good things
Should fall in such unequal shares;
Why some should taste of all the joys,
And others only feel the cares!"

MOLLIE E. SWAIM.

A VOTE FOR THE BANGS.—*Editor P. J.*:

—I have pronounced the JOURNAL altogether perfect, until I received the January Number, which would be certainly so but for an article entitled "Mad Fashion." The author did not understand the subject, or at least failed to explain enough to cover what I would term "mad fashion": and that would be all false braids, switches, curls, puffs, and false fronts, not where one's own hair is banded and arranged stylishly, for I would consider that very minute indeed in comparison with our "dresses," "shoes," etc. I am considered an artiste in dressing hair, and have had our most stylish ladies call for my criticism and touch, before appearing on particular occasions. I dress my own hair very like the portrait of the "belle"; in fact, it is said by several to be a good portrait of myself. I use nothing but half a dozen rubber pins and a tuckling comb about my hair, and I think you, dear Editor, and every one else, would think it prefer-

able to having the hair pasted and twisted up with two or three yards (?) of silk or satin ribbon, like the "modest, bright girl" that you have in contrast with the "belle." I for one vote for the latest coiffure and the progressive "belle" as long as there is nothing false or injurious about either. I also think if the ideality, perseverance, and courage of our devotees of fashion were turned in the right channel, they would surpass the Royalty of any other nation. The JOURNAL invites personal views, and I must have my say when so significant an article appears.

Sincerely,

Elizabethtown, Ill.

MRS. T. B. P.

A MINISTER'S OPINION OF "BRAIN AND MIND."—Having just finished a careful reading of the book, "Brain and Mind," I can not but express high approval of it. The style in which it is written is clear, convincing, terse, and exceedingly interesting. For any one who wishes to gain a true idea of the science of Phrenology as taught by its ablest exponents, but has neither inclination nor opportunity to wade through the goodly library of works that have been published on the subject, this is just the book. The terms used are, as a general rule, easily understood, the anatomical ones being the only exception. If any one book can make Phrenology popular, this one certainly should do it.

While reading it, the student who believes that "The proper study of mankind is man," feels an intense desire to know more about that particular branch of the study which has been treated of in the chapter just read by him. We might compare the science to a palace containing many apartments. Then we would say that the reading of a chapter in "Brain and Mind" opens the doors wide enough, and keeps them open long enough, to enable us to obtain a glance at the furniture of the rooms, whereby an anxiety is awakened in the mind to go in and carefully examine all the useful and curious articles with which the apartments are filled. For instance, he reads the chapter of eleven pages on "Temperament," and feels at once that though the matter is treated of very plainly, a volume might be written on the subject, and if such a work is to be had, he wants it. The book in many of its parts is as fascinating as a novel. Mental science as taught in its pages may be learned with sensations of delight by many who would turn from "Locke's Essay on the Human Understanding" and "Roid's Inquiry into the Human Mind," with feelings of disgust.

To the teacher whose business it is to educate our youth, a *knowledge* of Phrenology would certainly prove an element of *power*. To the clergyman whose vocation it is to edify or build up the moral and religious sentiments and feelings of those entrusted to his charge, by guiding them

in the way of all truth, a similar knowledge would be of immense advantage. An accurate estimate of the dispositions, inclinations, powers, and capabilities of the different members of his flock, is almost absolutely necessary. Ignorance of this is often the cause of lamentable failure to secure desirable results, and discord and dissatisfaction prevail where harmony and good-will might have reigned, if the requisite knowledge, combined with tact, had been possessed by the overseer. To gain the necessary knowledge by intimate acquaintance with each individual member is generally impossible, or it takes a long time to obtain. A knowledge of Phrenology would here give the much-needed assistance, and the pastor would be enabled to direct wisely and well, thus securing the most desirable results. The wisdom of his advice would soon become generally recognized, and he would be more respected and loved than he otherwise could be. Through his advice and counsel, the church would be officered by the most capable persons, and church work would be done as it ought to be. If the members of any trade or profession need to understand human nature in its ever-varying phases, most certainly those of the ministerial do. Their influence can not be overestimated, and in these days of intellectual advancement and self-aggrandizement, our moral teachers need all the assistance they can obtain from every source, to help them in their great work of inculcating the great truths of Christianity—love to God and love to man. The majority of them are men of large literary desires and small pecuniary means, and we are glad that a kind friend has set the good example of supplying a few of them with such a desirable work as "Brain and Mind." Every minister's library ought to have a phrenological bust and a few good works on Phrenology and related subjects in it, and we sincerely hope that the suggestion in the April Number of the PHRENOLOGICAL JOURNAL, that persons able to pay for books for the purpose of supplying this need will do so, will be acted on promptly. "The Lord loveth a cheerful giver."

Amesville, O.

REV. WM. J. WARRENER.

PERSONAL.

THE NEW "GOVERNMENT."

PRESIDENT JAMES A. GARFIELD. See biography and portrait of him in the August Number of this JOURNAL for 1890.

JAMES G. BLAINE, now Secretary of State, has a sketch of his career, with a portrait, in the January Number, 1890.

WILLIAM WINDOM, appointed successor to Mr. Sherman as Secretary of the Treasury, was born

in Ohio, and is about fifty-four years of age. He is a lawyer by profession, but since 1858 has served the greater part of the time in Congress.

THOMAS L. JAMES, Postmaster-General, is a New Yorker by birth and fifty years old. He had been a journalist and then a Custom-House official previous to taking the place of Postmaster over the New York office in 1873.

ROBERT T. LINCOLN, Secretary of War, is a son of the late President Lincoln, about thirty-eight years of age, and a lawyer of Chicago.

WILLIAM M. HUNT, Secretary of the Navy, was born in South Carolina, but has resided in Louisiana since boyhood. He is a lawyer, and has held important judicial positions.

SAMUEL J. KIRKWOOD, Secretary of the Interior, is about sixty-seven, a Marylander by birth, but a resident of Iowa since 1835. He is also a lawyer, and for many years has been prominent in political affairs, three times Governor of Iowa, and twice United States Senator.

WAYNE McVEAGH, Attorney-General, is a Pennsylvanian, about forty-eight years old. He is also a lawyer by profession, and has been prominent in politics; served for two years as Minister to Turkey, under President Grant.

LUCRETIA MOTT was a descendant of Tristram Coffin on her father's side, and of Peter Folger on her mother's, her father being Thomas Coffin and her mother Anna Folger Coffin. This will explain the anomaly which has appeared in the many biographies which have been published of this extraordinary woman; some styling her a Folger, some a Coffin, before her marriage.

ADELE TROCHOUT, a beautiful but immoral girl who flashed through Paris in the last year of the Second Empire, under the title of La Comète, with dresses from Worth, portraits by Cabanel, sonnets from Théophile Gautier, offers of marriage from ancient dukes, mansions in the Champs Elysées, equipages, and diamonds, died in a hospital, a week or two since, of lupus, and destitute.

WISDOM.

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

THERE is no time so miserable but a man may be true.—*Shakespeare*.

EDUCATION should bring to mind the ideal of the individual.—*Richter*.

HE who waits to do a great deal of good at once, will never do any good.—*Dr. Johnson*.

WHOEVER desires the character of a proud man ought to conceal his vanity.—*Jonathan Swift*.

No evil propensity of the human heart is so powerful that it may not be subdued by discipline.

WHEN a man has no design but to speak plain truth, he isn't apt to be talkative.—*Geo. D. Prentice.*

You can not bring the best out of a man unless you believe the best is somewhere in him.—*Canon Farrar.*

HIM only pleasure leads and peace attends,
Him, only him, the shield of Jove defends,
Whose means are fair and spotless as his ends.

A WORLD without a Sabbath would be like a man without a smile, like a summer without flowers, and like a homestead without a garden.

A MAN should never be ashamed to own he has been in the wrong, which is but saying that he is wiser to-day than he was yesterday.—*Pope.*

HAVE patience with all things, but chiefly have patience with yourself. Do not lose courage by considering your own imperfections, but instantly set about remedying them; every day begin the task anew.—*Francis de Sales.*

TEMPTATION is a fearful word. It indicates the beginning of a possible series of infinite evils. It is the ringing of an alarm-bell, whose melancholy sounds may reverberate through eternity. Like the sudden sharp cry of "Fire!" under our windows by night, it should rouse us to instantaneous action, and brace every muscle to its highest tension.—*Horace Mann.*

MIRTH.

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

It takes an old woman well versed in herbs to give sage advice.

"MAMMA," said a little four-year-old, after waiting patiently for her mother to be at leisure, "will you be unbusy soon?"

"My sermon shall stand on dese tree pints," said a colored preacher not many Sundays ago: "1, the expoundin'; 2, the enlargin'; and 3, the arousin'."

A MAN advertises for a competent person to undertake the sale of a new patent medicine, and adds that "it will be highly lucrative to the undertaker."

"WILL you take something?" said a teetotaler to his friend, when standing near a tavern. "I don't care if I do," was the reply. "Well," said Frank, "let's take a walk."

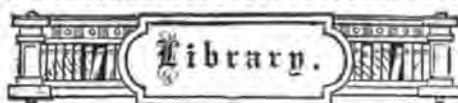
"MABEL, why, you dear little girl," exclaimed her grandpa, seeing his little granddaughter

with her head tied up, "have you got the head ache?" "No," she answered sweetly; "I've dot a spit turl."

THE mother had cut her little daughter's hair to make "bangs." Surveying her own work, she said: "Bessie, yesterday you looked as if you had no sense. To-day you look as if your mother had none."

WISHING to pay his friend a compliment, a gentleman remarked: "I hear you have a very industrious wife." "Yes," replied the friend, with a melancholy smile; "she is never idle. She always finds something for me to do."

"SEIZING the gigantic Indian around the waist, the brave boy lifted him into the air, and flung him headlong down the chasm. Panting, the boy stood and watched the Indian's body fall from crag to crag until it disappeared in the darkness below. Just at this moment—" just at that moment the father of the boy who was reading this trash came along, lifted the youngster by the ear, and in the woodshed matinee that followed the boy had no thought of flinging the old man down a chasm. There was no chasm handy.—*Detroit Free Press.*



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 SECRET OF VICTORY; or, The Story of Ernest Adler. By Margaret E. Winslow, author of "Saved," "Barford Mills," etc. Price, 60 cts. New York: The National Temperance Society and Publication House.

A good story, founded on facts, which illustrate the dangers and difficulties attending the work of reform. The author aims in the course of the volume to indicate those methods or that plan of action which is likely to be successful. And she sums it up in this way: "Depend upon it, the safest course is total abstinence, absolute self-distrust, and a momentary dependence upon the promised aid of an always present Saviour."

"THESE SAYINGS OF MINE." Pulpit Notes on Seven Chapters of the First Gospel, and other sermons. By Joseph Parker, D.D., Minister of the City Temple, Holborn Viaduct, London. 306 pp. Price, \$1.50. New York: I. K. Funk & Co.

A biographical and descriptive sketch of this eminent preacher of London, by Dr. Deems,

forms a pleasing introduction to the discourses which make up this volume. In the religious world, or at least that part of it which gives attention to the affairs of more than one denomination, Dr. Parker has become well known as the founder of that great building called the City Temple, which is in the heart of London, yet far removed from what is considered the respectable quarters of society. He is eminently a preacher, using few notes, so that what the public reads of his discourses from week to week in newspapers and weeklies is the fruit of stenography. The discourses in this volume were so secured, and have received but little touching up, so that they possess the freshness and vigor of the original efforts. There are upward of thirty sermons in the closely-printed volume, so that the reader has a rich opportunity to consider the character of Dr. Parker as a pulpit orator and as a Christian minister, the variety of subject bringing into view the versatile style and broad culture of his mind.

IS DARWIN RIGHT? or, *The Origin of Man.* By William Denton, author of "Our Planet," "Genesis and Geology," etc. 12mo. pp. 193. Published by the Denton Publishing Company, Wellealey, Mass.

The author of this volume has occupied for many years the important position of an instructor in physical science, particularly geology, and has now and then appeared before the public as an advocate of a natural origin of man, in a volume treating on questions of a biological nature. The present book purports to be the substance of what he has been presenting in lectures for many years, the spiritual side of man being given special prominence. After reviewing the experiments of Bastian, Tyndall, and others with sealed and unsealed bottles, and evidently accepting the theory of spontaneous generation, he goes on to consider the variation of species, hereditary transmission, natural selection, and other principles of the modern hypothesis of evolution, using illustrations from that master of dogmatic assertion and ad captandum argument, Professor Denton accepts without qualification the doctrine that man is descended from animals; and to the reader who is like-minded, his synopsis of the growth of the human germ will prove very interesting. But we have said that he treats of man on the spiritual side; and so, after going over the course of our "natural origin," he tells us that there is an "intelligent spirit" in the universe that presides over it and controls its affairs; that "in every atom of every organized being is a perfect spiritual type, constantly seeking perfect expression in material form." As an epitome of the views of "advanced thinkers" on the genesis of man, the book serves well.

PUBLICATIONS RECEIVED.

PART SIX OF MODERN ARCHITECTURAL DESIGNS AND DETAILS, published by Bicknell & Comstock, of this city, contains beautifully drawn plates of two cottages, appropriate as suburban residences, with detail drawings, all according to a fixed scale, and forming a complete outfit for the builder. One cottage is of liberal dimensions and adapted to the use of a large family; the other is smaller, yet designed as an abode of refinement and taste. The styles of both are exceedingly picturesque, and very convenient in arrangement of rooms, halls, etc. Price of the designs, which cover six quarto sheets, \$1.

CULTURE AND RELIGION. By Principal J. C. Shairp. Printed without abridgment. Price, 15 cents. New York: I. K. Funk & Co. This is No. 50 of the "Standard Series" (octavo size), issued by the above-named publishers. The eminent Scotch teacher aims to show in the five lectures which compose the book, that high mental culture is entirely compatible with spiritual growth, and indeed that religion combines culture with itself. He considers the aim of culture, the scientific theory, and the literary theory of culture.

EXHIBITION AND PARLOR DRAMAS, containing the following plays: *Odds with the Enemy; Initiating a Granger; Seth Greenback; A Family Strike; The Sparkling Cup; The Assessor; Two Ghosts in White; Country Justice; Borrowing Trouble.* By T. S. Denison. 12mo. pp. 182. Cloth. Price, \$1.25. Published by the author at Chicago, Ill. A good selection of plays for home or social use. Some of them appear rather long, however, for the ordinary purposes of parlor drama; but if well performed, we should have no doubt of their admirable effect in delighting an audience.

STANDARD HYMNS, with Historical Notes of their authors. Compiled by Rev. Edward P. Thwing, Professor of Vocal Culture, Brooklyn, N. Y. Price, 10 cts. I. K. Funk & Co., publishers, New York. This is a collection of 137 of the hymns which are dear to every one who takes pleasure in religious services, and most of which are found in the better collections of books of praise in use among Christian denominations. The idea of supplying biographical notes of the authors is a good one, and will be welcomed by all who love good poetry.

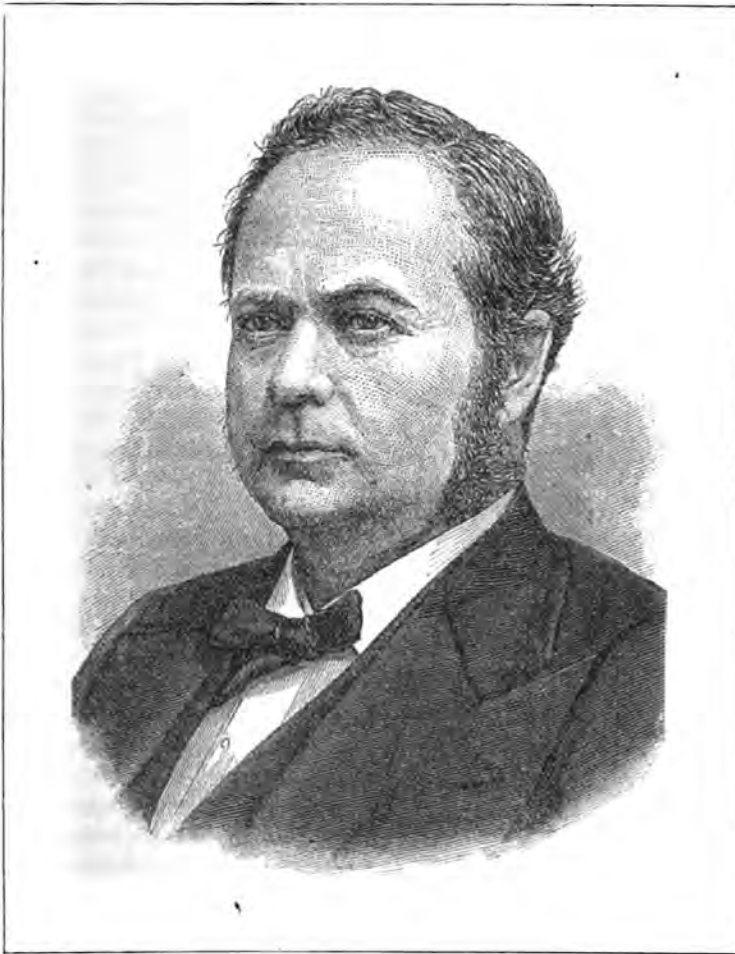
THE ALBUM-WRITER'S FRIEND, comprising more than three hundred choice selections of poetry and prose, adapted to albums, valentines, holiday cards, etc. A compilation by Mr. J. S. Ogilvie, which meets a want very prevalent among young people nowadays. Price 15 cents. Published by J. S. Ogilvie & Co., New York.

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WILLIAM WINDOM,

THE NEW SECRETARY OF THE TREASURY.

THE portrait before us—we never have seen the original—impresses us favorably; it shows excellent health, and general harmony of disposition and character. Mr. Windom appears to have a large head, and, therefore, much general power. He evidently resembles his mother, which is shown by the delicate,

rather small features, and by the form of the forehead.

In early life we judge that he was more marked in his perceptive talent, as compared with the reasoning power, than at present. He is capable of attending to details, and has come to be capable of comprehending abstract thought and taking in large affairs. He seems to have an excellent memory of facts, of words, and also of combinations; he could carry on business which was complicated, and not lose sight of any of its factors. He has large Constructiveness, which is indicated by the width of the head at the temples and backward to a point upward and forward of the top of the ears, and he seems to be broad at the region of Acquisitiveness, which, when well developed, serves to inspire the intellect to act sharply and clearly in the direction of financial matters; he should, therefore, be an economist and a correct thinker in respect to fiscal affairs. His head is wide above and back of the ears, indicating courage, force, power of facing difficulty, and his temperament will lead him to hold on steadily, when he thinks he is right, until he has worn out opposition, or conquer it if brought to a conflict. His Conscientiousness, located at the back of the crown, seems well elevated; there is capacity in that region where Firmness, Cautiousness, Conscientiousness, Hope, and Approbativeness are situated; hence he should be known as a man ambitious to be appreciated, desirous of the good opinions of his fellow-men, cautious in his movements, courageous, and earnest in that which he thinks is right, joined with intelligence, planning talent, and financial and mechanical ability. As a literary man and speaker,

he should succeed well, and quite well as a solid thinker and debater.

If President Garfield had named Mr. Sherman for the Treasury, and thus retained that gentleman in the Government, we should have regarded his action as in every way becoming, and a deserved compliment to a most efficient financial officer. But the ways of politics, "which are past finding out," appeared to require a sweeping change in the composition of the Cabinet, and William Windom became John Sherman's successor. The appointment is pretty generally considered a wise one, and the portrait, which is said to be a good representation of the Secretary's features, impresses us favorably with his character and capabilities.

Mr. Windom's career has not been a brilliant one, in the parlance of the day, but mainly distinguished for a steady, even performance of duty in private and public life. He is a native of Ohio, having been born in Belmont County of that State, May 10, 1827. The son of an early settler, he was familiarized with many of the hardships of frontier life. He was educated in the "academy" of the neighborhood, and had been apprenticed to the tailor's trade in Fredericktown, Ohio, but soon abandoned it in disgust with his ill success, and turned his attention to the study of law. This was a source of grief to his parents, Hezekiah and Mercy, who belonged to the Hicksite Quakers, and looked upon the law and lawyers as a prime source of worldly iniquity. The young man's ambition and force of character bore him rapidly onward, however, and at the age of twenty-three he was admitted to the bar. He established himself at Mount Vernon, Ohio, and two years later, in 1852, was elected Prosecuting Attorney for Knox County as a Whig by a majority of 300, although the county had usually gone Democratic. In 1855, he removed to Winona, Minn., and there practiced law, taking part also in politics, and winning prominence as a

leader, as his nomination and election to Congress in the fall of 1858 fully attested.

During his first term as a representative, he served in the Committee on Public Lands, and was appointed one of the special Peace Committee of Thirty-three, which was formed after the election of Abraham Lincoln to the Presidency. His course in the National Legislature strengthened the confidence of party friends at home, and others, so that he was repeatedly returned to Washington, taking his seat in the Thirty-seventh, Thirty-eighth, Thirty-ninth, and Fortieth Congresses, working in them as a member of important committees, specially those connected with Public Expenditures, and Indian Affairs.

At the close of the session of the Fortieth Congress he returned home with the view of devoting himself to private business, but the following year, viz., in July, 1870, he received from the Governor of Minnesota an appointment to the Senate of the United States, to fill the place made vacant by the death of Daniel S. Norton. This appointment was made good by his election, in January 1871, by the State Legislature, for the full term of six years, which expired March 4, 1877,

and this service was supplemented by his election to the Senate for a second term. His call to a participation in the administration of Executive business, however, has arrested his Senatorial career midway, and thus far he has indicated an appreciation of the financial needs of the country, which has won the approval especially of the producing and industrial classes of the people.

Lower rates of interest on Government securities mean lower taxes upon the masses of the people at large, and the Secretary who aims, by firm and judicious measures, to reduce the interest drain on the National Treasury, must rise in the esteem of a grateful public. There are some who claim to know him who say, that under his management there will be no disturbance of the sound financial policy established by Secretary Sherman, but on the contrary a steady development harmoniously adapted to the best business interests of every section of the Union. Mr. Windom is of medium height, heavily built, and presents an aspect of mental strength united with frankness and geniality. His home in Washington is on Vermont Avenue, a plain but pleasant house, standing in a cluster of luxuriant maple trees.

RESPONSIBILITIES OF GENIUS.

GENIUS is the quality of uncommon endowment by the Father of Spirits. As some men are born kings, so some are the monarchs of mankind. They are the artificers of thought, the builders of mind. Better than titles, or heraldic renown, or vast wealth, they possess what all of them can not purchase. They move among their fellows as light-givers, as spirit magnets, as walking marvels; the enchanters of intellect, the builders of soul-mansions, the wizards of immaterial wealth. They are universal travelers welcomed into every land, and making illustrious the place of their birth. They speak to all peoples; kings die, and empires decay, but they live on in ever-

increasing youth. No manipulations of science, or college curriculum, or parchment diplomas, can bring them into recognition or authority. Homer lives, though the olden Greece is dead. Bunyan keeps upon his pilgrimage, while his Stewart-persecutors are remembered only for their vices and follies. Shakspeare will delight with his sumptuous creations, when the Tudor monarchs are recollected as buried mummies. Chatterton, "the marvelous boy"; Cowper, the melancholy author of his "Task"; Burns, the Ayrshire plowman, and Goethe, the regal poet, romancer, and philosopher in one, will be read, eulogized, and preserved in monument and picture,

when these United States shall grow old in historic age.

Genius has ever been held in admiration; and as enthroned power has been regarded above law or public sentiment, so people of genius have been regarded by misled opinion as excusable from the ordinary obligations of decorum and morality. Alexander's wry neck was imitated by fashion because it was his, and the immoral eccentricities of brilliant minds have been excused or palliated, because of their connections with what was uncommon. The patrician may trample on the "Decalogue," but the plebeian must observe the "Sermon on the Mount." The brilliant Byron may be the central figure of a lust-Saturnalia, but the commonplace civis must observe the sanctities of home. A Fanny Ellsler, because poised in pantalettes like a flying nymph, may bound over all lines separating vice from virtue, but the dairyman's daughter, whose circle of duties require a slower and modest grace, must never forget the virtues of Dorcas. What matters it, if a Madam Rachel or Bernhardt shame the household virtues and domestic sanctities? do they not charm and fascinate amid swelling music, falling bouquets, and applauding throngs? What matters it, if Virtue bleeds while Pleasure rules the hour? In holding the mirror up to nature, why *cant* about the Pattern on the Mount? What has good *acting* to do with good *living*? If a renowned metaphysician like Stuart Mill disregard the marriage code, a Mary Woolstonecraft lead the way before him with William Godwin, exceptionally unique with his wizard pen, why should it be a wonderment if "George Eliot" be willing to be called the wife of Mr. Lewes, while dispensing with the marriage covenant? Miss Marian Evans before the connection, while in it, and after his death, subscribing herself Miss Marian Evans still? These four were of *four-square* genius, as the old Greeks would call a person pre-eminently endowed; but would this mental brilliancy bring with it a heavenly

dispensation from the laws of virtue and the obligations of a good example? Is the brightest light to act as false to human trust? Is less required from greatness than from mediocrity? Shall the favored stumble at noonday upon the mountains, while the plodders walk safely in the obscure valley?

We have always supposed that from those to whom much is given, much would be required. If there are "myriad-minded" people in the world, whose minds see from heaven to earth, and from earth to heaven; if there are minds so constructed like the Revelator's living beings, "full of eyes before and behind"; whose thoughts wander through eternity, and come to ordinary mortals with their rich spoils, it needs not much common sense to determine that they should be helps, guides, inspirations, to those less favored, and not serve as hindrances, stumbling-blocks, and discouragements in seeking whatsoever things are of good report. We think that a mind conscious of rich endowments, should feel it a resting duty to be a helpmeet for those less qualified for the engagements of life; to subtract from no virtue, darken no hope, mislead no aspiration, hinder no reform, and misrepresent no ordination of God. Let Dickens wear the laurels of his beautiful creations, yet let his admirers confess their disappointment at his example as a husband; teaching reform, yet discouraging temperance by his pen and example; commending the religion of his country, yet introducing its professors and ministers as weak hypocrites; professing himself a believer in Christ, yet listening to the poorest actor with patience, "no matter how poor the play, always careful while he sat in his box to make no sound which should hurt the feelings of the actor or show any lack of attention," yet never, or rarely, seen as a worshiper in God's house, with any preacher—Melville, Spurgeon, Parker, Farrar, or Newman Hall—able to hold his attention for an hour; a genius catching follies as they flew about him to entertain his fellows, and living with

human woes and frailties, yet falling, with no voice to speak or eyes to see, when near the marvels of eternity.

"George Eliot" was a woman unusually gifted. Greater than Hannah More, or Charlotte Brontë; the equal of Madame DeStaël or Mrs. Browning, yet coming under an eclipse, how uncertain her light and how sad her end! No woman could have drawn such a character as Dinah Morris, who had not in early life been familiar with divine originals, and caught a sight of the Mount of the Beatitudes. We read "Adam Bede" with eyes suffused with tears, yet soon wiped away with a thankful and rejoicing spirit; we peruse her last productions feeling 'as if the sun had been withdrawn, and the air was too stifling to breathe. We feel in the first, as if we were *Gnostics* indeed; we come to the last, and we say, "Well, this is *Agnosticism*, and to this complexion we must come at last!" Was her companion Lewes a genius? Perhaps he was so, but he made a terrible use of it when he darkened such a soul as that of Marian Evans. Was that the best that he could do for her? Perhaps so, for how can agnosticism convey either light, inspiration, or hope? Let not such men talk of genius; from what, for what, to what? Let them never speak of poetry; they would place the poet in a bottomless pit of mephitic gas, where fancy and imagination could never spread their wings. A mental creation like that

of Dinah Morris—and she has had some originals—could never spring from Huxley or Lewes' material cogitations; and in such a world as they would make, they might search for her, with Edison's lights, in vain. It has been said that this Lewes had a controlling influence over this remarkable woman. Was it so? Can one soul mesmerize another? It may be, and if he was such an operator, we can only think of an eagle chained to a mountain of lead.

The bestowment of genius is for the noblest conceivable ends. It comes from heaven to lead us there. It is a sad thing to have it mislead, or be misled. Yet we read human biographies in vain, if we do not find repeated instances where the most brilliant minds, forgetting that there is a superhuman guide, have been misdirected by inferior ones, reminding us of a sun drawn away by an asteroid. Burns was misdirected in the crisis of his being, by men who shone little in the pulpit, but were luminous at the festive board where the decanters and tumblers were more attractive than morals. So "George Eliot" was misled from a more brilliant future by a mind less creative than her own; and where she might have advanced from Dinah Morris to a Saint Cecilia, not bringing angels down, but leading mortals up to be angels, she left these mortal shores in a gloom and dreariness, like that of her funeral, in storm and rain.

REV. JNO. WAUGH.

MORAL CULTURE IN YOUTH.

UNTIL the discovery of Phrenology, no specific rules could be given for the proper cultivation of man's moral nature. And since the discovery of this science, educationists have not availed themselves of its light, so as to make their pupils perform the moral duties of life in accordance with the commands of the decalogue.

In the December Number of the *North American Review*, Richard Grant White,

a celebrated American author, had an article entitled "The Public School Failure," in which he proves by facts that can not be controverted that, even in New England, what is termed "a good education" at the public schools, has not made the people honest. And here we will say that we do not agree with Mr. White in all his charges against the public schools, and only coincide with him on the question of "Moral Culture."

We admit, at the outset, that the term "Education" is an expansive one, and hitherto has been subjected to numerous interpretations. But with the light of Phrenology to guide us, the true principles of public education become so plain that "he who runs may read" them. This only true science of mental philosophy teaches that conscience is an innate faculty of the mind, and depends upon the culture it receives in early life for its right manifestation. And it should receive as much cultivation in our public schools as any of the intellectual faculties. Admitting this, the necessity of having text-books for instruction in morals, in our primary schools, becomes apparent to all who are versed in the principles of Phrenology.

The objector says that moral culture should commence in the family. We admit that it should, but it ought to be continued in the public school. Moreover, there are thousands of heads of families in our country who have no cultivated moral sense, although they may know how to read, write, and cipher;

and such parents can not properly teach their children morals either by precept or example. In order, therefore, to have all parents and guardians of children in the future virtuous and moral, the children should all attend our public schools; and there should be a system of moral science taught in them founded on the law of God, as delivered to Moses on Mount Sinai, and written on the head by the secret workings of the brain by the same power.

We hold that man is a progressive being, and that the race, as a whole, is growing better in a moral as well as an intellectual point of view. But we are forced to admit that all moral reforms are of slow growth; at least they have been so in the past. Is it not reasonable to suppose, however, that with the light that the science of Phrenology will throw upon the intellectual and moral world, that the dawn of millennial glory will be seen on all lands, and the fulfillment of inspiration be soon realized, viz: "A nation shall be born in a day"?

P. L. BUELL.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER VII.—*Continued.*

THE BRAIN IN MAN.

CONCERNING the structure of the brain and nervous system, Gall and Spurzheim laid down certain propositions, of which the following are noteworthy: The white substance of the brain can not be under any aspect compared with medullary substance, for it is like the other nerves, entirely fibrous.

Anatomists, long before these medics, regarded or conjectured the white matter to be fibrous, but they appear to be the only ones who insisted upon that as its true organization. Indeed, as late as 1825 there were some physiologists who were inclined to question the evidence of its fibrous nature, owing, probably, to the practice of cutting the brain

into transverse slices. It is easy to conceive that in having recourse to such a method, a body constituted of very fine and delicate fibers would appear to be formed of pulpy substance, as, for instance, an apple, a bit of cheese, etc. If we cut transversely the pectoral muscles of a chicken when in a fresh condition, the surface of the cut parts will appear smooth; but if we scrape the muscles, we shall soon perceive that they are composed of fibrous parts.

The cerebro-spinal system, or that part of it which is a prolongation or reinforcement of the pyramidal columns, is only in communication by decussation with the nervo-vertebral system.

As the nervous system of the abdomen, the chest, and of the vertebral column are more or less numerous in different animals, and as animals are endowed with a greater or less number of senses, so also the different parts of the brain are more or less numerous in the different species.

[Here it should be said that Herder and Bonnetus, long before Gall, had positively stated their belief in the plurality of the organs of the brain, Bonnetus not being contented by limiting this belief to man, but including animals. He states, for instance: The construction of the animal mechanism has been designed upon the number and diversity of the objects in view, and relatively to the place to which a species was assigned in the system of animality; the brain of the ape, while much less composite than that of man, is incomparably more so than that of the oyster].

Just as in the different species of animals, the nervous system of the abdomen, of the chest, the vertebral column and the special senses differ in size, form, color, and density, so the different parts of the brain vary, according to species and individuals, in size, color, texture, and density.

Just as each individual organism and the organism analogous differ in individuals of the same species, and as none of all these organisms have constantly a direct ratio with the other nervous organism, so also each cerebral division and the analogous cerebral system have not constantly in different individuals of the same species a direct ratio with the other cerebral organisms.

Just as the special organs of the same individual—for example, those of the senses—differ in size, so the cerebral parts vary in size in the same individual.

Just as in the different species of animals and in individuals of the same species the different nervous systems of the abdomen, chest, the senses, develop at unequal periods, so also the partial systems of the brain develop and dimin-

ish at different periods in the different species of animals.

[M. Vincent remarks on this proposition that the differences and partial diminutions in development of faculties, known as they were from antiquity, should have been sufficient to establish the plurality of the cerebral organs, and that this fact would probably have been long ago recognized had not the idea of a principle acting independently of the body generally reigned among the philosophers and in the schools.]

The development and diminution of the different nervous systems in all parts of the body, as much as in the brain, follow generally a determinate order, while in certain individuals they are subject, however, to changes strikingly inverse.

As with other organs, one half of the system only may be diseased or deranged, so alterations and maladies often attack but one side of the different systems, or but a single part.

[This fact of the double constitution of the cerebro-nervous system explained how faculties could still manifest themselves while there might be very serious lesion on one side.]

CHAPTER VIII.

DEVELOPMENT OF THE CEREBRO-SPINAL SYSTEM IN MAN AND ANIMALS.

The brain of the infant at birth shows little consistence; its color is generally of a rosy hue, and the distinction in color of the two substances composing it is but slightly apparent. The spinal marrow and its superior expansion are quite well developed, and their consistence may be said to be more pronounced than that of the brain proper. That is very soft, so that it is almost impossible to separate the folds. The convolutions lying in the middle lateral fossæ may be more susceptible to manipulation than others. The deep parts, the corpora striata, optic couches, and semicircular bands are distinctly shown in the new-

born child, but do not possess the color or density which they have in the adult. In a former chapter it was stated that the skull grows very rapidly during this first four or five months, in correspondence with the increase of the brain; the growth takes place mainly in the parts situated at the base of the brain, those which occupy the anterior and inferior region of the frontal bone.

The cerebellum does not indicate a growth at all corresponding with that of the cerebrum in the months immediately following birth; the part of it which is generally most developed at birth is that known as the Vermiform process.

The new-born infant usually exhibits little intelligence, its life in the first two or three months consisting almost entirely of alimentation and sleep. But soon the growth of the brain begins to indicate itself by the exhibition of the function of the observing senses; it recognizes its nurse, and the objects by which it is surrounded take its attention; joy and grief are expressed upon its features,

and it agitates its little limbs in evident desire to become self-supporting and self-progressive.

From the period of the appearance of the first teeth to the age of seven years the brain increases rapidly in volume and consistence. During this interval the intellectual and affectional faculties manifest themselves in the most salient manner, and it is by no means difficult then for the experienced observer to distinguish the characteristics which will control largely the mature man or woman.

During this interval, nervous affections generally indicate themselves; the fancies and emotions which accompany them express the astonishing work that is going on in the brain of the child, and these phenomena are more or less pronounced according to the temperament, that in itself marking the tone or quality of the organism.

To promote the muscular development of children in this period by exercises adapted to their strength, is one of the most important matters connected with their training.

DOES DEATH END ALL?

A NEW PHASE OF THE SUBJECT.—NO. 1.

MY object in this article is to supplement the teachings of Scripture with certain physical facts, upon which to erect an argument for a continued life of the spirit after the form. This argument I offer in answer to the following inquiry, lately clipped from one of our daily papers. The inquiry is in these words:

"SIR—Let a Pagan ask a question. If we are to believe that we possess an immortal soul or spirit, that is to live on and on through the countless ages of the future, happy or miserable according to our lives here, is it not reasonable to believe that the soul or immortal spirit is superior to the earthly part which we now inhabit? Now, then, if the spirit has that life

quality to leave our present frame at death, why is it that when we are under the dentist's gas we know nothing?

"Again, a laborer is struck by a falling stone; he is picked up unconscious; or a mortal is dragged from the water totally unconscious, but by persistent mechanical efforts breath is once more forced in its accustomed channels. Now, if the question is asked of these what they knew, they will answer that they 'knew not anything.' Is it to be believed then that there is a future existence, or does not the grave end all? A PAGAN."

The inquiry of our Pagan is a very natural and proper one, and made, I believe, in a spirit of candor. At any rate I shall so treat it, and shall endeavor to be

fair and reasonable in its discussion, however much I may differ from the inquirer's manifest position. In the first place, I think our friend will agree with me in this, that the body is the instrument through which mind or spirit manifests itself. Yet as he may not, let us come to the world's basis as well as to our own experience with reference to the nature of matter, which is, that it is inert, that it is not in and of itself capable of motion—that it moves only as it is moved by something. The human form is a material form. It is moved by something. If, then, matter in and of itself is incapable of motion, there must be something superadded to matter in the human form to move it. When the power which we call life inhabits it, it moves. When this power is withdrawn, it ceases to move. This power is, then, something superadded to matter, so to speak, which, when present and inhabiting the form, manipulates, directs, and controls its every movement. This power or life-force not only sits as governor in the form, directing and controlling it, but also manifests itself, and its own attributes to us, by means of it.

Is not my proposition, then, that the body is the instrument through which mind or spirit manifests itself, established by the above self-evident propositions, and sustained by science as well as by reason and experience?

If the body, the instrument of life, and of its expression, becomes so impaired through disease, injury, or otherwise, that the spirit is no longer able to manifest itself in its normal condition through it, we then have an instance of interrupted manifestation, and that is the condition suggested by our friend, by "the dentist's gas," "the falling stone," and "the watery illustration" cited. I am unable to see, however, that this argues anything against immortality, or in favor of the theory that death ends all, for the reason, that the moment the interrupting cause is removed, the spirit again manifests itself naturally and fully in the instrument. How then can more be said than that the

power has ceased—has temporarily ceased to manifest itself?

Again, let us suppose the interrupting cause to be so potent as to separate the power and its revealing instrument altogether, which condition we call death. Is there any argument here to show that the power has entirely ceased when it has only ceased to reveal itself through its instrument?

Our friend might have cited the further and more forcible instance in favor of his theory, of old age, when the mind, seemingly with the body, together hold a weakening pace toward decrepitude and death, and say, that as the mind seemingly decreases with the body, why may we not claim that at death it ceases altogether?

I would answer this, that as age, the interrupting cause, creeps upon life, the body, the instrument of life, becomes worn, shrunken, weakened, and thus gradually interrupts life's free expression; but if there were administered to the aged person a strong stimulant, tending to bring the power and its bodily instrument into a more intimate report with each other, the aged person will, as it were, re-advance into his organism, and will walk as briskly, and talk as cheerily, as in by-gone days; thus showing that the power is not lost, but only that it is gradually losing control of the organism.

So again, in youth, when some powerful malady attacks the bodily frame and reduces it nearly to the point of death; if, now, the proper remedy be administered, life begins to advance toward its full and free expression in the organism.

But it is said by our friend that where the conditions instanced by him occur, that after the producing cause is removed, if the question were asked of the persons what they knew when in their unconscious state, they would answer: "They knew not anything."

Now, what does this "knew-not-anything" condition argue against immortality, or in favor of the theory that death ends all more than the fact that we go into and remain nearly one-half our

lives in the so-called unconscious state of sleep, knowing nothing of what is transpiring in the world around us.

By sleep, so generally regarded as typifying death, we are forcibly reminded that the unconscious state is but the normal expression of a large portion of our human life, devised, seemingly, for the express purpose of keeping the body, the instrument of life, in repair for life's free expression. The power continues to waken, however, from the unconscious state into this side of being, so long as the spirit is able to control the bodily organism. When that control ceases, who shall say, that the spirit, which was before in dreamland, is now in its normal sphere?

The continuance, therefore, of the life-force, is not inconsistent with what we call the unconscious state, whatever be its producing cause—whether sleep, the cases instanced, or otherwise.

This life of ours is dual in its nature and in its expression—having its wakeful side, upon which impressions are being constantly made through the avenues of the five senses—the inlets of all knowledge of life's wakeful side; and its dreamland side, where the avenues of the wakeful condition are securely closed in sleep's sweet lock. Here we arrive upon the true ground for our inquiry, and now purpose to enter upon our voyage of discovery into sleep's strange country. We will suppose an individual in the above condition, and absorbed in a dream. Here, with all the external avenues of the senses closed, with no physical object presented to the retina of the eye, no sound to the ear, nor other sense presented to the consciousness, the mental world, without the aid of any of the external senses, is living a full rounded life of consciousness. The spirit, during the repose of the body, is up and active; and now absorbed in important business relations, wandering through beautiful scenery, or discourses cheerily with friends. Then sadness in turn visits it, and perhaps the individual awakens in a flood of tears, showing that the spirit has

been passing through a living experience, the effect of which no amount of mere thinking during wakefulness could produce, and in fact so vivid as to require moments of reflection to determine that the experience was really a dream. Thus the external world is inwardly represented to our mind with all the force of reality; we speak and hear as if we were in communication with existence.

If, then, the human spirit without the aid of any of the five external senses is able, as illustrated in dreams, to live a full rounded life of consciousness, and as perfect in detail and as real in spirit as any experienced during wakefulness, and this without the aid of the external or physical world, or outward impressions of any kind, who shall say that when the spirit loses control of the bodily organism altogether that it does not retain the same powers, and that the only end served by our coming into this form, is to have the physical world and life experiences impressed upon the spirit, or mirrored into it, whereby a future, without the physical form, is alone rendered possible, the spirit by this means becoming self-creative, so to speak?

When the spirit is cast—that is, takes form—at birth, it knows nothing as to time, space, distance, form, size, weight, color, order, number, or any other condition or attribute, but is simply the moving life-force in a mysterious trinity of capabilities: 1st, soul or sensation, in which all impressions are caught and held; 2d, perception, by which they are seen and judged of as to their nature and attributes; and 3d, will, by which the spirit takes some action in reference to the judgment formed on those impressions.

The above conditions are brought to this mysterious trinity in unity of life-force through the avenues of the five senses, the body serving no other purpose to the spirit than to keep open, so to speak, these inlets of knowledge from the world around, by which alone the spirit becomes individualized. No dreams could come to the human spirit prior to

its contact with form. This was the infinite plan of bringing us to light. These conditions having now been once impressed upon the spiritual and imperishable side of our nature, may not the physical side of the five senses—the body—by and through which they were obtained, and which have now served their purpose, be dropped consistently with continued life?

An effect once produced is a continued fact, even in the physical world. Is not consciousness, whether upon the side of sleep or wakefulness, or otherwise, still consciousness to the end of reckoning? It is the fundamental verity that renders existence possible to us. It is the accepted basis of all true mental philosophy.

We have already seen that the spirit is immediately dependent upon the five senses for all external impressions. These senses are finite, and limited in their range. The eye is constructed upon a certain plan, and will measure certain distances, beyond which its plane is passed. The ear has also its bounds, and is able to distinguish sound at a certain distance, beyond which it can gather no vibrations; and so with the other senses. The spirit is able to gather not only within the range of the senses, but in the infinite distances above and below their plane, as modern science has abundantly demonstrated in the discovery of the microscope, telescope, telephone, and other instruments, made to supplement the natural plane of the senses. And still higher does its vision stretch, until we are lost in the infinite. It will not do, therefore, to deny the existence of facts, simply because they surpass the vail of the senses. Everything in life takes place under conditions of either physical or spiritual laws, and who can say that he has mastered the mysteries or capabilities of either? All things that are, are not seen. Our friend would not deny his own mental states or the attributes of his own mind, because his eye could not behold them, or because no tape-line could give them measurement.

Again, in the physical world no object can be seen until it is brought under some light, and it grows more and more distinct under the gradually increasing rays: and the law holds equally good in the mental world. Truth is seen only as it is brought into some mental or spiritual light. When an inventor desires to bring forth a new improvement, he puts himself in a mental attitude or state of receptivity to receive impressions in the line of his work, by applying his mind upon the difficult point to be overcome, but when the result first appears in his consciousness, it comes like a flash of light, and the new truth seems so simple, that he wonders why he could not have seen it before, and by an examination of his mental state, he discovers that it was not arrived at by a reasoning process, further than that he had kept his mind in an attitude or state to receive the impression when it came; the result, however, could have been attained only by conforming to the necessary condition.

But, perhaps it will be said, would it not be unphilosophical and ridiculously absurd to believe, that sensation can exist in the shape of a conscious identity, separate from and independent of a material vital existence?

As to the physical side of sensation—yes; as to its mental or spiritual side—no. Well, let us see. Our physiology shows us that the nerves of sensation are alone the inlets of physical knowledge to the mind or spirit, and that the nerves of motion are alone the outlets by which all thought or feeling is communicated to others. When these nerves of sensation which bring to the spirit all outward impressions, and which physiology teaches can be obtained in no other way, are locked in sleep, how is it, that we may then experience all the conditions of wakefulness hereinbefore referred to?

Again, after having enjoyed the blessing of sight, if one becomes suddenly blind, so as never again to be able to receive any outward impressions through this sense, still the person is able in his dreams to enjoy these experiences as to

sight, as before. If, then, these experiences may take place as to one or more of the senses when dropped altogether, I am unable to see that it would be ridiculously absurd to think that the same might hold equally good when those remaining were dropped also.

The position taken in this article is, that the spirit has its subjective, as well as its objective side, as taught by all true mental philosophy, and that after the subjective side of being—the receptacle of all impressions—has been objectively impressed, through and by means of the body—the sum of the senses—it is then able to evolve in the consciousness all objective conditions with which it has been brought in contact, and to reproduce them, not only as received, but to place them, or any portion of them, in new combinations. The senses are only necessary in the first instance, in order that the subjective side of being may be first impressed, after which their use may be wholly dispensed with, and they are absolutely dispensed with in most dreaming; and if the spirit is able to pass through living experiences, wholly independent of them, and with the equal effects of wakefulness, why may it not continue so to do, when they are dropped altogether? After the outer world, through the camera of the senses, has once been photographed upon the subjective side, or sensitive plate of being, so to speak, our consciousness still shows us that we have a world on the inside, as broad as our contact with form, whose conditions and attributes, together with our ever-changing mental states, are now objects to the mind, to be used in such combinations as the self-creative spirit—this mystery of the Infinite—shall evolve. It is clearly to be seen, then, that the character of these productions in the hereafter, in good or bad lives, may be measured by the standard of the Christian faith, in its effects upon the human spirit, for man is what he is on the inside, and not on the outside, in the great relations of being.

In this close grip with matter, it is not

at all wonderful that the human spirit should imbibe some of the dirt of its animality, and hence the need of the crucible of a higher power than self to remove the dross.

The impressions made upon this sensitive side of being, as stated above, are not impressions made upon an immovable rock, or upon the photographic plate of some artist, or upon the physical human body, or upon any other material substance whatever which may be broken, but upon the unseen, yielding, ever-moving life-force, of thinking, feeling, and willing. The Good Record tells us that "the life of God is the light of men."

This kaleidoscope of spirit can contain only what is put into it, so far as any external impressions are concerned. As to the hand that moves this spiritual instrument, that is not now under discussion. The spirit throws up into consciousness, by means of its moods, movements, and activity, such combinations as it may—and this is equally true in sleep or wakefulness. During wakefulness, however, its moods, movements, and activity are more or less controlled and directed by external influences which the condition of sleep excludes, thus leaving the spirit free to roam. Is it not as legitimate to examine mind and its attributes on this as on its wakeful side, so long as I deal with facts? Are not consciousness and its experiences as much facts as a block of wood, which I can not know until I am first conscious?

The reason our dreams frequently appear jumbled to us, is due to the fact, that upon waking we retain but sketches here and there of important or prominent points, or at least those that have made more permanent impressions upon us, the intermediate ones and details having faded wholly or partially, as indeed does the entire dream, unless secured in the memory after waking by a mental effort.

It is true, also, that we are not always able, when we wake, to recall all or any portion of our mental experiences, but our inability to recall what has passed in

our minds at any given time is no evidence that our minds were not then active. Many hours are passed by us when we are awake, and when our minds are known to be active, yet after a day, or often a few hours even, we are unable to recall a solitary thought that was passing in our minds during that time, so that our inability to recall into our present consciousness the mind's activity in sleep, is no evidence that it was not then active.

In cases of somnambulism, which differs from the usual mental activity in dreams, in that the dreamer is enabled to act his dream, the mind may be exercised for several hours in a very energetic manner working out difficult problems, executing nice processes of art, or treading difficult passages, performing feats of mind and body beyond all that is possible during wakefulness, and yet be unable when it is over to recall anything that has occurred during the sleep.

Mind, according to my understanding of it, never wholly ceases its activity; while matter is not only motionless, but formless, until it is shaped and moved by mind. Our customary thoughts or ideas arise out of the association of the effects of material forms, impressed upon the conscious susceptibility of thinking, feeling, and willing.

An object is presented to the organ of vision; the object is first felt by soul or sensation, immediately followed by perception and reflection, and while thought is the last process in the act of thinking, they are instantaneous, as it were, and are a trinity or one whole. Neither can be separated from the other so that one can act without the other. It is an impossibility for the mind to perceive, without the resulting condition of reflection, for the mind is conscious only in this trinity. An object may be placed before the eye, but if the mind be wholly absorbed in reflection upon some other subject, the mind has no consciousness of the object before it, though the picture is represented upon the retina of the eye. The foregoing is a truthful illustration of

all objective thought; and subjective thought, either during sleep or wakefulness, is the same in operation, only that the objects are not physical, but mental. There can be no thought, however, of either description without objects. But, as to our dreams, it may be said that frequently certain external and physical causes have a tendency to set the spirit in motion in a certain direction, and thus give character to a dream, and I shall not take issue upon this point, unless it be said that they do not occur, and principally so, wholly independent of such causes; yet when they do occur by such means as a starting-point, they by no means fill out or create the great body of the dream, which may present a combination of events never before experienced in the consciousness of the dreamer.

To illustrate: I awake from a dream, retaining a vivid impression that I have been wandering along the banks of a beautiful lake, and amid scenes where I have never been before. I have been gathering wild flowers from a neighboring gorge, the fragrance of which I particularly note. I go to the water's edge and amuse myself in the boyish sport of throwing pebbles, which I pick from the beach, into the clear water. There are berries near, which I pick and eat. I hear a noise, and upon turning suddenly the face and form of a stranger, accompanied by an intimate friend, approach me. I have never seen the face of the stranger before. It is, however, a pleasant and genial one. After a brief conversation touching the beauty of the morning and landscape generally, we take a sail upon the lake. We engage in the fascinating sport of the angler. I secure a nice prize, and while my companions in a hilarious manner are complimenting me upon being the button upon fortune's cap, I awake with their merriment ringing in my ears. I have not been absent from my couch. The above are facts in my consciousness. What will you make of them? A disordered stomach will make a person less restful. People, how-

ever, who have good stomachs have the same experiences.

But perhaps it will be said that it does not require a very vivid imagination, even in our day-dreams, and while engaged in our various avocations, to wander back in thought to the scenes of our childhood, and that we can as clearly see "the old oaken bucket," the ivy-clad church, and the face and form of our mother, as she was accustomed to meet us at the door, as if we were actually at the cottage. Now, while I shall claim that the above is an argument convincing in its nature in favor of the theory that *death does not end all*, it does not, however, answer or meet the views advanced by me as to dreams; for the reason, that it is quite another thing to be able to recall into our present consciousness a by-gone

experience, which, with all its incidents, has once been witnessed.

But does not the above go to affirm the statement already advanced, that this holding on in the mental life of all events and conditions brought to the consciousness, show a continued and uninterrupted individuality, and that nothing is lost, although, according to science, the form or bodily organism is subject to continual change?

The fact that all our past experiences can not at will be recalled into our present consciousness, is no evidence that they are not there, as subsequent mental states may evolve and bring them forth, and we know this frequently occurs in dreams, when all efforts to recall them during wakefulness have wholly failed.

AMONG THE CHURCHES.

I'VE entered each temple, one by one,
And into each chapel and church have gone,
Hoping that some celestial ray
Of Truth might glimmer upon my way;
And various dogmas and doctrines I've heard,
While one sweet story my heart has stirred,
So fresh, so pure, and yet centuries old!
That beautiful story each teacher has told;
That story which every heart must move,
The story of an undying love!—
The story of Jesus!

I've worshiped in plain Puritanic halls,
Where bare and cold were the plastered walls;
Where preachers eschewed the priestly dress
As worse than the worst of worldliness;
Denying that faith is the soul of rite,
Despising the form, they grope for the Light;
And wrestle with gloomy powers of Night,
Strong in the strength of Eternal Might.
I, too, can join in that plaintive song,
In union pray when they breathe, How long!
For the simple story is evermore told,
The wonderful story, now centuries old—
The story of Jesus!

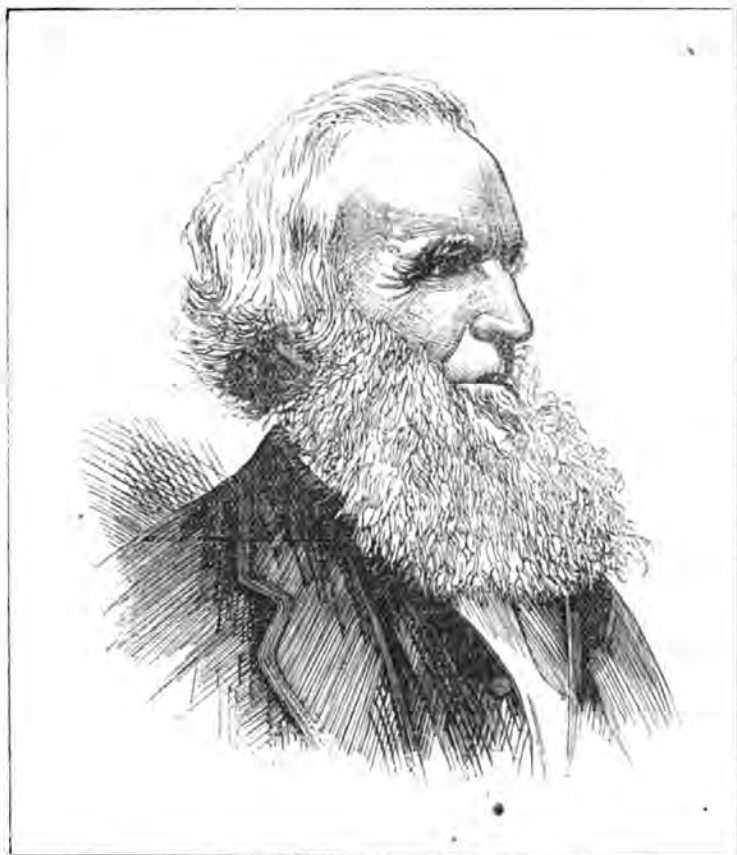
Where Gothic arches rose overhead,
And marble traceries round me spread,

Where priests, in garments of gorgeous hues,
Seeking by rites their faith to infuse,
And incense and prayers together they raise,
I, too, can offer my prayer and praise!
For that dear story again is told—
Forever so new, though centuries old.
That story, the depths of the heart to move,
That holy story of sorrow and love!
The story of Jesus!

I have knelt in the holy Wesley's band—
Evangelists they in every land;
And as among every grade they move,
Gaining the hearts of their kind by love,
Each brother the heart-reaching story has told,
That tenderest story, now centuries old!
The story of Jesus!

When cold, hard thoughts the bosom may chill,
The story's a bond of union still.
Its echo from out each church shall ring,
And back to the fold the wanderer bring.
Each Christian the story says or sings;
For this we bless God, as for all good things—
For the story of Jesus!

—GRACE H. HOBBS.

**SIR JOSIAH MASON,**

AN EMINENT ENGLISH BENEFACTOR.

ONE of the more conspicuous men of England in the spheres of industrial success and practical philanthropy, is the gentleman whose portrait appears on the opposite page. He has risen from poverty to the possession of great wealth, from complete obscurity to special distinction. This historical fact implies the possession by Mr. Mason of superior mental powers, and his head being over twenty-four inches in circumference—an extraordinary development—confirms or supplements the instructive history of the gentleman.

Prof. L. N. Fowler had an opportunity to examine Mr. Mason's head in 1862, and from his notes we derive the following estimate of the tendencies of the organization :

He has a remarkable head : some faculties are very large, while others are rather small. The strong qualities of his brain are so active that they thoroughly monopolize his whole mind, and on this account his defects are less apparent than they otherwise would be. As a foundation to his character he had naturally a powerful constitution, a strong hold on

life, and a healthy organization, which he has preserved by a temperate, industrious life. He has six very strong tendencies of mind that exert the most influence over his life and actions. One is centered in his social faculties, which are generally strong. He is particularly fond of children, the organ of Philoprogenitiveness being so large as to show almost a deformity. Having no children of his own, it was natural, therefore, that his attention should be enlisted early in providing a home for the poor orphan. Another strong trait comes from his Self-esteem, which is manifested in self-reliance, independence, and the desire to be entirely free from the control and direction of others, and to take the responsibilities of his own life and actions upon himself. The third is Firmness, which is very strongly represented, giving him a very great amount of perseverance, determination, and presence of mind in times of danger. The fourth is Benevolence, which is very marked in the organism of the brain. His fifth prominent power of mind comes from his very large perceptive faculties. He has great power of observation, and easily takes cognizance of physical objects. Form, Size, Weight, Order, Calculation, and Locality are very large, and through their influence he has a first-class mechanical eye, a superior judgment of the value, condition, and quality of things. He has also the ability to arrange and systemize, and adapt means to ends, to calculate estimates as to profit and loss, to use his forces to the best advantage, and to have everything adapted to its place so as to make the best possible use of space and material. Few, if any, have excelled him in applying principles, in adjusting parts, and in judging of nice mechanical and artistic

work. All his business, as well as mechanical arrangements and operations, have been conducted with equal precision. He has not proceeded one step unless he could see his way clear; he has taken nothing for granted, and he has perfected everything he has attempted to do. He is very fond of experiments, and of putting parts together, and of seeing results. He can express his ideas much better in what he does, or sitting in council with others, than in a set speech. He has not only excellent practical judgment, but superior financial abilities; his large Time, Order, and Calculation enable him to utilize every moment, and to make the best possible use of his time; he has been able to detect the wrong movement of machinery by the sound the moment he entered into the room where the machinery was in operation.

His sixth prominent quality arises from his large reasoning brain. He is quick to understand the relation of cause and effect; can look far into first principles and understand their combined action; has very active powers of comparison, of analysis, and ability to criticise and study results. His intuitive perception of character, of motives, of simple truths in nature, science, and philosophy is very correct. By the aid of this power of his mind he is able to employ such men as will suit his purpose, and put each man in his proper place with consummate skill. In religious belief he is liberal, being governed much more by principle than by creed or form of worship. He has very little regard for fashion and display, is not vain, and has never worn jewelry. He does not flatter or stop for trifles, for if he has made up his mind to accomplish a certain end he allows nothing to hinder or prevent him from ac-

completing his object. His propelling powers are stronger than his restraining powers, but having superior intellectual qualities, he is able to guide his energies so as not to impair his success. As a business man, he has been distinguished for his quick and correct judgment. As a manufacturer, he has been characterized for his power of invention, his accurate mechanical eye, and for his ability to arrange and adjust mechanical and mathematical principles.

In the early part of 1880, Prof. Fowler had an opportunity to examine Mr. Mason's head, when he made the following notes, which are very pertinent in this connection :

" Few individuals offer so strong a proof of the science of Phrenology as Sir Josiah Mason, and the number is limited where such great changes have taken place in the shape and size of the head. I have measured and examined Sir Josiah's head with care several times, and each time have been surprised at the changes that were taking place, both in respect to the size and the shape of his head. When I first examined his head in 1862, it measured $23\frac{1}{2}$ inches round the central portion of the skull, and the predominant developments were the very large perceptive faculties, the lower portion of the forehead projecting much beyond the reasoning organs, so that it was somewhat retreating. The development of Firmness was much larger than now, and Philoprogenitiveness was developed to excess, and exceeded any other social or domestic faculty. The executive brain was larger, and Cautiousness less than now. Ten years after I again examined his head, and found it had changed in a marked degree, and measured $24\frac{1}{2}$ inches. A few days since, I once more examined it, and found it measured 25 inches minus $\frac{1}{4}$. It now shows the reasoning faculties to be equal to the perceptive. His forehead is up-

right, not retreating in the least. Benevolence is larger than ever, Firmness is not so marked, the organ of Philoprogenitiveness does not appear nearly so prominent as it did fifteen years ago, while Friendship is much larger, so that the back-head is now round, and evenly developed. The executive brain is less marked in development, while the prudential brain is more distinctly manifest. The head, as a whole, is more even, and there is less distinction between one organ and another."

SIR JOSIAH MASON was born at Kidderminster, February 23, 1795, of poor but worthy people. When quite young he worked as a shoemaker, then as a baker, and next as carpet-weaver at Kidderminster. At the age of twenty he went to Birmingham, where for ten years he was a jeweler and gilt toy-maker. At thirty he became connected with the manufacture of steel split-rings and key-rings, which was conducted by Samuel Harrison, the first inventor of steel split-rings. Mr. Mason regards this as the foundation of his worldly prosperity. He afterward succeeded to the business of Mr. Harrison, and then added to it the manufacture of steel pens.

Mr. Mason's introduction to the pen trade is strikingly illustrative of his business intellect. In the year 1828 or 1829 he was walking up Bull street, in Birmingham, when, looking into the shop window of a then well-known stationer, he saw a card containing nine steel pens, the price of which was 3s. 6d. (84 cents). Infinitely better pens are now sold at 10 cents per gross. "The novelty of the thing," said Mr. Mason, recounting the incident to a friend, "induced me to go in. The proprietor was writing with one of the pens. He said 'it was a regular pin.' I instantly saw that I could improve upon it, and I bought the 'pin' for sixpence." On examining it, Mr. Mason made out the name of the maker to be "Perry, Red Lion Square, London." When he got home he made three pens,

from which he selected the best, and sent it by that night's post to Mr. Perry. Two days afterwards Mr. Perry presented himself in Lancaster Street, to see the man who had made a better pen than his, to ascertain if he could make them in large quantities, and to conclude a bargain with him.

In both the split-ring and the pen business Mr. Mason was eminently successful, and with the capital thus acquired he subsequently entered into the business of electro-plating and gilding, then into the business of copper smelting. In connection with the latter undertaking Mr. Mason established a copper-smelting business at Pernbury, in Wales, which, an obscure village in 1850, has, through his enterprise, been converted into a flourishing town. The school built there by his firm to accommodate between 400 and 500 children, is now found too small. Another sphere of Sir Josiah's activities was in connection with the banking interests of the Midlands. When the Birmingham Bank failed, he became chairman of a new company formed to assist and, if possible, to repair the losses of the old.

Such is a brief record of his business career, but the chief interest of his life is in the noble use which he has made of his wealth. His first great work of benevolence was the erection and endowing of almshouses, and an orphan asylum for boys and girls, at Erdington, near Birmingham. The first portion of the buildings was erected in 1858, one part as almshouses, and the other for an orphanage. There is accommodation in the almshouse portion for thirty women, spinsters or widows of the age of fifty years or more. Each inmate is provided with a furnished house, coal, gas, and other advantages. The part which was originally the Orphanage is now converted into a home for girls educated at the Orphanage, who may be out of service, or suffering from sickness. Not satisfied with these acts of beneficence, Mr. Mason laid the foundation stone of a new orphanage himself, on the

19th of September, 1860, and the building was finished and first occupied in 1868. In addition to the expenditure of \$300,000 on the building, Sir Josiah has endowed the institution with land and building estates of the estimated value of \$1,000,000. No publicity was given to this munificent gift until the twelve months prescribed by the statute had elapsed after the date of the deed, when, on the 29th of July, 1869, the institution and the estates were handed over to seven trustees, who, together with the founder, compose the present board of management. The inmates of the Orphanage are to be "lodged, clothed, fed, maintained, educated," and brought up at the cost of "the Orphanage income." There is no restriction whatever as to locality, nationality, or religious persuasion. The institution is now capable of accommodating 300 girls, 150 boys, and 50 infants (boys), who meet together for meals and prayers, but are separated as to school and dormitories. The rules permit the admission of boys from 7 to 10 years old, and girls from 4 to 10 years. Boys leave when they are 14 years of age; girls from 15 to 17 years of age, as situations are found for them. Boys and girls are awarded two suits of clothes and a Bible on leaving, if they have been their full time, and their conduct is satisfactory to the trustees.

Besides this noble and munificent charity, Mr. Mason has built and endowed a college for the study of practical science, which is based on the same broad and liberal principles. The object of the founder being to promote "thorough systematic education and instruction, especially adapted to the practical, mechanical, and artistic requirements of the manufactures and industrial pursuits of the Midland district, and particularly of the boroughs of Birmingham and Kidderminster, to the exclusion of mere literary education and instruction, and of all teaching of theology and of subjects purely theological."

This college was completed early in the fall of last year, and is a magnificent

Gothic edifice, with a frontage on Edmund Street of 148 feet. The buildings cover an area of about 2,400 square yards, but in the course of time, when the original plan of the founder is carried out, they will occupy nearly double that area, the extension, of course, being made in the rear. Interior arrangements include a library and reading-room of large dimensions, which, together with a physical laboratory, are on the ground-floor.

In the year 1872 Her Majesty conferred on Mr. Mason the honor of knighthood, in recognition of the munificence of his many benevolent and philanthropic

labors for the good of his fellow-men. Of all who have received the honor at the hands of the Queen, few have merited it so well as Mr. Mason. There are some remarkable resemblances between Mr. Mason and the late Mr. Peabody. Both were born within five days of each other, both began poor and became wealthy through their own energy and industry, and both have distributed nearly a similar sum among the poor. But while Mr. Peabody handed over his money to trustees and left the arrangements to them, Mr. Mason has superintended the details of his own charities.

PLANT ORGANIZATION.

A ROOT, stem, and leaves constitute a perfect plant, and are called the organs of vegetation.

"The little sprouting oak tree,
Two leaves it had at first."

Linnaeus, the celebrated Swedish naturalist, who awoke the study of plants from the sleep of centuries—he of whom it is written, "His magic pen turned the wilds of Lapland into fairy fields," briefly sums up the distinctions in nature: "Stones grow; plants grow and live; animals grow, live, and feel."

The history of the formation of plants we owe to the same source as that from which we derive our knowledge of the origin of man, in the opening chapters of the Bible; in the records of the third day, vegetation appears. Following closely upon the dead atoms of matter, the plant holds the middle rank in creative order, being the connecting link between the crust of earth and man. The plant possesses organs and life. It has its period of infancy, maturity, and old age. It finally—by the decay of its tissues—dies, and is decomposed in a manner strangely analogous to the animal; but at that stage the resemblances cease.

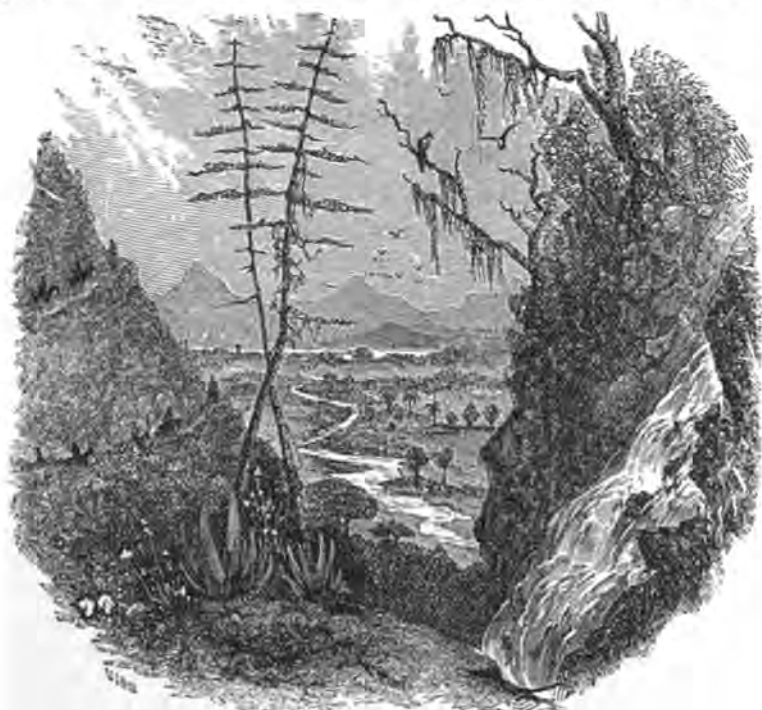
The mechanism of the plant is simple—an assemblage of tubes, and cells, and

ducts; and its habitation—except in some of the lower orders, as the drifting seaweeds—is fixed. Unendowed with the mystery of nerve, instinct, or perception, the senses, which in some degree pervade all animal life, are entirely wanting. The marvels of an inanimate life, and circulation, are sustained and carried on in the fibers and tissues of the plant. The pores of the roots imbibe their nourishment, which is always in a fluid form, from the earth; the leaves reach forth for their tribute from the air and the clouds; the friendly sunlight awakens the sleeping bud into the open flower; contracting fibers fold the delicate petals over the tender germ to protect it from the harmful influences of the night, and thus wonderfully do the forces of nature nurture the plant and develop its growth.

The leaf, though of rapid growth and brief duration, unfolding with the spring-time, and dying with the waning year, is yet essential to the life and growth of the tree which has flourished for centuries. Leaves imbibe air and moisture, and after assimilating a portion of each for the nourishment of the plant, give back to the inhabitants of the animal world their own life-sustaining element of air, oxygen. After the leaf has performed

these offices its appointed time, the tissues become hardened, circulation is retarded by an accumulation of earthy matter, a greater amount of oxygen is consumed by the plant as the nights become longer, chemically changing the green coloring matter of the leaf to the many hues which paint our autumnal forests with such changeful and glowing tints. The life fluids flow back to the root, the leaf falls, and the plant rests, till the next season calls forth its verdant life again. These simple processes result in the autumn

were for his sustenance. The thorn, the thistle, and the vile weed were among the curses of the fall. The grace and beauty of foliage have breathed the purest forms of inspiration upon the painter's brush and sculptor's chisel. Long ago, in the ages of the forgotten past, an architect found a cluster of acanthus leaves growing around the pedestal of a shattered vase, and from the instruction thus given was received a lesson which gave to the world the beautiful Corinthian column, with its graceful



A CENTRAL-AMERICAN LANDSCAPE.

death, and spring-time resurrected life of the tree, and other forms of plant life.

The products of vegetation were the first material gifts of God to Adam. While he was to rule over and subdue all animals, the fruit of the "green herb" and tree, that is, the fruits of vegetation alone, was given to the human race for food, at the time of their creation; and there is no authority for believing that any other than vegetable food was used by man before the flood. The Garden—beautiful Eden—was for Adam to dress and to keep, and its fruits

ornamentation, and the leaf-crowned ruin became immortal.

Customs seldom have outlasted religions, perhaps because so inextricably interwoven with them; but flower and leaf have been the emblems of different emotions of the human soul, among nations, and every form of religion, through all time.

The poplar tree is remarkable for the amount of its exhalations, or the amount of moisture given off by the leaves. During certain hours of the day, the water will drop to the ground as in a slight

shower. The classic legend represented the daughters of the sun-god as weeping over their brother's fate, until changed by Jupiter into poplar (weeping) trees, and the poplar has been a favorite ornamentation of cemeteries ever since.

Notwithstanding all the bountiful provisions of the Creator, we behold in nature a great economist. While enjoying the full plenitude of creative bounties, she wastes nothing. The adaptation of vegetable products to the needs of man, is a proof of this. The most nutritious fruits, as the banana, bread-fruit, and others, flourish in the warm regions of the tropics, where man is nourished by vegetable food alone; while the products of the temperate zone, as the grains, are found to mingle with, and assist the digestion of, the animal food with which man is now partially sustained in the colder climates. The pleasures of the eye, the charms of perfume, and the delights of taste, the luxuries that wait upon civilization, and the mysteries of the silent but resistless forces of nature, are produced and developed by the plant life of the earth.

There is no fixed rule for the natural distribution of the different families of vegetation over the earth. Cultivation and civilization introduce and naturalize many plants before unknown. As the olden forests are borne away, the beams of sunlight break the seals upon the mausolea of leaves, a new life is resurrected therefrom, and a flora hitherto unknown presents its beautiful tribute to civilization.

Sometimes a page of history reveals to us a conqueror carrying home vegetable trophies from subjugated lands, and in this manner introducing foreign products into his own country. Lucullus, a renowned Roman general, carried a cherry-tree, loaded with ripe fruit, from Pontus to Rome, to grace his triumph. This fruit was never before seen in the Roman Empire, yet within a hundred years after, the cherry was common throughout Western Europe, as one of the results of that Roman victory.

The greater portion of the cultivated fruits of the temperate zones grow wild in the region of country south of the Caucasus. There we find the native home of the apple, pear, cherry, peach, apricot, plum, and a host of others; and though, in its wild state, the delicious peach discloses its poisonous qualities, and the apple exists as the sour crab, yet these harsh fruits are very probably the remains of ancient gardens, planted by the immediate descendants of Noah, who settled in the fertile valleys of Armenia; and cultivation is all that is needed to develop their nutritious and delightful qualities.

Our modern luxuries of cultivated flowers and fruits are also in a measure due to the famed hanging gardens of Babylon, long known as one of the "seven wonders of the world." These gardens were reared by one of the Babylonian kings to please the sylvan tastes of his country-born queen, a Median princess, who pined for the wild woods of her father's rugged kingdom. Successive terraces, placed upon lofty piers sufficient in height to admit the tallest trees, with depth of earth suitable for their support, were reared to imitate a mountain slope, and there were gathered all of floral tributes which the known world could render.

With the fall of Babylon, these gardens were finally destroyed, while the fruits and flowers nurtured there soon degenerated into a state of wildness, and as such have existed through the intervening centuries. But the germ of a higher development remained, and at length civilization endeavored again to give to the world the delicious fruits of old. As some of the results, the luscious peach regales us with its delicate flavors; the harsh crab-apple, of which we have spoken, yields over fifteen hundred cultivated varieties; and the descendants of the wild rose of Asia Minor contribute their loveliness to the gardens of the enlightened world in hundreds of beautiful and fragrant varieties.

ANNIE E. COLE.

SOME THOUGHTS ON THE PROBLEM OF POVERTY.

DURING these seasons of cold and storm the cry of the poor comes up to us continually, and we are led to inquire into some of the causes of poverty and suffering of which we hear and see so much.

Idleness and drink go hand in hand, and both are fruitful sources of poverty, degradation, and disease. The conditions of society are such that often those who would gladly toil for a subsistence can not get work; they must be maintained either by private or public charity or starve. Many, from want of proper sustenance, become diseased and are placed in our public hospitals, or struggle on until death brings them release.

The drinking classes are a constant drain upon society. They give nothing as an equivalent for their support unless it be a brood of weak and vitiated children, who, in turn, furnish for public maintenance a numerous progeny in the place of one individual. The transmission of appetites, passions, and evil tendencies receives no effective check from any source; on the contrary, in some of our pauper houses and other places where these wards of society are maintained, the most degraded reproduce their kind.

The wholesale traffic in spirituous liquors goes on with ever-increasing activity, and our prisons are filled with criminals as a legitimate result. Every day we are sickened with the tales of crime and horror enacted in our midst, and every day a new list is made out of those who must be sent to these prisons and kindred places, and every day heart-broken wives and hungry children appeal to our sympathies and receive our aid, whose sufferings have come as the result of the dissolute habits of some husband, son, or father.

Such children grow up with the hunger for stimulants pervading all their being, and each generation furnishes an increase in the number of those who by inheritance are weak, morally, mentally, and

physically, and who thus fall back as dead-weights upon society.

We have still another class of non-producers almost as fatal to the general prosperity of the masses as the paupers and criminals; these are the public officials for whom places are made as a recompense for political favor, or whose office society has outgrown, or the duties of which are performed by some deputy who does the work while the former gets the pay.

The salaries of the judges in our police courts—and, in fact, the salaries of those who fill many of the second-rate offices—are entirely out of proportion either to the work they perform or to the salaries paid men whose ability, culture, and endurance must be of the highest character in order to fulfill the duties of their position. Men who receive large sums of money annually from the public funds, and whose services are not needed for the safety and good order of society, should be classed among the other non-producers and esteemed as vampires who are sucking the very life-blood of our nation's strength. The Registrar of the city of New York receives an income from his office of \$100,000 annually; other officers, in like manner, have incomes out of all proportion to their duties. It matters little whether these sums come from the public funds or from the individuals of society—the people are taxed all the same, either directly or indirectly, to meet the demand, and the hard-working middle classes are the ones on whom the burden of this taxation falls.

In raising public moneys by assessments this burden on the laboring classes is most heavily felt. They are taxed to support those who can't or won't support themselves until their own lot becomes unendurable; and they too often are compelled to succumb to the pressure, and sink into the ranks of the paupers.

In a discussion in our State Legislature the other day upon the subject of tax

reform, one honorable member declared that not more than one-fifth of the property in the State of New York was taxed, and that one-fifth which carries this enormous burden is largely the property of those who have too little to enable them to cover it up. In the cities of New York and Brooklyn the taxes and assessments often amount to confiscation of the home.

The Hon. James A. Briggs, one of the State Assessors, in an address before the New York State Bar Association, says :

"The inequalities of our present tax laws, and the great injustice existing and practiced under them, are perfectly fearful, and puts the oppression of which the fathers of 1776 complained of the mother country, so far into the background, that the oppression can not be seen in comparison *then* and *now*. Two women in the city of New York pay more personal tax than incorporated companies whose capital stock is some \$130,000,000."

Again he says :

"If any of the advocates of woman suffrage want facts to sustain their arguments, let them go and examine the tax rolls of almost any town, village, or city in the State, and they will find them only in too great abundance. . . . As the laws now are, and as they are executed by local assessors, they are a mere farce, a sham; and in too many cases used merely to assess the personal property of unmarried women and widows, who have no voice in saying what amount of tax shall be raised and levied upon the personal property for which they are assessed for any purpose. . . . In the city of Rochester in 1872, with a population of some 70,000, with its millions of dollars in trade and manufactures, and incorporated companies liable to assessment for personal property, together with the wealth that has accumulated in the hands of individuals for more than half a century, its inhabitants were not assessed—after deducting the assessment of *stock* to incorporated companies—as large an assessment for personal property as the assessment against one widow

lady in the town of Batavia, Genesee County. The assessment of personal property to individuals in Rochester and in Utica, in 1872, was not equal to that of two widows in Batavia that year. . . . In 1877, in the city of Utica, with more than 32,000 inhabitants, only 67 persons were assessed for personal property. In one ward, with over 3,500 inhabitants, there were but five assessments for personal property, amounting in all to \$29,000, one against an executor for \$5,000, and four against *widows* for \$24,000."

These facts, quoted from the very best authority, go to show that rich men find no difficulty in hiding and otherwise screening their property from taxation. The poor man or woman whose home is mortgaged must pay as much tax as though it were clear of incumbrance, while he who owns the mortgage finds little trouble in shirking his part of the public burdens. Thus the industrious middle classes are weighed down, and crushed under the weight of taxes levied to support the non-producers. If all who were able to work were furnished with employment and compelled to earn their own living, and the enormous sums paid to public officials were cut down to what is absolutely earned and required for the public good, the heavier portion of the taxes would be lifted, and if that which was really needed for the management of public affairs were raised by just assessments, the expense of living would be largely reduced. Then a poor person might hope some day to own a home, his family might be comfortably clothed and fed. At present, directly and indirectly, the houses over our heads, the food we eat, and the clothes we wear are so heavily taxed, that one must have a fortune hid out of the assessor's sight in order to be even comfortable.

No wonder that the tide of poverty sweeps down in its track so many deserving persons. Those who deserve the most make the least outcry; they starve and die, while the drunken, idle crowd are sheltered and fed from the public storehouse.

Now we have shown that it is not the wealth of the country which takes care of its wards, but the hard-working, struggling, middle class; and we can all see how the numbers of the drunken, idle, and vicious are increasing year by year—and it is a question which every philanthropist would do well to study—this question as to how long the able-bodied and industrious can hold out against the demands of the great army of political and corporate vampires.

We women have a policy, which, had we a voice in all political issues, and an equal part in legislation, we should certainly endeavor to carry into effect. A portion of this policy would be the industrial and moral training in our public schools of *all children*—a plan by which every child should come up with educated *eyes* and *fingers* as well as brains; where every child should be taught the sacredness of his body, and the imperative lessons of *self-control*, *self-respect*, and *self-support*. These lessons should be as thoroughly inwrought into our systems of education as the alphabet and multiplication table, and children should be taught to consider idleness as one of the chief of crimes. If all the waifs of the streets were gathered into schools of this kind, and the children of the rich were taught lessons of the same character, a few years would suffice to stop the recruits which now keep the ranks of criminals and paupers overflowing. This would be one of woman's preventive measures, had woman free scope, as men have, to act in all departments of life. Nature seems to have constituted woman as the power which

should prevent evil, while man more naturally punishes the evil-doer; both united could gain the mastery over poverty, idleness, and crime.

Women in legislation would join the army of reformers already at work to revise our system of unjust taxation—for women have so long felt the injustice of "taxation without representation," that they would put heart, energy, and brain into their efforts toward reform. The back that has felt the lash knows well the sting, and women have groaned under the injustice of unfair assessments and unfair representation until they are all ready to do their part in the great battle for right.

Prison reform is a great and grand work, in which woman's influence, if rightly directed, would be of inestimable value; but a greater work than prison reform, or asylum and pauper-house reform, is the inauguration of a system which shall check the development of crime and indolence in the children who are to be the men and women of the next generation.

Now there is a constant demand for more and larger institutions, more and larger appropriations, to meet the needs of the mighty multitude of vagabonds who infest the community; who poison our moral atmosphere; who people the earth with creatures worse than themselves; and who would, if not checked, at no far distant period stultify all the efforts toward moral and intellectual growth which the better classes are making.

MRS. HELEN M. SLOCUM.

THE PURITAN CHILD.

BEING AN AUTOBIOGRAPHY.

ASKING QUESTIONS.

I LEARNED very early to doubt the opinions of others. The old Pilgrim theology, when I was no more than half a dozen years, gave me a sense of horror. That little children should be such ter-

rible creatures—"in hell only a span long," born with nothing good in them, I stoutly denied, declaring that "*I was good*, and always was, and always meant to be," at which people laughed, of course, or warned my mother that I needed

looking after. Others exclaimed, "Oh, you strange child! don't talk in this way; don't bother your brains about what is beyond you." My mother would tell me that it was an improper way to talk, and bade me be silent. In these dilemmas I used to go to the Bible, a child of six years "searching the Scriptures," and remember, as if but yesterday, the light and comfort I found when I first was arrested by the passage, "If any man lack wisdom, let him ask of God, who giveth abundantly, and upbraideth not."

What a comfort were these words, "upbraideth not," to a little child so often repulsed! I took heart at once. I carried up all my ignorances, and impediments, and imbecilities to the Great Audit, and found help and comfort; and what was more, patience to *wait*; but still I suffered a great deal by this deferred knowledge, and sometimes would say: "I don't think it right to keep little girls ignorant, when they want to know so much."

I began to think grown-up people must know but very little, or they would answer me, especially when I would add, and often I did, "I will never forget, and when I grow up I shall know."

I had a young aunt, very fair and handsome—Eliza Prince—who looked upon this asking of questions on my part as an impertinence. Sometimes she would say to me: "I will take you out with me, but you must promise not to ask questions."

Now I dreaded of all things to make a promise, because I was thus under bonds, and might break them. I remember once we were walking across a pasture lot of the farm to visit some relatives on the mother's side. I was under the interdiction, and dared not ask. Scattered here and there we passed several boulders of granite, worn perfectly smooth by the action of primeval currents. This peculiar drift had worried my mind not a little. I had wondered at their roundness, and place above the soil. I was six years old, and ought to know the why.

At length one larger and smoother than all others so tortured my curiosity that I could no longer resist. I laid my small hand upon it, and with some fear said: "Aunt, just this once, please tell me where did this great round rock come from?"

She regarded me with a look of impatient pity, and exclaimed: "Elizabeth, are you a fool? Where do all rocks come from?"

"That is what I do not know, aunt; nor why this should be round, and up out of the ground."

"Oh, child, you are a fool!" and she bade me come on.

"I think I am not bright, aunt," I said tearfully, "but I so want to know things."

As I pen these little incidents they seem puerile subjects for an article, and yet I think it well to preserve them. Could we have the record of a few minds from early childhood, written honestly by persons of tenacious memory like mine—for I recall after this lapse of time, not only events, but the exact words, looks, and attitudes of those connected therewith, the locality, period of the year, kind of weather, also—I am sure some psychological intimations might be obtained in aid of education. Grown people need the help of children.

Children are far more penetrating than is generally thought, and detect a false ingredient as by natural instinct. They are made false in the nursery, and go out into the world with conventional rather than moral ideas. I do not believe in perpetual teaching, coercion, and reprimand; much may be left to spontaneous insight.

My grandfather Prince never rebuffed me in my search after ideas, but answered me with conscientious tenderness. I got to thinking he knew everything. Judge, then, of my surprise when he once honestly said, "I do not know." I had been gathering flowers in the corn-field, and came home with my hands filled with the delicate silk of the Indian corn. Grandfather was reading, but as I placed my-

self at his knee he stroked my head tenderly. At length, observing what I held in my hand, he exclaimed, "Ah, child, do you know what you have done? There will be no corn where you have pulled out the silk."

"Why, grandpa; why will there be no corn?"

"I can not give the reason, child; I only know the fact from observation."

It must be remembered that Botany and Geology were then in their infancy.

I do not think I was what is rightly called a precocious child. I seemed to myself very dull, not to know more in some way or other.

Once an elderly lady, thinking to please me, gave me a book of riddles. I was not more than six, and was reading Milton. I was shockingly disappointed, and my poor tell-tale face showed it.

"Don't you like the pretty book?" she inquired.

I was in a strait between truth and politeness, but answered manfully, "When I was a little girl I did not like riddles, and now I am too old for them."

"A little girl! What are you now, I should like to know?" At which I was alive with shame.

When I was a mere baby, for some misdemeanor I was put into a dark closet. I remember crying out, "Oh, whip me; don't shut me up"; for cold and darkness were from the first a terror to me, and lack of space became a horror. My entreaties were disregarded, and I was shut in. I sank down upon the floor in silence. I was never a child to scream and cry, but I remember I felt as if the hell about which people talked had got me shut in for the burning. I became insensible, to the horror of my young mother, who opened the door to find me in a dead swoon.

CHILDHOOD NOT A HAPPY PERIOD.

Children take matters far more deeply to heart than is generally considered. I do not think childhood a happy period. It is true everything is limited and puerile, but children are restive because

of these. They suffer to the full amount of their capacity to endure. I, being of a sensitive make, had much to endure, and this endurance without complaint was the germ of something heroic, though on a small scale. My surroundings were peculiarly desirable—no contentions, no excesses, no vices, no cruelties—all was orderly, pious, genial; and yet I used to go away and shed unchildish tears, from emotions I did not understand, and over ignorance which it seemed to me would remain forever.

My lisp also was a sore trial. Once I was sent on an errand for a bit of cop-peras, as the family was coloring. I delivered my errand in this wise: "Aunt Thawyer, ma wanth to know if you will lend her a thmall piethe of coparath."

The response to this was a burst of laughter and a shower of kisses. I went home thoroughly disgusted with myself, and, rushing to the nursery, repeated the obnoxious paragraph till I found out the secret of the mispronunciation. I soon discovered that I put my tongue to my teeth in soundings; so I put some of my beads into my mouth, and found it very nearly a remedy.

FROM FIVE TO TEN.

This was the blossoming of my life. I was happy in my own way. I was conscious of mental and moral growth. I read, I wrote; and though nothing of any moment, my bits of rhyme were not marvelous, neither were they contemptible. I could write legibly; could spell very nicely. At first I had been compelled to print my writings. I would take paper, and cut and bind into miniature volumes, print my stories and poems therein, and delight my little friends by reading them to them. I was pleased with their applause; pleased to hold my generally noisy auditors spell-bound to listen. This was ambition, and not ignoble in kind, for I was not long satisfied with my efforts. Books, written with zest, would soon revolt my growing taste, and were consigned to the flames. Sometimes I would have quite

a library of my nicely-printed books, which I would review now and then, and really weep to find them so poor. Then I would write another, and exclaim: "Now, this is a good, pretty book, and I will keep it," but I outgrew my work, and to the flames it went. The sight of a library of books distressed me; I considered how many books the writers must have destroyed before they would be willing to keep so many.

STINTS.

Puritan children were rigidly held to a routine of duty varying little from day to day. First, every child was out of bed and dressed by rise of sun, at all seasons. Ablutions many and often were in order, for my mother believed in the bath, and the shower-bath at that, to be used at least once in the week. At my grandmother's this thrilling and breath-taking operation was considered a cruelty, and remonstrated against in my case, I being thought delicate. Every child was carefully inspected by the mother's eye, to be sure that no rents were to be found, and no strings or buttons missing. We all knelt in the nursery at prayers—the Lord's Prayer. It was a pretty sight, a family of six to eight children at the breakfast table, each one bright, and white, and nice to the last degree.

We appeared after breakfast before my mother, and took what was called our stint, which was an amount of knitting or sewing to be done through the day, whether we went to school or not. This stint was exacted from the time I was four years old till I was in my teens, and as there were three and four girls in the family, a considerable amount of linen was made up by us. Later in life I learned that this unvarying toil was bad for me, as I became afflicted with a "busy devil," that would not let me rest. I could not be idle, even when I would. I must have work, reading, writing, when others were at play. In this way I have done much for the poor, which otherwise I might not have found time for. I have passed hardly an idle hour in my whole life, and

have rarely been disabled, having never had any organic disease.

DUTY.

In doing my stint my strong early sense of responsibility manifested itself. I never on any occasion permitted anything, however tempting, to divert me from this duty. My mother was not exacting, but it being a thing enjoined me was enough, and I allowed nothing to distract me. I used to be greatly distressed to see my mates eager at their play and their task unfinished, while I, like a little machine, sat with busy fingers till all was done. I would often, after completing my own work, take up my sister's and do it, rather than have her fall under blame. Once, however, I observed she not only allowed me to do this, but on occasion expected it of me, at which I was greatly indignant, and utterly refused to help her, from an instinctive feeling that I was injuring my dear sister by fostering meanness and selfishness in her; but I went away and prayed God to help her and forgive me for being angry.

Duty before pleasure thus became the law of life with me. Sometimes I have thought with what talents I may have possessed I might have achieved more but for this inexorable law in all my members. Responsibilities, however incurred, however repugnant, must be redeemed at any cost.

WAS I PECULIAR?

I do not think I was, for I believe that the selfishness and indifference of parents have the effect to obliterate essential lines in the character of the child. Worldliness would stretch them all upon a Procrustean bedstead, and a strong will reduce to the desired form all outstanding shades.

My mother recognized the bent of my mind, and her strong Puritan proclivities rather inclined her to foster my tendency to something akin to asceticism, especially while I was an infant in years. She read a great deal herself, and was

pleased at my inclination in this way. With my doll in my lap, my needle in hand, and book beside me, I troubled no one, made no noise nor litter, and was no trouble, except in asking questions, with my childish threat when unanswered, "I will remember it as long as I live, till I do know."

My mother had a prodigious memory. She never forgot anything. She could recite the whole New Testament, all the Psalms and Prophecies, much of the Book of Job; indeed everything poetic in the Bible;—thus she expected much from us children, and was annoyed if our memory proved treacherous in any way. Dullness irritated her, and Aunt Beckey said to her, "Sophy, in your eyes dullness is the unpardonable sin."

I do not think I was peculiar. I had a strong self-consciousness, and could not bear to abandon a train of thought, and used to sort of threaten to "keep on thinking till I could understand," whereat people laughed.

Often and often, I, a child of less than half a dozen years, have risen from my bed, and, standing at the window, have gazed at the silent stars (I did not much like the moon), my poor little brain seething with thoughts too mighty for me. My mother sometimes found me thus, and would put me into bed with a sigh, but did not kiss me. I wanted the kiss, which I dared not ask for, and remember sometimes I felt in consequence a foolish pity for myself. But my mother was wise in this and many other ways to counteract my excessive sensibility.

SENSE OF THE BEAUTIFUL.

To this day I can not fully understand the exceeding pleasure I experience from the shape as well as the aroma of the rose and the lily. As a child I was comparatively indifferent to other flowers. The odor of the hyacinth, honeysuckle, lilac, and all others of pungent sweetness, affected me to faintness. I have often fallen into a swoon from no other cause. The rose and the lily stand purely apart to the senses correspond-

ing to some archetype yet to be revealed to us. So strong was this impression of pure loveliness to my mind that I could not bear to see those flowers cast aside and trodden upon.

Later in life I have been pleased at having strangers spontaneously present me lilies, as once did a beautiful youth in Broadway, who bowed and said, "Acceptez," with a lovely blush. In my novel of "Bertha and Lily," in which I wished to delineate an ideal character, though one stained, I made use of several of my experiences in this way.

Of personal beauty I had an instinctive admiration. Children devoid of beauty pained and distressed me. Deformity filled me with something akin to terror, for in my childish theology I thought somebody had been wicked, or such a thing had not been. I disliked black eyes and black hair. My sister's face pleased me, except I thought her upper lip a trifle too short; but then her nose was just right, and her eyes wonderful, with such a sweet smile. Everybody looked common and unhandsome beside my mother.

IMPERSONALITY.

I used to gravely discuss like a little casuist the proportions of evil-doing, and how some might do one way and some another, and yet God would love them both. He would not expect children to do just like me, for somehow I could not stop thinking about things, and wickedness was worse in me than in them. Other children might do as my sister did, who was quite perfect, but I was a little different, and perhaps an idiot about some things.

There was one in the neighborhood with bleary eyes and slovenly mouth, who was a misery to me. I never for a moment felt that I had anything akin to her; but as I was a little different from my sister and others, I could not define wherein the mental difference consisted, and once quite shocked my mother by asking "if I had not had good care I might not have been like her."

It will thus be seen that children need a great deal of help in solving their mental problems. To incur paternity is to incur the responsibility of not only training, but of comforting the misgivings of the child. They are called dull or irritable when the only thing required is that they should be revealed to themselves. Their heart questionings, their perilous misgivings are as real to them as to children of a larger growth. Mothers should merge all considerations into the interests of the household, most especially to the vital claims of the child.

Had I written any great poem, I am

sure I should have traced its origin to the days of my childhood. I read Milton so early that other poets dwindled into insignificance. I was magnetized from the first by the personal greatness of the man, and believed, as he did, that the true poet must be the man himself. Had Milton written nothing but the great sonnet upon his own blindness, he had done the work of others, and more, as a poet. Shakespeare was an aftergrowth to my mind. Till I was fifteen years old I had not read a single play of his, and doubt much whether I should have enjoyed the reading.

ELIZABETH OAKES SMITH.

THE YOUNG FOLKS OF CHERRY AVENUE.

CHAPTER XI.

HOW THE INVALID SPENT HIS TIME.

TAL slept well that night, but daylight revealed an eruption on his face and hands which told unmistakably that it was measles.

"Oh, dear me!" said he, ruefully looking at the red dots on his hands, "but, Auntie, must I stay in when I feel just as well as ever?"

"Yes, my boy. Most people are required to go to bed when they have your complaint, and take sweat-medicines, but you won't need such treatment, and will soon be over it."

"Well, I 'spose I'll have to grin and bear it—anyway I shouldn't want to go out and show myself with this red face. When will the spots get off, Auntie?"

"In three or four days they'll be pretty much gone, I think."

"Oh, dear, and I knew my piece so well; I could speak it right off. I wonder who'll do it now. There's Dave Hanford, I guess, could, but he said he'd rather look on."

"I am sure they will miss you, Tal. But what do you want to do after breakfast?"

"I'd like to read my library book—but

I can't do that, 'cause mamma said I must not use my eyes much now."

"I will read some to you, and Clara will too."

"Thank you very much, Auntie. There, I just thought I'll have to fix up my fish-lines so as to have 'em all ready, and I've been thinking a long time I'd like to make a windmill for the chicken-house, if you'd let me whittle here, Auntie?"

"Yes, my dear boy, you can lay down a newspaper on the carpet, and that will catch the chips."

"I've been wanting and wanting to go about that windmill ever since I saw one over at Will Halsey's, and somehow, Auntie, I couldn't find time. Now I'll have plenty, and I'll make a first-rate one. Horace will get me the wood, and I'll commence it this afternoon. I think it's real fun to be making things, don't you, Auntie?"

"Yes, it is a pleasure to be occupied with things we like to do."

"I'll paint the cross pieces, that the wind turns, you know, with red and blue stripes. I've got a good deal of those paints you gave me last birthday in a

box, Auntie, and that'll make it look nice, won't it?"

"Yes."

"Ha, ha, ha, there's Edith singing, 'Come, come away,' and makin' noise enough. I guess she's forgotten all about catchin' the measles she was so dreadful afraid of yesterday. Well, I shouldn't

"That's funny, Auntie. I don't see how any one who's sick can do that."

"Why, there are some persons who are so patient and cheerful and grateful, that it is a privilege to wait on them and talk with them."

"That's what mamma often says of Uncle Philip."



TAL RECITING HIS PIECE.

want her to have 'em anyway. It isn't so nice to be sick ever so little if you must stay in the house; and then, Auntie, the worst part of 't all is, somebody's got to be waiting on you, and that makes so much trouble, don't it?"

"Yes, my little philosopher, sickness always makes extra work, but sometimes we find a sick body who seems to make home really pleasant."

"Yes, Tal. Oh, how we did miss him after he died. Everybody enjoyed attending to his wants, although for over a year he was almost helpless."

"There's Jip. Can't he come up here, Auntie?"

"Jip, Jip! See how he wants to come." Miss Manley nodded.

Jip was a small Scotch dog belonging to the family, and just then trotted in

front of the house, and was sniffing about when Tal caught sight of him. He looked up, wagged his tail, and whined when he heard the boy's voice, and then ran back as if to find an entrance. A minute or two later his light bound was heard on the stairway, and then, pushing the unlatched door open with his nose, he tripped into the room, and, running to Tal, who was sitting on a stool, laid his head on the boy's knee, and peered up in his face with an expression of satisfaction.

"Oho, old fellow, they let you up—they knew you wanted to see me," cried Tal, stroking the crisp head. "I'm going to have some breakfast soon, and you'll have a share too. I guess it's coming now, for the dishes are rattling."

Clara, in a moment or two, appeared with the young invalid's morning ration, and he at once addressed himself to the pleasant task of eating, for his appetite "was big enough," he said, "to put away half a dozen such breakfasts as that."

"Eat very slowly, then," replied Clara, with a laugh, "and make it seem a big meal. When things taste very good, Tal, you should be a long time chewing, so as to make them last as long as possible."

"Ho," exclaimed Tal, his mouth already filled with cream-toast, "that's just the time I feel like gobbling 'em down the fastest. But, sister, what do they say about my being sick at school?"

"Edith says Miss Julia and Miss Grace are both sorry to hear of it, and they hardly know what they are going to do without you."

"There, what do you think of that, my little knight?" remarked his aunt, looking upon him with an expression of pride.

"It's too bad I can't be there, but I'm kind of glad somehow, too," answered Tal, slowly looking meanwhile into the bowl of his spoon. "It's pleasant, Auntie, to know that people like you, isn't it? and that you can do something for 'em which they'll be glad about."

"And one of the ways to find out whether you are of any use to people is

to be sick so they can not have you, when you may be wanted. But, Tal," continued Clara, "don't let this make you feel too important."

"I sha'n't, Clarie, I can tell you, so you needn't preach."

"I shall not, little brother mine. You like kind words, approval, very much, but in this instance, I'm sure, they will not hurt you, for you deserve them."

And they did not, but had a very cheering effect upon the boy's feelings, so that he bore his captivity that day and the remaining days of his illness with much good nature, finding in the windmill and other things occupation to his taste. His playmates of the Avenue sent messages by Edith, or telegraphed merry thoughts by attitude and gesture, if they saw him at the window when they passed. Truman came every afternoon and gave him an account of what was new in school affairs, especially the funny incidents, so that Tal almost began to think that it wasn't such a very bad thing to be sick after all.

On the day of the school entertainment it was a little hard, however, for him to see Clara, Edith, Paulie, and his aunt go out of the garden on their way to the school-room. His eyes had been rather weak for a day or two, the usual effect of his illness, so that he could not be permitted to use them that morning as much as he wished, and that renewed somewhat the sense of disappointment. However, he examined the windmill to see whether it would work nicely, touched up with ink the eyes and whiskers of the wooden man who turned the crank, shelled a quantity of lima beans for dinner, and recited the piece he was to have spoken, before a very attentive audience, consisting of his mamma, Nellie, the servant-girl, and Jip:

What think you, friends, is my true name?

Guess quickly, while I speak—

If you can't do it quickly, then

I'll think your whimsies weak.

I think the world is very funny

In half a thousand ways,

It makes me laugh, laugh all the time,

On bright and cloudy days.

A week ago Sol Jones and I
Were going down the street,
When who should pass, but deacon Green,
Whose chin is hard to beat.

Said Sol, "Just look at him, old fel.
Consider, what a phiz!
It's longer, I will bet you, than
The life which here is his."

"Oh, you wicked, careless loafer!"
Said the deacon, hearing him;
"Tell me, rascal, what is that for,
Or I'll thrash you with a limb."

Then said roguish Sol, a-grinning,
"Once in Sunday-school you said,
'Each man's life is but a span breadth.'
From the Bible it you read.

"If that's true, and I don't doubt it,
When I look upon your phiz,
It must be than your life longer,
For a double span it is."

Then the deacon stood astonished,
With a grim and funny look,
And his chin dropped an inch lower,
While my sides with laughter shook.

Sol and I ran in an alley,
Where we roared and rolled about.
Deacon said we both were loony—
Time you found my riddle out.

Great applause followed this effort of elocution. Jip wagged his short, bushy tail with vigor, and barked his approval.

"Ach der poy, der poy," cried Nellie, "he must be a boet, a real boet!"

"I didn't write it, Nellie," said Tal, "but I found the story of the deacon in a paper, and Horie wrote the poetry. You ought to hear Tru's. I think it's better than mine; that is, the story part of it, and it's just the thing for him."

"You mean it suits his voice and nature, I suppose."

"Yes, mamma."

"Well, my dear boy, you have done so much to-day, working at this and that, and entertaining us, that you must feel tired, so I think you had better take a little nap. In an hour or so they will be home from the entertainment, and then you will have so much to hear that it may not be well for you unless quite refreshed."

"All right, mamma. Please leave Jip here, and we'll have a nap together."

So Mrs. Manley and the other human member of Tal's late audience withdrew from the room, and the boy stretched himself comfortably on the lounge. Jip sprang up and coiled himself at his master's feet, and soon Tal had gone to "the land of silence and dreams." CLARE.

HIS SECOND CHOICE.

"**H**ESTER!" exclaimed Aunt Susan, ceasing her rocking and knitting, and sitting upright, "do you know what your husband will do when you are dead?"

"What do you mean?" was the startled reply.

"He will go and marry the sweetest-tempered girl he can find."

"Oh, auntie!" Hester began.

"Don't interrupt me till I have finished," said Aunt Susan, leaning back and taking up her knitting. "She may not be as pretty as you are, but she will be good-natured. She may not be as good a housekeeper as you are, in fact I think she will not, but she will be good-natured. She may not even love him as

well as you do, but she will be more good-natured."

"Why, auntie——"

"That isn't all," continued Aunt Susan.

"Every day you live you are making your husband more and more in love with that good-natured woman who may take your place some day. After Mr. and Mrs. Harrison left you the other evening the only remark made about them was, 'She is a sweet woman.'"

"Ah, auntie——"

"That isn't all," composedly resumed Aunt Susan. "To-day your husband was half across the kitchen floor bringing you the first ripe peaches, and all you did was to look and say, 'There, Will, just see your muddy tracks on my clean floor. I

won't have my clean floor all tracked-up.' Some men would have thrown the peaches out of the window. One day you screwed up your face when he kissed you because his mustache was damp, and said, 'I never want you to kiss me again.' When he empties anything you tell him not to spill it, when he lifts anything you tell him not to break it. From morning till night your sharp voice is heard complaining and fault-finding. And last winter, when you were so sick, you scolded him for allowing the pump to freeze, and took no notice when he said, 'I was so anxious about you that I could not think of the pump.'"

"But, auntie——"

"Hearken, child. The strongest, most intellectual man of them all cares more for a woman's tenderness than for any-

thing else in this world, and without this the cleverest woman and most perfect housekeeper is sure to lose her husband's affection in time. There may be a few men like your Will, as gentle, and loving, and chivalrous, as forgetful of self, and so satisfied with loving that their affection will die a long, struggling death; but, in most cases, it takes but a few years of fretfulness and fault-finding to turn a husband's love into irritated indifference."

"Well, auntie——"

"Yes, well! You are not dead yet, and that sweet-tempered woman has not yet been found; so that you have time to become so serene and sweet that your husband can never imagine that there is a better-tempered woman in existence"

—*Advocate and Guardian.*

THAT BEDROOM I

WHAT about it? Well, a good many things might be said. It ought to be a place for quiet and refreshing sleep. But it is not such a place. Restless tossings with troubled dreams are there. Morning after morning finds the sleeper weary, listless, and dumpish. He wonders why it is so, and we wonder, too. But our wonder is that he does not make it a matter of thought, and learn how to sleep as he should. When anything is wrong with us, there is a cause for it. As a rule, that cause is not so obscure as to require the aid of a modern scientist, with all his jargon of incomprehensible technicalities covering his still more incomprehensible ideas, or want of ideas, to ferret it out.

To exorcise the demon of restlessness is not bedroom work alone. He who seeks the comfort of sound, refreshing sleep must properly control his habits by day as well as by night.

So much may be said about sleep in general that the bedroom is in danger of being forgotten. After all, that particular bedroom does not differ materially from many others of its kind. Twelve feet long, ten feet wide, and seven

feet six inches high, it has a capacity of nine hundred cubic feet. It has a door opening into the next room, and another into the hall leading to the stairway and hall below. One large window, with sash supported by pulleys and weights affords, or ought to afford, air and light from outdoors. The fourth wall is solid. The bed stands in a corner, with the head to this wall. Two walls confine the exhaled air about the head of the sleeper. The bed rests on springs, with mattress and feathers above. The breath of the sleeper is doubly foul from late and full suppers, and from ulceration of the respiratory membrane, caused by chronic catarrh. In such a case good ventilation is more than usual a necessity. Is it attended to? Take a peep at that room. Doors closed—windows carefully closed to keep out night air. Any good work on ventilation can be consulted to ascertain how long nine hundred cubic feet of air will supply respiratory material in such a room for one occupant. And yet that is a nice bedroom, genteelly furnished. If good sleeping is not done there, the failure is less chargeable to the room than to its management. How many cases of the kind have you met with, reader?

J. S. GALLOWAY, M.D.



WHAT IS A COLD?

TO enjoy life, one must be in good health; and to remain free from disease is the desire of all. Yet there are some ailments which do not interfere very much with the pleasures of life, and therefore are not dreaded in consequence—nay, more, they are frequently treated with neglect, although in many instances they are the precursors of more serious disorders, which may in not a few cases have a fatal termination! How often, to the usual greetings which one friend exchanges with another, is the reply given, "Very well, thank you, except a little cold." A little cold, and yet how significant this may be! In how many cases do we find a "little cold" resemble a little seed, which may sooner or later develop into a mighty tree! A little cold neglected may, and frequently does, prove itself to be a thing not to be trifled with. Let me, then, pray my readers to remember that small beginnings in not a few instances have big endings, and this especially where disease exists. Let us, then, consider what is a common cold.

In the first place, we must be paradoxical, and affirm that it is not a cold at all. It is rather a heat, if I may so express myself; that is, it is a form of fever, but, of course, of a very mild type when it is uncomplicated by other diseases. It is certainly in the majority of instances due to the effects of cold playing upon some portion of the body, and reacting upon

the mucous membrane through the intervention of the nervous apparatus. What is called a cold, then, is in reality a fever; and, though in the majority of instances it is of such a trivial nature as to necessitate few precautions being taken during its attack, yet in some cases it runs a most acute course, and may be followed by great prostration. Even when the premonitory symptoms of a cold are developing themselves, when, for example, what a medical man calls a rigor, or as it is popularly designated, a shivering is felt, when we would naturally suppose that the animal temperature is below par, it is at that very moment higher than the normal, thus showing the onset of fever.

Before going at once into the symptoms and nature of the disease under discussion, it will be advisable to dip a little into that most interesting department of medical science, physiology, and, indeed, without doing so, it would be quite impossible for the majority of my readers to understand the manner in which cold acts in producing the inflammatory condition of the mucous membrane of the nose, or, as it is called, the Schneiderian membrane, which inflamed condition constitutes a cold in the head. It will be necessary to understand what a mucous membrane is, what its duties are, and how these duties are performed, before entering upon a description of a disease attacking it. To take the mucous

membrane of the nose as an example. We find that it is a membrane spread out over a very large area, lining as it does a great many undulations caused by the arrangement of the bones composing the walls of the nostrils, so that a very much greater surface is required to be traversed by the air entering the lungs through the nose—the natural passage—than is required by the actual length of the canal. The object of this is obvious, when we take into account the fact that the temperature of the air is usually either below or above that of the human body, and that it is almost invariably loaded with particles of matter which would irritate the lungs did they find access to them.

The tortuous passage of the nose thus tends in the first place to equalize in some measure the temperature of the atmosphere inhaled with that of the lungs; and, in the second place, the mucus which is secreted by the Schneiderian membrane, being of a tenacious nature, tends to attract and ensnare the impurities which the air may contain. We thus see that the nostrils act as a filter to the air taken in by inhalation. If we observe any mucous surface, we can not help remarking its deep-red color, this being due to the close network of blood-vessels ramifying on its surface. In consequence of this accumulation of minute arteries and veins through which warm blood is constantly flowing, a pretty high temperature is always maintained in any cavity lined by mucous membrane. There is, therefore, little difficulty in understanding how important a part the nostrils play in preparing the air for its entrance into the sensitive structure of the lungs. But the nostrils do not only temper the air—they also yield to it an amount of moisture which renders it still more bland and less irritating. We see, then, that the functions of the nostrils as regards the atmosphere inhaled are threefold: 1. In equalizing its temperature; 2. In moistening; and, 3. In filtering it. The latter function is materially aided by quite a forest of minute hairs which guard the entrance to the passages.

Having noticed how distended the blood-vessels of the mucous membrane naturally are, it will not be difficult to understand how slight a disturbance of the balance of blood-supply will be necessary to produce congestion or inflammation of the structure, and such is really the case; and it is because of this that people who have what is called an irritable mucous membrane are so susceptible of cold. They have, in fact, a chronically congested mucous membrane, which, however, is usually associated with and dependent upon a disordered digestion. Yet, notwithstanding these facts, a cold is not produced by cold air acting upon the surface which suffers. It is quite true that there are individuals with peculiar idiosyncrasies who take catarrh when they smell certain substances. For instance, many can not go into a room where powdered ipecac is exposed without immediately catching catarrh in the nasal passages; and there is reported the case of a man who could not smell a rose without being affected in a similar way.

We must now go a step further before we can understand the *modus operandi* by which a cold in the head, or any other region, is produced. It has been shown that one of the functions of a mucous membrane is to secrete mucus. But what is it that makes the secretion vary in quantity? Well, an irritant applied directly to the surface may produce an excessive flow, and this superabundance of mucus is thrown out by an effort of nature in its endeavor to shield the delicate membrane and remove the irritant; this may happen also when there is an excessive amount of blood in the vessels, which is the case when congestion exists, the distension of the blood-vessels acting as an irritant, and supplying in greater amount the fluid from which the mucus is extracted, thus tending to excite the secreting power to greater effort. Thus we have an explanation of the excessive discharge in catarrh of the nose. But, when the direct irritant is removed, the unnaturally abundant discharge ceases. Not so, however, when

the superabundance is due to the effects of cold; for, in the latter case, a diseased condition is set up, which will only disappear when the effects of the exposure upon the nervous system have passed away.

Having demonstrated that cold is not produced by the action of cold air playing upon the part affected, but that, on the contrary, it is an effect of cold acting upon a distant part of the body, it will be necessary to explain how this is brought about. If a person sits in a draught of cold air, and this draught is directed upon the back of his head, the chances are that a catarrh of the nasal passages will result, and this is produced by what is called reflex action of the nerves. Here it will be necessary to diverge a little, and explain what reflex action is. It must be understood, then, that there are numerous nervous centers connected with the spinal cord. These nervous centers send filaments of their nerves to various portions of the body. For example, a nerve-center may be placed alongside the spine in the neck, and from this point nerves may be distributed to the back of the head and the mucous membrane of the nose. One important function of these little bodies is to control the supply of blood to different surfaces and tissues and organs. This is done by a system of minute nerves which are distributed on the arteries, by which the vessels are kept in a state of contraction. Now, if these nerves are severed from the main trunk, the blood-vessels immediately expand to the full extent of their caliber, and congestion is the result; or, if these nerves are paralyzed, the same effect is produced. Sometimes a very slight shock produces a temporary paralysis of these minute nerves, when a rush of blood takes place into the arteries, of which blushing is a good example; but the nerves soon recover their control over the blood-supply, and the blush passes away. Then, again, the shock may produce quite the opposite effect; this may be so severe as to cause such extreme contraction of the blood-vessels that a deadly pallor per-

vades the face, as, for instance, in severe shock from fear. This, however, is caused more by the effect of shock acting upon the nerve-centers which supply the heart with motor power.

But let us suppose that one extremity of a nerve arising from a particular nerve-center is irritated; this is communicated to that center, which is affected thereby, it may be slightly or more severely. The irritation may be so great as to prostrate for the time being the nerve-center, and, in consequence, all the nerves arising from it are thrown into a state of inaction. This is called the reflex action of that nerve-center, because the effects of the irritant applied to one part of the body are thereby reflected to other parts. Instances of reflex action may be seen frequently in every-day life. Take, for example, the action of the eyelid when an object threatens to enter the eye. The retina perceives the object advancing; this is telegraphed to the nervous center supplying the muscles which open and shut the eyelids, and immediately a message is sent back to the eyelids to shut, and exclude the particle of matter that threatens to enter the eye. All this is done so quickly that it is hardly possible to realize that there is time for reflex nervous action being brought into play.

Another instance of reflex action, but this time influencing the secretions, may be cited. Who is not familiar with the effect of a savory smell, or the sight of some luxury, upon the salivary secretion, so that, to use a common expression, "the mouth waters"? In the first, the olfactory nerve is the means by which the impression is conveyed to the nerve-center; in the other it is the optic nerve which is the transmitting agent; but in each case the impression is reflected to that nerve controlling the salivary secretion, with the effect of producing an increased flow of saliva. We thus see that the secretions can be influenced by one nerve conveying its impression to another whose filaments take origin in a common center.

Now, to come to the subject more di-

rectly under consideration in this paper, we must comprehend how cold acting on one part of the body produces catarrh of the nasal mucous membrane. Exposure to the most intense cold for a lengthened period will not produce this effect. Indeed, we find it invariably the case that severe frost in winter is, so far as catarrh is concerned, the healthiest weather we can have. During the prevalence of frost, as a rule, colds are at a minimum. The system here shows its power of accommodating itself to the circumstances surrounding it, and actually benefits by the prevailing low temperature. Let us, however, suppose a person to be sitting in a room the temperature of which is, say, 70 deg. Fahrenheit, and that a current of cold air is rushing in at an open door or window, and playing upon the back of his head, or it may be on his legs or feet, and the probability is that he will "catch cold," and in nine cases out of ten this cold will be a catarrh in the head, and, what may appear more remarkable still, only one nostril will at first be affected. Now, if the catarrh was due to the inhalation of cold air, both nostrils would suffer; but it is not so, for, as each side of the body is supplied by its distinct set of nerves, so only that side is affected through which the reflex disturbance has been transmitted. The *modus operandi* is the following: The draught of cold air, acting, we will suppose, on the back of the head, conveys through the sympathetic nerve, which ramifies on the scalp, a shock to the nervous center from which these nerve-fibers proceed; but we must understand that this nerve-center sends its filaments to other portions of the body, and so the shock which this center receives by one set of nerves is reflected by another set to some surface quite remote from that primarily acted upon, and in this way a temporary paralysis of the nerves supplying the blood-vessels of the mucous membrane of the nose is brought about. In consequence, these vessels become dilated and engorged, and the shock which has brought about this congestion continuing, dis-

turbs the equilibrium of the blood-supply, and so an inflammatory condition is set up. When this exists the blood-vessels are enormously distended; consequently, an excess of blood passes through the part, the little cells which secrete the mucus being thus excited and working much more rapidly than when in health. In this way the enormous discharge of mucus, which accompanies a cold in the head, is accounted for.

Another effect of this irritation of the mucous membrane is sneezing, which is an effort of Nature to restore the equilibrium of the nervous center by another kind of reflex action. Sneezing in catarrh is a method Nature adopts to stimulate the prostrate nervous center, and thus enable it to reassert its proper control over the blood-supply to the part; indeed, it will be found that the effects of being exposed to a draught of cold air are often completely destroyed by a succession of sneezes. Of course, Nature does not always immediately succeed in these efforts; but, when she does, the shock from which the nervous center suffers gradually passes away, and the blood-vessels again come under the control of the little nerves which regulate their caliber, and so the catarrh disappears in a few hours, or at most in a few days. It sometimes happens that the shock from the cold air acting upon the nervous center is of such severity that the consequent inflammation is intense enough to check the secretion of mucus altogether, and in consequence the mucous membrane is dry as well as inflamed, and the suffering very much intensified.

So far, we have only glanced at a cold in the head which passes away in a few hours, but this is not always the happy termination. There is a peculiar tendency which inflammation possesses of not leaving off where it commenced, but of invading the tissues in its immediate neighborhood, and more especially when the tissue is continuous with that primarily attacked, as is the case with the mucous membrane of the air-passages. A cold may commence in the head, and

rapidly spread by what is technically termed continuity of tissue into the chest; and so what at first promised to be only cold in the head may terminate in an attack of bronchitis, or even inflammation of the lungs.—“A MEDICAL MAN” in *Chambers' Journal*.

HEALTHFULNESS OF FRUIT.—Dr. B. F. Dunkley has made public some interesting facts derived from his own experience in regard to the healthfulness of fruit. When he first went to Dunksburg, Mo., thirty years ago, no orchards were there, and few vegetables were raised. The diet of the people consisted of corn bread, bacon, and a little black coffee, without sugar or cream. Inflammatory disorders, especially such as relate to the lungs, brain, bowels, and heart, prevailed in the winter, and were often attended with fatal results. Malignant dysentery, the pest

of armies shut off from fruit, afflicted many of the inhabitants in the summer and fall, and in the spring it was not uncommon for whole families to be sick with scurvy, the disease so fatal to sailors on long voyages before canning fruit was discovered. Dr. Dunkley told his scurvy-stricken patients, to their great surprise, that their blood needed no medicine other than vegetable acids, and he ordered them to eat oranges, lemons, and sheep sorrels. Now fruit and garden vegetables are abundant in that locality, and the diseases are not of so malignant a type, and yield much more readily to treatment. When the orchards first began to bear, Dr. Dunkley noticed that those children whose fathers had planted apple-trees eat plentifully of the fruit both green and ripe, and enjoyed most excellent health, while children living where no apples-trees grew, were sickly.

THE HYGIENE OF RAILWAY TRAVEL.

THE constant voyager by rail is supposed to encounter many risks, and whenever a frightful accident occurs, a railroad slaughter—and unfortunately these are not rare—the people are shocked and alarmed for a day. This feeling quickly passes off, however, even if the fact is not suggested that “statistics prove that only one in eleven millions is killed of all passengers by rail.” The risk of sudden death is very trifling compared with the inevitable injury sustained by every individual who has to make a long journey by rail. The traveler really takes his life in his hands whenever he sets out. The danger is less from accident than design, less from misplaced switches than from misplaced ventilators, less from bad roadbeds than from bad air. We are not now speaking of the barbaric nuisance of having to smell, breathe, and bathe in the smoke, soot, and cinders pouring from the engine, which, until some other method is found to obviate the difficulty, ought to be in the rear of the train in-

stead of the front. Of all conductors, brakemen, porters, and passengers, probably not one in the thousand understands the vital importance of pure air, nor indeed do they know what pure air is. To the conductor's mind, as to that of the majority of his passengers, the comfort of the car depends upon the temperature—it is a matter of warmth or cold entirely. A warm car, or more commonly a *hot* car, is the one desideratum, albeit the warmth is the product of animal heat from fifty bodies, many of them not very clean, and of exhalations from fifty pairs of lungs, with little chance for the escape of vitiated air or the ingress of pure air—a condition of things tending to produce a state of “blue blood” not contemplated by the *haut ton*. When the life-current comes up to the lungs to be changed from blue to red, to throw off there the carbonic acid and take in oxygen—and the whole volume of blood makes this circuit once in every half minute, or over one hundred times an hour

—if there is a lack of sufficient ventilation in the car, or sitting-room, or sleeping-room, the blood can not undergo this vital transformation. It goes back to the heart, and from thence is pumped through the arteries from crown to sole, throughout the complicated meshwork of the capillaries, in a state entirely unfitted to perform its functions of supplying oxygen to all parts of the body, of carrying off the waste particles resulting from the "never-ceasing death" of the atoms composing the body, and of replacing these with fresh, living atoms, or, as it is usually put, "repairing the waste." As we have said, if the car feels warm the heedless passengers will not complain, although their heads may ache, and the close of the day's journey finds them more exhausted than they would have become from working in the open air an entire day without food. They "can't account for it." It "don't agree with them to travel," and "a day's trip uses them up." This is the rule rather than the exception, and two wrong conditions contribute to this result. The first is excessive eating; for food should be taken in proportion to the amount of exercise; and since it is not practicable, while traveling, to exercise as freely as when at home, attending to work or business, the amount and variety of food should be

correspondingly diminished. The dietary should be very plain, mainly bread, with a large proportion of fruit—the latter taken at morning and noon, not at night. Unquestionably two meals only would be far better than three. Secondly, the air being impure, the right sort and quantity of food can not be transformed into pure blood, because insufficiently oxygenated in the lungs.

For want of the very air shut out, the passengers "feel chilly" often when the temperature is above summer heat. Warmth is life; cold is death. The circulation of the blood is nature's hot-water apparatus, that warms the body and maintains it at a temperature of 98 degrees F. in winter the same as in summer; and unless the blood is replenished by about the right proportion of food, and kept pure by its half-minute visits to the lungs, "creeping chills" may be expected; and in proportion as these wrong conditions are continued, they may go deeper and deeper, until the final chill of all comes. A chill is a partial death, and death itself is but a perpetual chill. A corpse remains cold in a temperature of 100 degrees above zero, while a robust man in prime condition remains warm in one of 10 degrees below. The one has no circulation; the other has his arteries filled with the vital fluid, pure blood.

C. E. PAGE, M.D.

BREAD MOLD IN THE MICROSCOPE.

MOST of us are familiar enough with the greenish film which makes its appearance upon bread that has been left a short time in a damp, close closet, even one night sufficing for the development of the minute vegetation. But few know how this vegetation appears when magnified by the microscopic lens. Our illustrations represent species of bread mold in different stages of development and different degrees of magnification.

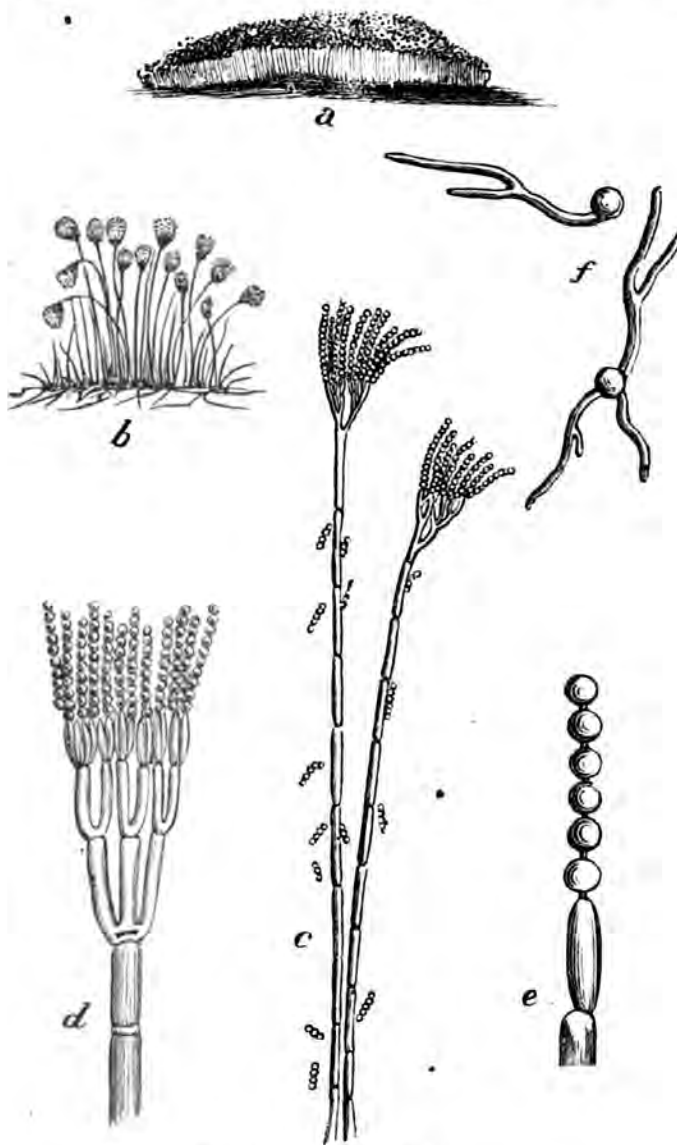
Bread mold belongs to the order of fungi known as *Hyphomycetes*, while the

genus *Mucedines* specially comprises the mold on food, the species which we are to consider being known as *penicillium crustaceum*. The group marked *a* is mold as it appears to the naked eye when full-grown; a thickly clustering, moss-like development, whose presence is unpleasantly evident to the nostrils as well as to the eyes.

Shown by a microscope with a moderate magnifying power, this growth appears to be composed of minute plants, the manner of its growth being by the

ramification of minute filaments, called mycelium, and from these, here and there, there arise thread-like stems which branch at the top and throw out rows of spores like strings of beads. As these

enlarged at *d*, where the head of the fruit stem only is shown, magnified 620 diameters. A single chain of spores is still more enlarged at *e*, and the spores are seen to be spherical bodies or cells, but



FORMS OF BREAD MOLD.

spores ripen they fall, as shown at *e*, where the ripened spores are represented as dropping from the plumed top of the stem. This figure is magnified 420 diameters, or over 170,000 areas. This fruit-bearing stage of the fungus is still more

slightly attached to each other. As they ripen this slight attachment gives way, and the very minute spores are free. They float hither and thither in the atmosphere, and when they fall upon a favoring substance, like a loaf of bread

or a fragment of food, they at once sprout (see *f*), and thus new patches of mold are quickly formed, and spread so fast that the substance is quickly enveloped in the coating.

But whence comes the mold which so quickly attacks food left exposed in a damp atmosphere? The minute spores are so numerous and so light that they are carried everywhere in the air. The seed (as it were) of the fungus being thus ever present, it needs but the proper conditions of heat and moisture to develop the plants when a proper foster substance is exposed. These spores have been gathered from the atmosphere, and identified by microscopic examination.

Molds are only to be guarded against

by freeing the apartments and closets wherein food is kept from moisture. A dry cellar and abundant ventilation are as essential to the preservation of good food as to the health of the occupants of a house. Too many mansions, otherwise attractive and homelike, are rendered damp by being closely shut in by shrubbery and trees, or by having the windows too closely shaded by blinds or curtains. Opening the windows and admitting the sunlight will arrest the formation of mold upon walls. In cloudy, wet weather building a fire in the room and drying the air thoroughly will be effective. In damp cellars and the like, the fungus can be arrested by a free use of powdered sulphur, or by occasional whitewashing.

MAN'S NATURAL FOOD.

WHAT is the natural food of man? As an abstract truth, the maxim of the physiologist Haller is absolutely unimpeachable: "Our proper nutriment should consist of vegetable and semi-animal substances which can be eaten with relish before their natural taste has been disguised by artificial preparation." For even the most approved modes of grinding, bolting, leavening, cooking, spicing, heating, and freezing our food are, strictly speaking, abuses of our digestive organs. It is a fallacy to suppose that hot spices aid the process of digestion; they irritate the stomach, and cause it to discharge the ingesta as rapidly as possible, as it would hasten to rid itself of tartarized antimony or any other poison; but this very precipitation of the gastric functions prevents the formation of healthy chyle. There is an important difference between rapid and thorough digestion. In a similar way, a high temperature of our food facilitates deglutition, but, by dispensing with insalivation and the proper use of our teeth, we make the stomach perform the work of our jaws and salivary glands; in other words, we make our food less digestible. By bolting our flour and extracting the nutritive principle of various

liquids, we fall into the opposite error; we try to assist our digestive organs by performing mechanically a part of their proper and legitimate functions. The health of the human system can not be maintained on concentrated nutriment; even the air we inhale contains azotic gases which must be separated from the life-sustaining principle by the action of our respiratory organs—not by any inorganic process. We can not breathe pure oxygen. For analogous reasons, bran flour makes better bread than bolted flour; meat and saccharine fruits are healthier than meat-extracts and pure glucose. In short, artificial extracts and compounds are, on the whole, less wholesome than the palatable products of Nature. In the case of bran-flour and certain fruits with a large percentage of wholly innutritious matter, chemistry fails to account for this fact, but biology suggests the mediate cause: the normal type of our physical constitution dates from a period when the digestive organs of our (frugivorous) ancestors adapted themselves to such food—a period compared with whose duration the age of grist-mills and made dishes is but of yesterday.—L. OSWALD, in the *Popular Science Monthly*.

NOTES IN SCIENCE AND AGRICULTURE.

Photographs in Natural Colors.—

The announcement is again made that a process has been discovered for taking photographs possessing all the brilliancy and delicacy of the natural colors, and an exhibition of pictures thus naturally colored has just been held in London. According to the reports, the colors are produced by the action of light alone in the camera, and owe nothing whatever to the artist's brush. In the photographs exhibited, the coloring appeared to be quite true to nature, and delicate tones and shades were clear to the view. The flesh tint was exact to life, and full justice was done to gorgeous regimentals. The protruded tongue of a dog in one of the photographs possessed the exact color of nature. Some of the guests, says the *English Mechanic*, inspecting this collection, and not fully acquainted with the character of the latest invention, took it for granted that the work was done by skillful, artistic hands on ivory and other material, and could scarcely believe their eyes when informed that the color, as much as the form and outline, was produced by the light of day. Careful investigation, however, would then show that human handicraft was not in it; for there were touches and effects which Nature's pencil of light could alone accomplish. The contention is that photographs colored by artists, however clever, must be more or less "monotonous, hard, untrue to Nature, and to the originals."

The process was discovered, it is said, by a French scientist, but has since undergone improvement by the proprietor of the process in England. If the new system proves an unqualified success, the reward will not have been reaped without much labor in the past, for numerous attempts have been made to induce the sun-pencil to fix colors in the picture it draws in the camera; but chemical and mechanical difficulties have stood in the way. In the new process colors are said not only to be faithfully produced, but protected from the action of light by being passed through a boiling solution, of which gelatine forms the principal ingredient, and that some of the photographs so treated have been exposed for months to the sun without being in anywise affected by the ordeal. Unfortunately the process is yet unknown, as it is likely to be for some time to come.—*Manufacturer and Builder*.

New Compressed Air Locomotives.—

In the last number of the Swedish *Jernskötorel*, it is stated that a new compressed air locomotive has been invented and patented by R. Akerman, of Motala, Sweden. It is said that it will run twelve miles without requiring replenishing, and draw three loaded tram cars at a speed which can be easily regulated. At an experimental trial, which took place at Stockholm a short time ago, the engine was started with a pressure

of 900 lbs. to the inch in the reservoir, and when stopped in three-quarters of an hour's time, 600 lbs. pressure remained. The revolutions per minute were 112, and the total number of revolutions made was 4,960, which, if the engine had been running on a road, would have been equal to over eight miles traversed. This engine seems to outdo the one invented by Colonel Beaumont, with which, however, satisfactory results have also been obtained.

Faculty of Place in Birds and

INSECTS.—The wonderful accuracy with which the carrier-pigeon determines the direction of its distant home has long been a subject of remark. It is evident that they can not be guided by remembrance, for they will return directly from places never visited by them before. Mr. J. H. Fabre has suggested that there is an undefined (?) faculty, a kind of topographical sense, which enables certain birds and insects to find their way. This faculty is very well developed in certain insects. The sand-wasp, for example, boring its mine until a late hour of the day, closes the opening with a stone and then goes away to a distance, but the next day it can find its home again. *Bembex* also, one of the hymenopterous insects, which burrows in the sand, possesses the same faculty. Mr. Fabre has conducted a series of experiments with certain insects, in order to test their intuition in this regard. A number of female moths were marked for identification, inclosed in a box, and carried some distance from their nests. When released, they all went directly toward their nests. In another experiment, they were kept in the box all night, and released in the street of a town where they certainly had never been before. Each moth rose vertically, and directed its flight toward the south, where the nests were. Mr. Fabre, however, asserts that this peculiar sense of locality is totally absent in man, or that man has nothing analogous to it. This is a mistake, for on the contrary this faculty exists in man, although comparatively in an undeveloped condition, owing to the predominance of other and higher faculties. The woodsman, the hunter, the trapper, and the Indian certainly can find their way through pathless forests, where their more civilized fellows would surely be lost.

Cold vs. Magnetism.—

A recent investigation, conducted in the physical laboratory of Harvard University, has led to the discovery of the remarkable fact that intense cold can deprive magnetized steel bars of nearly all the magnetism which may have been imparted to them. The intense cold was produced by solid carbonic acid. This fact has an important bearing upon observations of the magnetic condition of the earth taken in high latitudes; for what appear to

be daily and yearly changes in the earth's magnetism may be due in large part to conditions of temperature which affect the magnets used in the observations. It also must be concluded that the molecular condition of steel is changed by great cold.—*Boston Advertiser.*

The Apricot.—A correspondent of the *American Farmer*—Mr. John Saul, the well-known florist of Washington—thus warmly and intelligently discusses this cousin of the peach:

"One of the most delicious fruits in cultivation is the Apricot, yet we find it in this latitude but little grown, and when cultivated, with very indifferent success. Before venturing a remark on its cultivation, let us inquire where it comes from, trace it to its native habits, and we shall then more likely find out its requirements. It is native of Syria, Asia Minor, Persia, and other countries having a warm, arid climate. In those countries we read of the Apricot growing freely and bearing profusely, quite as free as any of our ordinary fruits—the apple, peach, etc. It follows, that to cultivate this fruit successfully it must have a climate similar to its native home. Along the shores of the Mediterranean it succeeds well, but as we go north, success diminishes until we reach, say, the center of France, where it is still to be found as an orchard tree, but not with the success met on the shores of the Mediterranean. If an orchard is examined we shall find dead branches and occasionally dead trees, though not to as great an extent as in this country. Passing further on till we reach the latitude of Paris, when there we find it grown on walls, under glass, and requiring protection; likewise in Great Britain, though in the south of England, as in the vicinity of Paris, some of the hardier varieties will perfect their fruit as standards. The apricot succeeds well in South Africa, Australia, Southern California, New Mexico, etc.—all dry, warm climates. Need we be surprised when transplanted to the rich, moist alluvial soils of our valleys, that it soon catches the prevailing disease—*chills*? True, it may not show it in the same way as man, yet it is evident to any person going into an orchard in such localities and seeing the yellow appearance of the trees, gummed and dead branches—dead trees.

"It follows from the foregoing that to grow apricots successfully, a dry, sandy, warm soil, not over rich, nor yet the reverse, but moderate, is necessary. Occasionally we find trees in our city yards doing finely. Let us examine, and try and ascertain to what success is due. The trees had been planted close to the house, well sheltered, the roots most likely rooting close to the wall or perhaps under a brick pavement—dry and warm—approaching in a measure the conditions of their arid, sunny home, with just sufficient warm soil to nourish them. In such positions the tree will grow vigorously, continue healthy and bear abundantly. I have seen

many such trees in this city, and have seen them farther north—in the State of New York—in just such positions breaking down with the weight of their golden fruit. It follows from what I have written I attach more importance to having the roots in a dry, warm position, than I do to the position of the tops, though the latter should have all the benefits of our warm suns, and will be all the better if well sheltered."

CAPTAIN CORN.

CAPTAIN CORN, in the garden,
Straight and strong and tall,
No matter how high his neighbors grow,
He overtops them all.
With silken plume and bright green cloak,
He really cuts a dash;
But when he marries Lima Bean,
He'll lose his rank—I think it's mean—
And be plain Succo Tash.

—*Harper's Young People.*

Introduction of Wheat into AMERICA.—Prior to the discovery of this continent by Columbus, there was no cereal in America approaching in nature the wheat plant. It was not until 1530 that wheat found its way into Mexico, and then only by chance. 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 on Mexican soil, and to-day one of the finest wheat valleys in the world is near the Mexican capital. From Mexico the cereal found its way to Peru. Maria D'Escobar, wife of Don Diego de Chauves, carried a few grains to Lima which were planted, the entire product being used for seed for several successive crops. At Quito, in Equador, a monk of the order of St. Francis, by the name of Fray Iodosi Rixi, introduced the new cereal; and it is said that the jar which contained the seeds planted is still preserved by the monks of Quito. Wheat was introduced into the present limits of the United States, contemporaneously with the settlement of our country by the English and Dutch.

Human Milk is found in general of a more bluish-white color than that of the cow, and possesses a sweeter taste. It yields cream in standing, which churns with much difficulty, and furnishes a pale, soft, oily butter. In China, it is said, human milk is sold for the nourishment of the aged. The following are analyses:

	No of analyses.	Water.	Fat.	Cassine.	Milk Sugar.	Salts.	Authority.
White women...	89	88.908	2.666	3.924	4.364	0.138	Vernois & Becquerel.
"	14	88.36	2.53	3.43	4.82	0.23	Simon.
"	14	87.806	4.021	3.523	4.265	0.285	Idy.
Colored women...	12	86.34	4.03	3.32	5.71	0.60	Mott.



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FOSSILS IN MENTAL SCIENCE.

THE idea of purpose implies limitation, but that does not lead necessarily to fatuity, else everything in the universe of matter and mind, being part of some wondrous plan, must be regarded as bound "fast in fate." With some thinkers the fact of organization appears to be allied to fatuity, and they are, therefore, very reluctant to accept the principle that it is the function of the brain in man to express mind. They feel compelled to admit the evidences of nervous structure so far as they relate brain to some peculiar and elevated sphere of action, but to admit that it is the sphere of intellection, reflection, judgment, concerning matters of moral as well as of physical import in human life, is, in their opinion, to rob mind of its dignity as the highest and noblest attribute of man; to degrade into a commonplace function a quality almost divine.

Science, with such thinkers, has to do with external nature only; when its Argus-eyes are turned to the scrutiny of mental phenomena it assumes a haughty, defiant, and even impious part, and becomes "false science." When they are

told that it is at least as much our right and duty to examine the laws of human being as to investigate the properties of the soil or the relations of the planets, they reply, Possibly, but not in the same way, or by the application of principles which have been derived from the investigation of matter. When it is claimed that the laws of vital growth and chemical change are the same throughout nature, they fearfully protest against their adaptation to man, for to attempt to show a parallel between the development of the tissues of his body and those of a dog's is little short of sacrilege. Yet, these elevated sophists devise schemes of mental philosophy in which they set forth at much laborious length various qualities, functions, and conditions as belonging to mind, and specify certain modes of action for it with dogmatic positiveness. They fly from one horn of their own dilemma to impale themselves upon the other; for while rejecting a calm and logical analysis of mental phenomena, they abandon themselves to vague, indeterminate, and hollow speculation—turning from what is tangible and self-evident to pursue airy phantoms.

No thinker, from Democritus to Stewart, produced anything worthy of preservation which was not founded upon definite phenomena. The sophists of Greece, the schoolmen of Alexandria and the Middle Ages reason volubly and often charmingly upon assumed premises, but their reasoning becomes platitude and balderdash when exposed to the keen logic of induction.

It seems wonderful to us that in the brilliant light of our era there should be well-educated, even learned men, who are willing to appear as a surviving remnant of an order of thought belonging

to antiquity; but so it is. Perhaps they have a mission in the age which is so much beyond them. Perhaps they help to prevent a too rapid movement of science and philosophy, and so contribute to making them definite and certain in their results. If so, let them live and air their doubts and fears; the Truth they can not harm.

THE LATE EARL OF BEACONSFIELD.

ONE of the most brilliant masters of political science since the days of

Richelieu, died at his residence in London on the 19th of April last. His career forms a piece of biographical history which is hardly surpassed in romantic interest by any tale of mediæval caliph. A novelist of the ideal type, ardent and ambitious, he was at the same time a political leader of the shrewdest and most sagacious order. On the one side, delicately sentimental and imaginative; on the other, politic, practical, audacious. This man, Benjamin Disraeli, Earl of Beaconsfield, was born of Hebrew lineage, in London, December 21, 1805. His father, Isaac Disraeli, won an eminent place as an author, his well-known works entitled, "*Curiosities of Literature*," and "*Amenities of Literature*," being found in all well-furnished libraries. Benjamin, it may therefore be said, inherited his inclination to literature, and this inclination was so strong that it drew him aside

from the pursuit of law, for which he had been intended by his father. Travel, writing, and politics occupied his time from 1824 until 1837, when he secured the great object of his ambition—a seat in the House of Commons. The ludicrous failure of his first speech before that body has been often quoted, and also the prediction he then angrily cast in the teeth of the jeering auditors,—“The time will come when you will hear me.” Two years later he delivered a speech which was listened to with respect and approval.



THE LATE EARL OF BEACONSFIELD.

In 1839 he married Mrs. Wyndham Lewis, a lady of wealth and high culture, whose devotion to his fortunes contributed greatly to his advancement in parliamentary influence. By 1848 he had acquired the distinguished place of leader of the Conservatives in the House, and

was regarded the champion of the landed interest and even of the Church, especially the High Church party. In 1852 he was made Chancellor of the Exchequer in the Derby ministry, but went out of office ere the year was out, on the restoration of Lord Russell to the Premiership. He, however, became Chancellor of the Exchequer again when Lord Derby, in 1858, was reinstated, and again in 1866, after the Government had experienced two changes in its ministry. The parliamentary measures of importance then arrayed Mr. Gladstone as leader of the Liberals against Mr. Disraeli, as the champion of the Conservative or Tory interest, and their opposition was sharp and persistent ever afterward.

On Lord Derby's resignation in 1868, Mr. Disraeli became Prime Minister, and held office for two years and a half, when, on the agitated discussion of the disestablishment of the Irish Church, Parliament was dissolved, and the new Parliament contained a strong majority for the Opposition. Mr. Gladstone succeeded him as Premier, and after an administration of about three years, resigned, Mr. Disraeli stepping back into his old place with a strong Conservative support. For about six years he wielded the authority of the Government, but employed it chiefly in diplomatic negotiations with the leading European powers, Turkey being their chief subject. Throughout these negotiations England appeared as the chief ally of the Porte, Mr. Disraeli, now Lord Beaconsfield, clearly showing his sympathy for the Turk. In the Berlin Congress of the chief Powers of Europe, he displayed great skill and sagacity in parading the resources and military pride of England, and restored, as it were, that

nation's influence in European councils. As regards the military campaigns in Afghanistan and South Africa, their obscure purposes, great expense, and comparative failures, must remain as dark spots in Beaconsfield's ministry.

When the general elections were held in the spring of 1880, and it was expected by the Conservatives that their result would be a triumphant confirmation of the course of the Beaconsfield Administration, they were surprised by utter defeat. At the hustings "the people had arraigned Lord Beaconsfield's Government for six years of inaction at home and menace abroad, and had condemned his policy in the mass as essentially un-English in its methods and tendencies."

It was in 1876 that the Queen called Mr. Disraeli to the House of Peers by investing him with the insignia and rank of an Earl.

He was a man of rare versatility, as exhibited by his being able to write book after book of the imaginative sort, amid the excitements and absorption of political life. Ambitious for preferment, he broke faith with party when his keen sense of opportunity dictated. Yet so boldly and skillfully did he play the game of Fortune that followers and foes could not but admire, while both alike never believed in him. It is said that, "among the Lords or in the Commons he seemed to stand apart from friend and foe, a mysterious figure."

Lord Beaconsfield offered to the observer a most interesting physio-mental study. His temperament was a peculiar combination of the mental, motive, and vital elements, a morbid quality of the latter bordering on the lymphatic, imparting the singular livid complexion which impressed every one who saw him.

His hair and eyes disclosed his Hebrew stock even more than the anatomy of the face, though in the nose there were characteristics generally found in the Israelite, for instance, the broad nasal bone and the wide alæ. The head was broad at the base, especially in the region of the temples and neighboring the ears, indicating superior vital powers, endurance, and tenacity. The forehead was narrow and high, widening somewhat as it neared the eyebrows, where it was prominent and rounded, indicating a sharp and specific type of perception, great ability in construing character, and power of close and minute criticism. The head rose loftily in the crown, impressing the character with steadfastness of purpose, love of praise, and great ambition. The occipital region was developed strongly in the region of courage and self-defensiveness, contributing to his well-known persistence in carrying out his plans, and undaunted demeanor when opposed, criticised, or censured. He was more audacious than circumspect, more shrewd and skillful in plan than cautious—in fact he had little fear, his objects being kept steadily in view—timidity or hesitation had no place in his counsels.

We can not but admire the tact, skill, audacity, and persistence of the man who breasted the tide of English prejudice and sentiment, and fought his way from comparative obscurity to the first rank in English society and English authority. He is an illustrious example of what boldness and perseverance, backed, to be sure, by some great intellectual gifts, will accomplish. Yet we question the value of his example to the young men of the English-speaking nations, for we think that time will show that in all that this profound party

leader did, self-aggrandizement was the actuating motive, and not the welfare and solid glory of people and country. He was a toady of the most brilliant order, at once flattering and cajoling the aristocratic and titled sons of fortune, and molding them to his will, and as such his remarkable connection with the English Government, records no great accomplishment for which civilization will inscribe his name on the golden roll of nation-benefactors.

LEGISLATIVE BARBARISM.

IF there be a remnant of barbarism in our civilization, it is certainly as manifest in politics as anywhere else. In New York City, and in the legislative center of the State of New York, lately occurred one of the most unreserved and audacious exhibitions of unmixed barbarism in its treatment of questions of the highest public importance. Directly in the face of an organized movement, supported by the best citizens of New York—a movement having for its object the thorough cleansing of streets in our great metropolis, laden with the accumulations of a long and severe winter, directly in the face of the warnings of sanitary science, and the dictates of common reason, the men whose duty it is to remove the waste of the city refused to do it, and the men who control the political machinery of the State openly set at naught the claims of justice and duty, and refused to institute a measure for so essential a work. We doubt whether a more obstinate piece of barbarism could be furnished by the natives of Patagonia or New Guinea. A good deal of indignant criticism has been published by our moralists with regard to the conduct of

the war in the Transvaal by English generals, and with regard to the sanguinary strife between Chili and Peru, but, taking everything into consideration, we think that New York politicians are more deserving of a premium for deliberate malignancy than any South African or South American military tiger of whom we have received accounts. Selfishness and propensity in the savage are productive of coarse and brutal deeds, but in the educated, or so-called civilized politician, they appear to lead sometimes to conduct that is Satanic.

THE INSTITUTE OF PHRENOLOGY.—The session of the American Institute of Phrenology, for 1881, will be opened on the first Tuesday in October next, and all who contemplate attending it will learn full particulars by addressing Fowler & Wells, 753 Broadway, N. Y., and asking for "Institute Circular." It is well for applicants to do this early enough to have time for perusing the works necessary before the date on which the course begins. There is no other institute for giving instruction in character-reading according to Phrenology, and this Institute holds but one session each year.

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.

ETHNOLOGY.—*Question:* Are Nott and Gliddon's "Types of Mankind" and "Indigenous Races," the best works on the subject?

O. E. C.

Answer: They are standard works, but not

recent. You can read them, however, with profit, and also Wood's "Natural History of Man," Bray's "Manual of Anthropology," Lubbock's "Prehistoric Times," and Lyell, Tyler, Denison, Baldwin, are highly esteemed authors on the subject of ethnology.

MR. HUXLEY'S POSITION.—J. W. MCC.—Mr. Huxley is an avowed disciple of Evolution, claiming that the evidences are sufficient to warrant the belief that man has risen from a lower animal type. Hence his scientific writing is pervaded with that bias.

"BLIZZARD."—According to a correspondent of our friendly contemporary, the *New York Evening Post*, "blizzard" is a term much used of late to denote a severe and piercing storm. The word reaches us from Texas and from the plains of the far West, and is of Spanish origin, as are many of the quaint-sounding idioms adopted by us from that part of the country. It is identical in derivation with the English word of so much less forcible meaning, breeze. The Spanish brisa, pronounced breeza, and meaning primarily a stiff north-east wind, was easily corrupted by collation into the sound of bleeza. This into bleezad was easy, and hence blizzard.

LOVER OF NOVELTY.—G. A. C.—Persons with large perceptive or observing organs, a relatively narrow head, active temperament, and but moderate Firmness and Caution, are naturally inclined to seek variety or novelty. A large endowment of Faith contributes to the moral phase of the disposition of the person seeking variety of experience and association in matters of moral and religious association.

TAKING PLASTER CASTS.—*Question:* Will you please tell me how to make a cast of my head?

J. A. B.

Answer: It would be a very difficult, if not impossible matter for you to take a cast of your head yourself, as the process involves a good deal of manipulation. See the "Combined Annuals," Old Series, for a complete description of the methods of taking casts in plaster of different objects.

WESTERN ALKALI LANDS.—*Question:* Will you please inform me through THE JOURNAL of the nature of the soil and the cause of the alkali lands in our Western States and Territories, and oblige a subscriber?

M.

Answer: These alkali lands are as a class flat or slightly basin-shaped, the soil being of a stiff clay, nearly impervious to water. In the wet seasons of the past, water accumulated upon them, the drainage of the higher levels bringing with it lime, soda, potash, ammonia, etc., in solution. As the water evaporated the alkaline matter was deposited, and when dry the flat

ground became hard and incrustated with the alkali. In those regions were or are mineral springs which contribute their substance to the deposit. The springs of Nevada, for instance, are well-known bearers of saline matter, some localities having extensive deposits of salt, and there are in the north-west and central parts of that State "mud lakes," which are nothing more than alkaline land in process of formation.

BABY FEEDING.—J. C.—Your questions are in great part answered in the article entitled "Baby" in our last Number. The book "How we Fed the Baby" will be of service to you. Most mothers and nurses overfeed their young charges, and that is the reason for most of the stomach disorders which make babyhood a period of anxiety.

CARRIE B. H.—We can not open THE JOURNAL to give descriptions of character to any who may send us photographs. If we were to do so every page of it would soon be so occupied. We wrote to tell you so, but not having your full name, the letter is just returned to us. If you will send for "Mirror of the Mind," you will learn from that the conditions necessary for having a full description of character of yourself or any friend made from photographs.

ERRATUM.—Mr. Todd's full name was incorrectly given in our last Number. It should have been Woodward H. Todd instead of William H. Todd.



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

NECESSITY OF A KNOWLEDGE OF HUMAN NATURE.—(From a letter to the Publishers of the PHRENOLOGICAL JOURNAL). Men in public life are dependent upon the public largely for their success. Many intelligent and well-meaning men have become complete failures, simply because they understood not Human Nature. They knew not how to strengthen their friends or disarm their enemies.

How often we hear it said, "Poor fellow, he means well, but is always in hot water." While of another, who is far from brilliant, 'tis said, "He is lucky, as usual." As though chance or luck had anything to do with the success of the one or the failure of the other.

We should be acquainted with the strong fortifications of those who are friendly to us or to the business of our life, and learn to see the exposed places and breeches in those of our enemies, or the enemies of the cause for which we hope to make them friends.

In truth 'twere better for us not to know

who our friends are than to be ignorant of our enemies, or their mode of attack. We are believed to be on the aggressive. "Hold the fort" is a good proverb; but "Storm the fort" is a better one. We are not only to be clothed with defensive armor, but also have given to us the sword of truth. To know when and how to attack, to know whether to fight or retreat, will depend largely upon whom our antagonist may be, and the strength of our weapons of defence and attack. There are times when a retreat is more honorable than a fight; there are also victories which are of no credit to the victor. The study of theology will not be sufficient to supply you with the information. We must deal with men as we find them—as they are; not as men used to be, or as we hope they will become. The stern realities of life are the things presented by living men; the presentation of these to us by force of our surroundings, be they by choice or otherwise, go to make our peace or disquietude in proportion as we have learned how to disarm our foes, be they men, women, or circumstances. I have learned by closely observing, that my chances for success are enhanced by having certain persons as my enemies rather than as my friends. One popular preacher has said, "The Lord deliver me from my friends."

Politicians oftentimes have been defeated simply because they have chosen the wrong men to advocate their claims. Unworthy persons have been elevated to positions of trust because of the influence exerted over the people by "stump speakers" of large hearts and smart heads.

How often, when special work in a church is to be done, and the persons to undertake it must be chosen in haste, sad mistakes are made by the pastor in following the advice of certain advisers, who are ever free, but seldom competent, to give advice. The Scriptural injunction of Paul to Timothy, "Study to show thyself approved, a workman that needeth not to be ashamed, rightly dividing the word," etc., would at least remind us of the importance of not only understanding the words but the natures and dispositions of those who are to hear.

I will not underestimate the benefit and importance of the study of Greek and Hebrew by the theological student, but I am perfectly safe in saying that an insight into the study of human nature by the channel of Phrenology and Physiognomy will prove a greater blessing to him, to his people, and hence to his Maker, than the mastery of the dead languages.

The preacher who preaches to his people, rather than over them, to the ceiling, or under them, to the floor; he who looks his congregation in the face, watches the changes which take place, the expression upon the countenance, will enjoy the study of "Brain and Mind."

It will start him on an investigation of the powers of his own mind and desires of his own heart, and he will not rest satisfied until he has made some improvement in himself, and thereby becomes the more competent as a molder and fashioner of the thoughts and feelings of his hearers.

WILLIAM HOLLINSBED,

Pastor of M. P. Church, Lebanon.

INJUSTICE TO THE HOG.—The Rev. Dr. Dobbs warmly defends the animal to which society is indebted for lard, ham, and other porcine productions, against certain common animaladversions of the day, thus :

In the course of my researches at the State Fair, I naturally devoted some attention to the apartments occupied by the swine. Never was I more impressed with the gross and grievous injustice that has been done these, our fellow-mortals. As I saw them lying in the enjoyment of innocent felicity (though unconscious of their blessings); as I watched the faces, unfurrowed by care or guilt; as I remarked them, in the exercise of cultivating benevolence, eating for the good of others, putting upon their ribs and on their quarters the deposits which others will enjoy after they (the swine) shall have passed away, I could hardly repress my tears. Especially was I moved when I recalled the odium which is undeservedly heaped upon them.

PERSONAL.

WILLIAM LAWTON, formerly a merchant of New York City, and a member of the Chamber of Commerce and the American Institute, died at his house in New Rochelle, April 28th last, at the age of eighty-five years. Mr. Lawton is well known in connection with the highly-esteemed variety of blackberry which he first cultivated, and which was named after him.

MRS. HUGHES, the mother of Thomas Hughes, has been so pleased with what she has heard of the new Tennessee colony that she has determined to visit it, although more than eighty-three years old.

THE oak frame in which Mrs. Hayes' White House portrait is placed was carved by Cincinnati lady-artists, with representations of oak-leaves, acorns, grapes, lilies, sunflowers, and hawthorn. The frame was paid for by a few prominent ladies of Cincinnati.

REV. DR. MIX, of the First Presbyterian Church at Orange, N. J., in consequence of some dissatisfaction in the congregation, recently gave notice of his intention to resign his pastorate. The church, by a very large majority, refused to consent to the resignation.

JUDGE JAMES GARLAND, of Lynchburg, Va., has just completed his eighty-eighth year. Of him a paper of that city says: "He practiced law for

fifty-eight years, for ten years was Judge of the Corporation Court of this city, and for eleven years was in public life as a member of the Legislature or Congress. To-day he is sitting and patiently trying cases and delivering opinions, showing great vigor of mind and considerable physical force."

WISDOM.

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

VIRTUE is the politeness of the soul.—*Balzac.*

REPORT is a quick traveler, but not a safe guide.

It is often the case that men, for the sake of getting a living, forget to live

THE power to do great things generally arises from the willingness to do small things.

RECOLLECT that trifles make perfection, and that perfection is no trifle.—*Michael Angelo.*

A MAN with a very small head is like a pin without any, very apt to get into things beyond his depth.

THROUGH woe we are taught to reflect, and we gather the honey of earthly wisdom, not from flowers, but from thorns.

ONE of the illusions is that the present hour is not the critical, decisive hour. Write it on your heart that every day is the best day in the year.—*EMERSON.*

FARTHER ON—ah! how much farther?

Count the milestones one by one.

No; no counting, only trusting—

It is better farther on.

EVERY individual has a place to fill in the world, and is important in some respect, whether he chooses to be so or not.—*HAWTHORNE.*

HOW narrow our souls become when absorbed in any present good or ill. It is only the thought of the future that makes them great.

MIRTH.

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

"WHAT Ladies Wear," is the title of an article of an exchange. The right kind usually wear well.

IF a young man hasn't got a well-balanced head I like to see him part his hair in the middle. Don't you?—*BILLINGS.*

"LET us remove temptation from the path of youth," as the frog said when he plunged into the water on seeing a boy take up a stone.

A DETROIT lady called at a drug store the other day and said: "I want a tooth-brush—a real nice one. I want it for a spare bedroom."

A LITTLE boy was told by his mother to take a powder she had prepared for him. "Powder! powder!" said he; "mother, I ain't a gun."

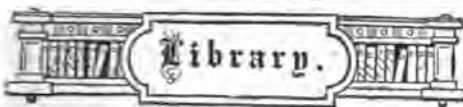
A NEW YORK man has discovered an "invisible soap." It must be the same article that our small boys have used in their daily ablutions from the most remote periods.

NAUTICAL.—Husband (jokingly), "O, I'm the mainstay of the family." Wife, "Yes, and the jib-boom—and the—and the—" Small boy (from experience), "And the spanker, too, mamma." [Applause].

EX-SUPERINTENDENT KIDDLE, of New York, sent recently the following toast to a social gathering:

"Our Public Schools—may their influence spread Until statesmen use grammar and dunces are dead;

Until no one dare say in this land of the free, He's 'done' for he 'did'; or it's 'her' for it's she.'"



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.

PARSON THORNE'S TRIAL. A Novel. By Emma May Buckingham, author of "A Self-Made Woman," "Pearl," "The Silver Chalice." 12mo, pp. 364. New York: G. W. Carleton & Co.

From prose to poetry and then back to prose, certainly indicates versatility in a writer. Miss Buckingham has evidently grown stronger with her author experience, for in this new venture she spreads before the reader's eye a broader view of human nature than appears in her "Self-Made Woman." She shows, too, a specific appreciation of individual character, as some of her personages are well developed; "Captain Nat," for instance, is nicely delineated, and supplies the reader with much amusing material. "Tabitha Goodenough," too is by no means a weak production. We think the author must have drawn her from some living embodiment among her acquaintances. One thing which seems to us almost incredible, in view of the delicacy which invests "Una Riverton," is

the confidence she exhibits by showing "Minnie's" letter, full as it is of gossip relating to the parson and herself, to that gentleman. And the disclosures of personal experience, or love-life, on both sides, form the climacterics of the story. The gossips drive Una from the town, and render "Doctor Thorne," the parson, unhappy, of course. But patience, seeking, and waiting have their final reward, and two yearning hearts triumph over all malice, envy, and spite, and in the happiness of union forget past suffering. Miss Buckingham has impressed her volume with warmth and vigor which at times border on sensation, but her motive is high and the lesson she would teach healthful.

PLAIN FACTS FOR OLD AND YOUNG. By J. H. Kellogg, M.D., Member of American Public Health Association, American Society for Advancement of Science, etc. 12mo, pp. 512. Segner & Condit, Publishers, Burlington, Iowa.

There is no lack of treatises, medical and moral, on the evils growing out of the ignorance, indifference, and willfulness of people in their sexual relations, but these evils are so great and obstinate that we are always ready to welcome a new book from an earnest, sincere teacher of physiological truth and moral purity. The more laborers in this field the better for society, for too much can scarcely be said to warn and instruct old and young in regard to the impropriety and vice resultant from carelessness and indiscretion in social and private life. Dr. Kellogg has accumulated in one bulky volume a large amount of matter bearing upon the sexual functions. He sets forth the principles of biology and heredity in their relation to man, and points to many of the customs and mannerisms of every-day life whose influence is corrupting. He supplies therapeutical advice of the hygienic character, and indicates methods for the proper training of youth that they may be inspired with high and noble purposes, and made elements of true social elevation and prosperity.

OUTLINE OF ELOCUTION AND COMPREHENSIVE MANUAL OF PRINCIPLES. By G. Walter Dale, Vocal Cultivist and Lecturer in Elocution. 12mo, pp. 354. Price, \$1.50. Danville, Ind.: Normal Teacher Publishing House, or J. E. Sherrill.

The author of this new treatise on elocution gives us a well-digested arrangement of the theoretical principles and practical methods involved in vocal culture, and has evidently striven to render a subject which has not a few difficulties clear to the general student, so that one who desires to pursue the study of elocution, and can not avail himself of the aid of a teacher, may take this manual and follow its directions with full confidence. The selections are excellent, comprising most of the masters of English literature, and sufficiently abundant to cover a broad field of thought and sentiment.

HENDERSON'S HAND-BOOK OF PLANTS. By Peter Henderson, author of "Gardening for Profits," "Practical Floriculture," etc., pp. 410. Published by Peter Henderson & Company, New York.

Like everything which Mr. Henderson has published heretofore, this large and well-printed list of plants, ornamental and edible, is thoroughly practical, and supplies an old need of the gardener and horticulturist. We welcome it ourselves to our library, because we have occasion now and then to answer questions bearing on horticulture, and usually find it a matter of labor to procure technical information. In the list, care has been taken to give the common as well as scientific name of a plant, and brief instructions for propagation and culture are included with respect to the leading ornamental and useful varieties. The order of arrangement is alphabetical, so that one can readily turn to any plant wanted.

INA'S VISIT TO VIRGINIA. By Sara Keables Hunt, author of "Yusuf in Egypt," etc. Price, 50 cents. Southern Methodist Publishing House, Nashville, Tenn.

An attractive tale for children, at once pleasing, and inculcating the highest Christian morality, without being preachy or prosy. Mrs. Hunt is known to the readers of the *PHRENOLOGICAL JOURNAL* as an agreeable writer, with a bias toward story telling, which is happily illustrated here.

PUBLICATIONS RECEIVED.

HOW TO LEARN PHRENOLOGY, With Hints as to the Study of Character. Illustrated. By L. N. Fowler, author of "Lectures on Man," etc. Price, paper, 15 cents. L. N. Fowler, Publisher, London.

A succinct exposition of the principles of mental science on the practical basis of phrenology, prepared in Prof. Fowler's usually clear and direct style, and well adapted for a wide circulation.

A CHAPTER ON NOSES (Reprinted from *The Phrenological Magazine*). Illustrated. Edited by Alfred T. Story, author of "A Manual of Phrenology," etc. Price, paper, 15 cents. L. N. Fowler, Publisher, London.

In this well-printed little brochure, Mr. Story describes the physiognomical indications of the different types of the human nose, which are usually to be seen in society. He has taken for his guide the views of standard authorities, and woven them into an interesting and suggestive essay.

SARTOR RESARTUS: The Life and Opinions of Herr Teufelsdröckh. By Thomas Carlyle. Printed without abridgment. 8vo, paper. Price, 25 cents.

Messrs. I. K. Funk & Co., of New York, add this remarkable work of the great Scottish thinker to their well-known Standard Series.

THE NUTRITIVE CURE: A Statement of its Principles and Methods. By Robert Walter, M.D., with Introduction by Rev. Joel Schwartz, D.D. Paper, price 15 cents. An exposition of well-known hygienic principles, blended with some views of an original character, based upon the author's own experience. Same publishers.

DIARY OF A MINISTER'S WIFE. By Almecia M. Brown. Parts I. and II., No. 53 Standard Series (octavo). Price, 15 cents. Same publishers as above. This is a case of overdoing the matter for the sake, we suppose, of exciting the mirth of the reader. The author has made an unfortunate choice of a subject for her fun.

BUOYING THE CHANNEL; or, True or False Lights on Temperance. By Rev. Theodore L. Cuyler, D.D. Price, 5 cents, or 60 cents a dozen. New York: The National Temperance Society and Publication House. An excellent reply to the advocates of moderate drinking.

WINE DRINKING AND THE SCRIPTURES. By Prof. Tayler Lewis, LL.D. Price, 10 cents. Published by the same. An able argument on the Scripture phase of the drink question.

WIDE AWAKE. Current numbers of this admirable juvenile, published by Lathrop & Co., of Boston, are at hand. There is nothing of the kind superior to it.

SPECIE BASIS. A Lecture by E. A. Weston, of Brooklyn, Pa., which presents a strong argument against the prevailing view of the necessity of metallic money for the purposes of trade.

THE ALPHA, published in Washington, is a spirited advocate of social reform, good education, temperance, anti-tobacco, etc. It has our cordial sympathy.

JOHN SAUL'S CATALOGUE OF PLANTS for the spring of 1881. A descriptive list of new, rare, and beautiful plants, Crotons, Dracaenas, etc., etc., with prices. John Saul, Nurseryman, Washington, D. C.

APPLETON'S RAILWAY and Steam Navigation Guide, Editions for April. Price 25 cents. New York: D. Appleton & Co.

SURGICAL TREATMENT OF Naso-Pharyngeal Catarrh. By D. H. Goodwillie, M.D., D.D.S. Read before the American Medical Association. Reprinted from the *Medical Gazette*, July 31, 1880.

WEATHER REVIEW FOR FEBRUARY. From the office of the Chief Signal Officer, War Department, Washington. The percentage of verification for the "probabilities" of the month reached 83.2.

THE
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VOL. LXXIII. OLD SERIES—VOL. XXIV. NEW SERIES.
JULY TO DECEMBER, 1881.

H. S. DRAYTON, A.M., AND N. SIZER, EDITORS.

NEW YORK:
FOWLER & WELLS, PUBLISHERS, 753 BROADWAY.

1881.



"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."—*Encyclopædia Britannica*, 8th Edition.



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FOUR AMERICAN QUEENS OF SONG.

FOUR AMERICAN QUEENS OF SONG.

KELLOGG.—HAUK.—CARY.—THURSBY.

IT is not many years since America was deemed by foreigners rude and incapable of appreciating fine music; and the sweet singers and master-instrumentalists of Italy, Germany, and France glanced disdainfully from their places of popularity and profit in the old art-centers of the Continent toward the young nation of the West. "Those Americans," it was said, "are unrefined, and it will be very long before they can understand the beauty and delicacy of a Mozart, a Beethoven, or a Chopin." Only twenty-five or thirty years ago, it was regarded a perilous undertaking for a manager to invite a celebrated musician to our shores; but Mr. Barnum was found bold enough to invite Jenny Lind to the American stage, and at great expense afford citizens of several of our leading cities the opportunity of hearing her magnificent voice. The great success of the "Swedish Nightingale's" visit revealed the fact to foreign artists that in some parts of the United States, at least, there was sufficient esthetic culture to make them a new and desirable field; and then began vocalists, pianists, violinists, etc., to visit us, and their number has rapidly increased, until Boston, New York, Philadelphia, Chicago, Cincinnati, New Orleans, and other cities, have their regular operatic seasons, with concerts or musical festivals, which enliven the greater part of the year. Indeed, musical culture has so rapidly advanced, particularly in New York, that the tables have been turned, as it were; and out of our own circles have sprung musicians, whose talents and acquirements have won the admiring plaudits of the best European audiences. Not long since an English critic took occasion to say that the leading English concert singers of to-day are Americans, and the principal Italian *prime donne* of the lyric stage come from America.

Whether this be precisely so or not, the fact is palpable to him who will take

the trouble to examine into musical affairs, that the number of highly gifted native singers in this country is very large, comparing well with those abroad. Furthermore, the facilities for instruction at home have improved to that degree that it is no longer considered indispensable for one who intends to make music his or her profession to study in Europe, although a tour abroad, with its advantages for observation and comparison, is always a desirable addition to a course of technical training.

The small group of portraits at the head of this article will be recognized by the music-loving reader as drawn from those of our vocalists whose names are frequently seen or heard when high lyric capability and a successful career are topics of discussion. Of the four, Miss Clara Louise Kellogg should properly be considered first, as her excellence as a singer was recognized by the public long before the others won its applause. To say that she possesses a superior physical organization is almost surplusage, because a good constitution and high temperamental endowment are essential to superior artistic capacity; and a singer, especially, must have a strong physical basis for the maintenance of the vocal organs in that condition of harmonious vigor which is essential to the perfect execution of fine music.

Miss Kellogg's profile, and what of the head is available for observation, indicate delicacy, earnestness, ambition, and a good degree of practical judgment. While sensitive and spirited, she is, nevertheless, endowed with firmness enough to control her emotions, and patience enough to abide the result of events. She is not a creature of impulse and susceptibility, as many of the finest singers are inclined to be, but holds her feelings under good control, and has a capital understanding of herself. Her intellect exhibits a fair balance of perception and

reflection, the sense of utility or the practical adaptation of circumstances and things being a conspicuous element. Her disposition is one well calculated to win friendship and esteem, as she is, doubtless, generous, considerate, and fond of the enjoyments of social life.

Miss Hauk has a plump, rounded face; the features of which show her German descent. She is of a lively, susceptible, playful disposition, the sanguineous elements predominating in her temperament and giving her mind its mobile, sprightly character. She has excellent perception, quickly appreciating the purport of things, and promptly coming into *rapport* with her surroundings. She has a good degree of the esthetic elements, enjoying everything that is beautiful in form and picturesque, and is easily impressed by the sentimental and emotional sides of every-day experience. She has a fine development of the musical sense, as seen in the rounded contour of the margin of her forehead, and it is intimately associated by position with her perceptive, mechanical, and esthetic faculties. This relation enables her to cultivate her musical gifts easily, and to give them practical expression in a way which pleases by its naturalness and freedom from effort or affectation.

In Miss Cary we observe strong elements of organization. Inheriting, probably, from her father the more conspicuous traits of her character, she is at once vigorous and enduring in body, and clear, definite, and positive in mind. She is warm in feeling and affection, her sympathies tending to impulse, so responsive are they to impressions, but she has her own personal convictions of duty, responsibility, and every-day conduct, and dislikes restraint, criticism, or dictation. Her social nature is very influential, the importance of home and friends being usually a prominent consideration in the ordering of her professional as well as of her private life. She appreciates sympathy and kindness more than may be generally apparent in her conduct; but her expression has always an empha-

sis which carries with it the impression of sincerity. In the home circle she should be highly esteemed for the openness and honesty of her disposition, and the cordial sympathy with all that belongs to the tender and generous side of life.

The organization of Miss Thursby combines qualities of strength and delicacy which are well exhibited in the portrait. She is observant, inquiring, intelligent, highly appreciative of life on its objective side, viewing the world as a sphere, in which there is need of prudence, discretion, and industry if success is to be attained, no matter what may be the vocation. She has a good deal of self-helpfulness; is very spirited and thoroughgoing, willing to work patiently and earnestly to secure a desirable end. She is averse to wasting her time and efforts, and shows more than average discrimination in the choice of objects on which to employ herself. She is ambitious, and keeps high objects in view; and is very decided in her conviction with reference to the value of name and position; few women are more sensitive than she in matters of duty and obligation, so that she would sacrifice much of her own comfort and interest for the sake of others. To be called selfish or ungrateful is one of the severest trials, and one to which she would not make a defiant response notwithstanding her spirit and firmness, but would rather seek to refute it by an earnest and candid appeal to her past conduct and to the testimony of friends, of whom she should have many.

CLARA LOUISE KELLOGG is entitled to high credit for being among the first of our singers to compel a tardy recognition by European culture of the capability of Americans to excel in opera. She was born in Charleston, S. C., where her parents, who are of Connecticut birth, were temporarily residing. She exhibited her musical endowment at a very early age, being able to read music with great ease when but seven. Appreciating her promise of rare vocal powers, her father placed

her under the instruction of Prof. Millet, a graduate of the Conservatory of Paris. After remaining with him for a short time, she was transferred to a noted Italian teacher, who in turn gave place to M. Riznire, also a graduate of the Conservatory of Paris, and with whom she studied industriously for three years. Her last instructor was M. Muzio, under whose auspices she made her *début* in opera at the New York Academy of Music, in 1861, in the character of *Gilda*, in Verdi's opera of "*Rigoletto*," and at once won the favor of the public. She appeared thenceforth every successive season, taking the principal *roles* in most of the standard operas, and constantly increasing in popularity, until she became universally confessed a leading *prima donna* among American singers.

In 1867 Miss Kellogg made her first appearance before a London audience as *Margaretti* in "*Faust*," and with what success the opinion of a music critic will best show, viz :

"Miss Kellogg has a voice, indeed, that leaves little to wish for, and proves by her use of it that her studies have been both assiduous and in the right path. She is, in fact, though so young, a thoroughly accomplished singer—in the school, at any rate, toward which the music of M. Gounod consistently leans, and which essentially differs from the florid school of Rossini and the Italians before Verdi. One of the great charms of her singing is her perfect enunciation of the words she has to utter. She never sacrifices sense to sound; but fits the verbal text to the music, as if she attached equal importance to each. Of the Italian language she seems to be a thorough mistress, and we may well believe that she speaks it both fluently and correctly. These manifest advantages, added to a graceful figure, a countenance full of intelligence, and undoubted dramatic capacity, make up a sum of attractions to be envied, and easily explain the interest excited by Miss Kellogg at the outset, and maintained by her to the end."

In 1871 Miss Kellogg appeared in Lon-

don again, and this time the most famous singers in Europe—Nillson, Patti, Tietjens, and Lucca—were there also, but she held her place in the galaxy with modesty and credit.

Unlike most singers of acknowledged genius she does not appear to care to court the favor of foreign nations, being in the main well contented with the appreciation of her own people, who have from the beginning accorded her a cordial support on all the occasions of her appearance upon the stage. She has made her way to distinction quietly, unassumingly, studiously. Merit has been her passport to success.

MINNIE AMELIS HAUKE has found so much favor in European musical circles, that she has been seen but transiently during the past ten years on the American stage. She was born in the year 1853, in the city of New York, her parents being worthy German people in humble circumstances.

She very early showed musical tastes and voice, which rolled with fountain-like volubility from her youthful lips. Her mother divined and fostered the genius so early displayed, so far as her limited abilities would permit. Fortunately, a gentleman of New York heard her voice, and determined that it should not be hidden in silence from any neglect of his. He invited her to his house to meet a few of his friends, where, accompanied by a superior pianist, she displayed her powers. Among the guests was Mr. L. Jerome, of this city, whose taste and pecuniary means had led him to erect a small theater attached to his private residence. His admiration of the girl won upon his generosity; he supplied Minnie with the best instruction, and she soon after made her first appearance on his little stage in the opera of "*Linda di Chamouni*," to a select company of ladies and gentlemen, and achieved an unequivocal success. Mr. Maretzek, a well-known *impresario*, thereupon made an engagement for her appearance at the Academy of Music in New York City;

but the building was burned to the ground before she had an opportunity to tread its platform, and her first appearance in public was made at the Opera House in Brooklyn, as *Amina*, in "La Somnambula," to a fashionable and large audience, which was surprised and delighted by the youthful singer.

Upon the rebuilding of the Academy, she was again engaged, sang in various other operas, made a tour through the principal cities of the United States, and increased rapidly in public favor. But, determined to seek every occasion of improvement, and having acquired the necessary means of travel, she embarked in company with her mother for Europe—not with the intention of immediately appearing in public, but solely for the purpose of perfecting by study the knowledge of her art. The celebrated manager, Strakosch, however, prevailed upon her to make her appearance in London and Paris, where her success was remarkable for so young a person. From Paris she went to Russia, then to Austria, Germany, and so on, everywhere adding to her reputation. In 1878 she returned to America, but the next year was called to Europe by an advantageous engagement.

Time has added fullness to her voice—which is a rich soprano—and accuracy to her interpretation of musical composition. She possesses much beauty and grace, which she adapts with much skill to her acting. Her sprightly temperament appears to especial advantage in bright and piquant impersonations.

ANNIE LOUISE CARY was born in Kennebec Co., Maine. When only eight years old her mother died, and a few years afterward she went to Boston, where she had a brother in business, with whom she found a home. As her musical gifts were early recognized, she was given opportunities for the best instruction the "Hub" could boast. In 1866 a public concert was given for her benefit; and in the early autumn of that year she went to Italy to complete her studies in opera, and to prepare for the stage.

In December, 1867, she was invited to accompany an Italian opera company to Copenhagen. She went, and a short trial resulted in her engagement shortly afterward by Mr. Ferdinand Strakosch for a tour of the principal cities of Norway and Sweden. This season was followed by a very successful one at Hamburg.

She then went to Baden-Baden, where she remained engaged in study with Madame Viardot Garcia until October, 1868, when she left to fulfill an engagement at Stockholm. Here she achieved a great success, which was followed by an engagement at the Royal Swedish Opera House, she singing in Italian, and the remainder of the troupe in Swedish.

In the summer of 1869 she resumed her musical studies under Signor Boltensi in Paris. In the fall of the same year she went to Brussels for a season of Italian opera. The enthusiasm of the Belgians was fully aroused by the beauty of her voice and the artistic rendering of her parts, and she became at once a great favorite.

This success drew the attention of Maurice Strakosch to her, the result of which was a three years' engagement, during which she sang in concerts in the principal European cities.

In 1870 she returned to America with the Nilsson troupe, and sang with great success in all the principal cities of the Atlantic States.

Subsequent engagements took her across the ocean, in the performance of which Miss Cary indicated growing powers of voice and expression, and won high tributes of favor from her every audience. Her every appearance almost has shown improvement in some respect, especially the last New York season, when she had the strong support of artists like Campanini and Galassi.

Miss Cary is probably the most popular contralto who has sung in opera before American audiences, excepting, perhaps, the wonderful Alboni, and it is a question whether Europe possesses a contralto superior to her in voice and acting. Report has it that she is soon to be married to a wealthy German nobleman

EMMA C. THURSBY.—Our little group must conclude with Miss Emma C. Thursby, whose excellence as a vocalist can not be said to be inferior to any of the other three, but who has been later than the others in coming before the public. We remember well, however, the promptness with which her great talent as a singer was recognized when but six or seven years ago she stepped upon the concert platform. She was born in Brooklyn, N. Y., and comes of an old Knickerbocker family. Her education was obtained, in her earlier years, at the Moravian Seminary, at Bethlehem, Pa. Very early she began to display her vocal gifts, quite unconscious of the career that was to follow. When this training became a matter of the clearest expediency, she was given good instruction. For a time she was under the tuition of Julius Meyer, a well-known teacher in her native city, and was subsequently engaged as soprano at two of the leading churches. In 1870 she became a pupil of Errani, an Italian instructor of eminence.

Having decided upon studying a while in Italy, in June, 1873, she went to Milan, where she secured the direction of two celebrated teachers, Signors Lamperti and San Giovanni. She, however, remained in Milan less than a year, and soon after her return home made her-

self the subject of considerable musical attention by a concert which she gave in Brooklyn. In 1875 she made her first concert-tour, going West as far as St. Louis, and in the following year went to California; since then she has made annual tours in various parts of the Union, and in Canada, which have been signally successful in every respect. In the one character of a church singer, which she has been in the intervals of retirement from concert engagements, she has probably received more salary than almost any other soprano who might be named. Miss Thursby's voice is clear and bell-like, and in solo does not impress the hearer with the quality of great power, yet it has unusual compass and purity, and can be heard throughout the largest building, and distinctly followed, although accompanied by an orchestra and chorus. She is heard to the best advantage in concert pieces and arias. In rejecting the very many allurements of the operatic stage, Miss Thursby shows a knowledge of her own powers. However difficult a passage, her technical skill and perfect intonation master it with charming ease. She aims to express the motive and sentiment of the composer; and her power in this respect is not surpassed by any singer to whom we have listened.

VISION SEERS.

"Your young men shall see visions."—JOSH. ii. 28.

IT is not an uncommon thing to hear men of narrow intellects and great vital energy disparage those who are called "visionaries," while it is the fashion to laud the "practical."

A man who has talent for working a treadmill is tickled, being told that he is "practical." He congratulates himself that he is attempting no impractical thing. He is struggling up no heights of fancy—not he. He thinks that the silliest youth of whom he ever heard is that young person in Longfellow's poem

who bore a flag with "the strange device of Excelsior," and went climbing up the snow and ice therewith, foolhardily beginning his journey in the afternoon.

If that young visionary had been a practical person, he would have heeded the warnings of that old man and of the peasant, and, instead of going on, with a tear standing in his bright blue eye, he would have turned in at the voice of the maiden, especially if the maiden's father had had a store of bread and cheese in the chalet. But that Alpine youth was

not practical. The pious monks of St. Bernard were, and none of them ever perished in the snow; but they did find this unpractical youth half buried in the drift of the avalanche, "lifeless but beautiful."

"There," says our practical friend, "what's the use of being beautiful if you are lifeless?"

And, as the meaning of the last three lines of the poem, about a voice falling from the sky "serene and fair," our practical friend gives it all up; he does not even ask the solution of the conundrum which it involves.

Now, the real fact is that one "visionary" man, in the highest meaning of the phrase, is worth a dozen "practical" men, and for the simple reason that there would be no practical men if there were no visionaries, as there would be no practical activity without high thought. The whole use of practical men—and they are never to be disparaged—is to make real in every-day life what the visionary men have first seen with their spiritual eyes.

The visionary is he who, before a foot of it is laid, sees a railway reaching from New York to San Francisco, over river and bay and lake and mountain and canyon. The practical men are the laborers who blast the rocks and bring dirt in the carts and wheelbarrows to make the grade and construct the road.

The visionary is the engineer who searches up and down a river, and at last detects the precise spot where a bridge should span the stream, and who at the same moment sees every block of stone which is to go into the abutments, and every piece of timber, iron, or steel which is to make the strings, the thwarts, the chessex, and the couplings. The practical man is the mason or the carpenter, or the laborer, who makes that vision a real, strong, safe passageway for loaded wagons or thundering trains.

Without these necessary practical men there would be no bridge over the river; but without the indispensable visionary there would be no bridge anywhere, and

no kind of employment for practical men, who must stand holding in reserve their most valuable powers until the visionaries suddenly say, "Put such a cottage there, and such a palace there, and such a church there, and such a warehouse there, and such a bridge there, and such a tunnel under yon mountain, and such a telegraphic cable under the ocean." At the command of the visionaries, the practical men find something to do, and they do it. "Your young men shall see visions," said the prophet, in one of the grandest passages in literature.

BLESSED ARE THE SEERS!

We owe them everything. It was a seer of visions who beheld the people of Israel led out from the house of bondage into the land which Jehovah had promised unto Abraham. The seer of that vision (Moses) would never have been able to endure the prodigious strain which came upon him when he had to carry all that people forty years about in the Sinaitic desert and organize a nationality which should revolutionize the ancient world of thought and action.

It was a seer of visions who heard, near the gates of Damascus, that Jesus who vouchsafed him such a vision of glory as enabled the young pupil of Gamaliel to organize forces which should revolutionize the modern world of thought and action. It was a seer of visions who went forth from his cell in the Erfurth monastery to begin the Herculean task of cleansing the fouler than Augean stables of mediæval Rome. It was a seer of visions who, standing on the western shore of Europe, gazed over the waters toward the West, and beheld a great land stretching where practical men saw only a waste of waters. America lay large and fair in the eyes of Columbus, alluring and attracting him long before his vessels beached themselves upon its unknown coast. The world had gone on without this addition of America but for that vision in some man's eyes, if not in the eyes of Columbus. It was one seer

of visions who beheld printed sheets before a type was made. It was another who saw boats and carriages propelled at rapid rates before any steam engine had been constructed. It was another who saw telegrams outflying the winds before the click of an instrument had been heard in the land. It was a seer of visions whose eye ran up and down from end to end of an ocean telegraph, and whose ear heard the nations' whispering to each other, and kissing each other through these thousand miles of ocean long before a strand of the cable had been formed. And in art as in science, literature, government, trade, and religion, it is the visionaries who pioneer the way for the practical men, and draw their heavier brothers forward by the songs they sing far up great heights and far away beyond great mountain ranges.

The Good Father knows, and only He, how much practical repentance, faith, self-denial, and grand, godly living have been created in hut and palace by the vision which John Bunyan saw in Bedford jail. Since Jesus ascended no history of actual personal or national transactions has had a hundredth part the influence which has been exerted on mankind by the simple narrative of the English tinker's vision of "Pilgrim's Progress."

Bunyan has done more for the world than Thucydides and Herodotus, than Tacitus and Livy, than Gibbon and Hume, than Rollin and Thiers, than Niebuhr and Dahlmann, than Prescott and Bancroft, and than all of them put together. For true religion that Dreamer has done more than any dozen "practical" preachers who have lived since his day. He enlarged the possibilities of practical preaching.

The general fact is that it is the men that see visions who make possible the existence of the work of the men who do deeds; and when "practical men" sneer at "visionaries," and when our current speech compels our lexicographers to define a "visionary" as "one whose imagination is disturbed," and "one who forms impracticable schemes," it is simply another instance of the clay

criticizing the potter. In every such case, so much worse for the clay.

It is because works of faith must precede works of righteousness that I would have the young men of America put themselves in such a posture toward the Holy Spirit of God that He may pour upon them the fulfillment of Joel's prophecy, "Your young men shall see visions." Think what a state of affairs would follow if all the Christian young men of the land went about, day and night, with their eyes full of visions of the greatest and wisest possible activities. What would they see by day and dream by night? They would see strong young men growing up into the most radiant manhood on wharf, in counting-house and bank, in shop and store, in drawing-rooms and on railways, doing everything as unto the Lord; men not slothful in business; fervent in spirit, serving the Lord;

MEN VALIANT FOR THE TRUTH in the earth; men whose sweetness did not impair their strength, and whose strength did not sour their sweetness; men who made all they could, and saved all they could, and gave all they could; men constantly trampling underfoot the fanatical doctrine that they were not to do good unless their hearts felt free to it; men whose work was a constant worship, and whose prayers gave them power to work; men on fire of love toward God and man, and kindling into holy flame every soul they touched; men ready to live and fit to die.

They would see these men in couples, in quartettes, in companies, in associations, in multitudes, in masses, prophesying, that is, finding grander things in the Word of God and in the heart of man, and proclaiming those discoveries. They would see the breathlessness with which other men would hang upon the words of these simple-hearted speakers, taking knowledge of them that they had been with Jesus, until the visions of God drew the eyes of the listeners from the pictures of sin, and they began to see the glory of God shining in the face of Jesus.

CHARLES F. DEEMS, D.D.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER VIII.

DEVELOPMENT OF BRAIN IN ANIMALS, BIRDS, ETC.—(CONTINUED.)

FROM the seventh to the fifteenth year, the brain increases in volume and density, but its growth is not so rapid as in the previous stages. At fifteen the epoch of puberty usually begins. This critical stage of nervous development is most interesting to the observer, its phenomena being so vitally influenced by, or dependent upon, inheritance, temperament, nurture, training, association, climate, etc. At this time remarkable development is noticeable in the posterior region of the head; it becomes fuller generally and more prominent at the basic parts. At the same time the character undergoes a marked change; there is more assurance and pretension in the manner of the boy, more sensitiveness and modesty in the demeanor of the girl; a desire, however, on the part of both to associate in the avocations of life, is marked, and courtesies and attentions to one another previously unknown are now instinctively rendered. The need of parental guidance and instruction in this period we shall not dwell upon here, as it is a matter universally recognized by the intelligent. If the emotions and passions assume a stronger phase in puberty, so do the intellectual faculties also, and they manifest the peculiar individualism of the youth, his tendencies to activity, his aptitude for usefulness. Now the development of the brain may be estimated, and those peculiarities of mind which will distinguish the character in manhood be safely described. In fact, it is at this time the skill of the cerebral physiologist becomes of the highest value, and fortunate is the youth whose parents possess a knowledge of the laws of brain-growth, or insist upon having him trained in accordance with the advice of a skillful phrenologist.

How easy it is for those ignorant of physiology to mistake cunning for intelligence, mere verbal memory for a sign of great capacity, timidity for modesty, etc.

And hence how easy for such to err most seriously in directing the education of the blossoming minds committed to their care. Without a solid basis formed of the principles of mental physiology, can education be much else than a muddle of arbitrary rules and regulations? Obviously not.

Between the eighteenth and fortieth year the brain of man attains its complete growth, *i. e.*, the intellectual and moral character is completely formed—the affectional or sentimental faculties especially exhibit the most strength in this period. There are few examples of men who after forty-five have performed great work or at least manifested great powers. The climax of mental development, which is reached at forty, is, however, more or less stationary. And this is dependent for duration, as may be readily conceived, upon constitutional and associated conditions—especially one's habits. Some men have shown great vigor and efficiency until past sixty, and there are rare instances of mental freshness and capability for useful labor of a high order in individuals who were octogenarians. Generally, however, after forty-five the brain begins to lose in vigor, while at the same time it increases in density. From that time the muscular functions, those of locomotion and of manual effort, decline in energy apparently in accordance with a law of nature which is applicable to the whole organism of man.

As regards the mental faculties, their changes with age vary in different individuals. In one it is sight that commences first to weaken; in another it is hearing which becomes less acute; in another there is an appreciable loss of memory. The decline in memory may be indicated under varying aspects: One person may show enfeeblement in retaining the names of places, another in recalling transactions of business or the subject matter of reading, etc.

From seventy years to the era of decrepitude the brain diminishes still in volume; its density or fibrous consistency increases; adhesions between the serous envelope and it are more frequent, and there are modifications in the color of its substance. After sixty years, diseases and affections of the cerebro-nervous system are more frequent than in the former periods of life, viz: apoplexy, softening, paralysis, which in themselves show the effect of age upon the most important organs of man.

Changes which occur in the structure and functions of the human brain are observed, for the most part, also in that of vertebrate animals. In birds the brain, as we have shown, develops very early; in many species the spinal column, the geminal tubercles and the neighboring parts situated at the base, have, in the earliest periods after the feathered being has emerged from the shell, the most solidity. If the skull of a chick but a day old be examined the considerable development of the cerebellar region will excite surprise. And this fact is noticeable in all birds

which can walk, run, and swim immediately after their birth. So also in the guinea-pig, hare, and other quadrupeds which are lively after birth, the occipital region is well filled out.

Experimenters of the school of M. Flourens have availed themselves of this fact for the purpose of making it serviceable in their attempts to demonstrate the

theory that the cerebellum exercises a marked influence upon muscular movements. Figure 230 represents the brain and spinal marrow of a very young guinea-pig; the development of the cerebellum is conspicuously marked.

Age does not appear to produce great changes in the volume and consistency of the bird's brain, which may be attributed, we will venture to remark, to the fact of its substance being more largely composed of fluid than the brain of animals.

The first days succeeding birth in kittens and dogs are almost entirely passed in sleeping and taking nutrition. At this time their brains are very soft and of a rose color. In the course of fifteen days, however, we find a notable growth and alteration in structure. In examining the skulls of two dogs of the same litter, one of which died when one day old, the other when fifteen days old, the difference of development was found to be very considerable; and in those skulls marked that of their brains. If the surface of the brain of a very young dog, say one two weeks old, be examined, the convolutions will be found to be distinctly traced in its structure, but the channels or sulci at that age are far from being so deep and marked as they are in the adult animal. At the end of the first month the brain shows development in this respect, the convolutions being more in relief, especially those which correspond to the lower mid-lateral regions of the skull, to the part just above the root of the nose, and to the posterior parietal region. The cerebellum does not increase in the same degree, although its central or vermiform region develops early. This is specially true of the cat. A comparison of the growth of the brain of a newly-born dog with that of a kitten will show a considerable superiority in point of cerebellar as related to cerebral volume on the side of the cat.

In the rodents, chiefly rabbits, hares and squirrels, the parts of the brain most developed at birth, or a few days thereafter, are those which correspond to the base of the skull, its middle frontal and anterior regions; the cerebellum, particularly in squirrels, has at that early period a marked development in relative size.

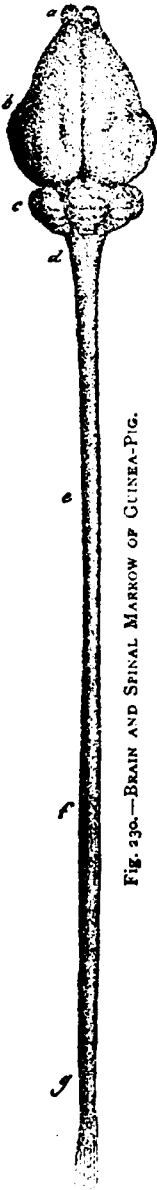


Fig. 230.—BRAIN AND SPINAL MARROW OF GUINEA-PIG.

WHY PHRENOLOGY SHOULD BE CLASSED AMONG THE SCIENCES.

THOUGH there are very many people who believe in Phrenology, yet there are some who persist in denying its claims and ridiculing its teachings. The only excuse that many of these people have is that they have never taken the trouble to ascertain what Phrenology really does teach, or to examine the evidence upon which it rests. They have, perhaps, become disgusted with some traveling charlatan who blends his exposition of the truths of Phrenology with mesmerism, table-rapping, vending of patent medicines, and anything else that would make a sensation or bring money into his pockets. They have not taken the trouble to separate the true from the false, but have satisfied their consciences and escaped the trouble of thinking, by passing an unsparing condemnation upon the whole thing. But the claims of Phrenology can not be thus lightly dismissed, and we have a right to examine the grounds upon which it rests before we throw it aside. The question is: Is it, or is it not a science? If a science, let us accept it, if we are fair-minded and honest; and if we can not prove it to be a science, we are at liberty to reject it, and not till then.

We shall have to consider what constitutes a science, what elements are necessarily present before any branch of knowledge can be dignified by this title. We find that a science must be systematic, general in its application, founded upon generally acknowledged facts, upon experiment and observation, and in the present utilitarian age, should be of practical application. Many of what are known as sciences fill these conditions to only a limited extent, and make up in arrogance what they lack in stability, while Phrenology, whose claims they would dispute, satisfies every demand, and has, in fact, been admitted to a place by no means contemptible among the sisterhood of the sciences by men most distinguished in the scientific world. It

thus seems late in the day to discuss or question claims so well founded, so universally believed.

In the first place, Phrenology is systematic. This can not be denied. Whatever may be urged against it, nothing can be said adversely on this score. All the mental functions are taken into account, arranged according to well-understood principles, treated of under well-ascertained laws. But it has been said that Phrenology is too systematic. System is what some people object to. They like hazy ideas; anything that is determinate is distasteful to them. They say that you parcel the mind off as you do your garden; here a bed of flowers, there a patch of cucumbers, there a hill of corn, etc. But the mind, they say, is one and indivisible. Well! who denies that? It proves nothing one way or the other. The same style of argument would prove that because we are each of us an entity—one personality—there should be no distinction between the hand and foot, the liver and the heart. Yet this is the kind of argument that some people advance in a triumphant kind of tone, and think that it settles the question. Arguments from metaphysics against Phrenology are not so very valuable after all. If they come in contact with the facts of Phrenology, so much the worse for the metaphysics. But why should there not be system applied to the mind? Should that order, that system, that regularity, that adaptation of the work to be done, to the agent to accomplish it, which, when shown in life, are regarded as the signs of a vigorous intellect, be denied to the mind, itself the creator of all this beauty? Order everywhere except in the orderer! Phrenology is systematic, and thus satisfies the demands made upon a science, though it be distasteful to preconceived notions and hazy prejudices.

But something more is required. A science must possess generality. It must

not be a hodge-podge of mere particulars, a jumbled mass of disconnected information. It must be something that you can put your hand upon and apply to any given case, knowing that it has that within itself which will exactly meet the demands of the case. It must be, not the steel and iron and wood that make up a tool, but the tool itself, perfect, complete, adjusted. Here, too, Phrenology satisfies the demands made upon it. It is general in its application and in the wide range of phenomena which it embraces, or, as the logician would say, in its extension and intrusion. Some sciences refer to only a limited class of subjects, and take in a narrow range of phenomena. Not so Phrenology. It refers to every man in the universe wherever he may be, and gives its decisions with unerring accuracy. All the different races of mankind are embraced, and in the correspondence of the distinguishing characteristics of these races with the results gathered from phrenological theories, do we find a strong proof of their genuineness. Then look at the phenomena embraced. All mental operations, all the acts of intellection, of volition, of emotion are included. And the same principles, the same rules, the same method govern each case. This is true scientific generality, and such Phrenology possesses.

We have shown that Phrenology possesses the form of a science. But there must be something more than this. Its foundation must be good and firm. You will remember that a science must be based upon generally-acknowledged facts—upon experiment and upon observation. Many sciences rest upon one alone of these foundations. But when all three unite, we have evidence which is irresistible, and in the case before us they do unite.

First, there is the generally acknowledged fact proved by the researches of the most eminent biologists, and the testimony of leading scientific writers, that the brain is the organ of thought and feeling, and that in this brain certain

functions are localized, that it does not require the entire brain to perform any single mental operation, any more than the whole muscular system is called into play in raising the arm or any other simple action. If it be admitted that the brain is not single, but a cluster of organs, or is at least capable of acting in part as well as in whole, the most important point in the entire controversy is conceded. The proof that such is the case rests upon facts which every one of you knows and readily admits, and the logical conclusion from these facts is irresistible. Thus the first kind of evidence is had. It is hardly necessary to enumerate these facts, as the readers of this journal are probably familiar with them, but we might just mention a few. There is the analogy of the different organs of the body, each of which has only one office to perform, and performs it invariably and without exception. Is it likely that the brain will prove an exception to an otherwise universal law? The different mental powers do not all come at the same time, and vary in intensity when they do come. Dreaming, injuries to the brain affecting one power and leaving others unimpaired, partial insanity, all lead to the same conclusion. The familiar state of mind in which the different feelings contend against each other would be an absurdity and an impossibility if the brain were only one organ. If the brain, then, be what reason clearly points out, there can be no difficulty in the next step, which is that if the localities of these separate organs, or parts of the brain, be once ascertained, we have a means, more or less accurate, of determining the tastes and character of the individuals, and that, other things being equal, the relative strength of the propensities will depend upon the relative size of the organs. There is nothing absurd, moreover, in supposing that the outward shape of the head will conform to that of the brain. Of course there are modifying circumstances and surroundings, education, habits of life, society, etc., which will have a part, and a

part by no means unimportant; but these are questions of detail, for which full allowance has been made, and which do not affect the scientific value of the theory. It is, however, upon these questions of detail and not upon broad general principles that the opposition to this science has been based, and assailed, too, with what weapons? Often with ridicule, which is supposed to supply the place of proof. We can find just as much to ridicule in many of the leading theories of physical science of the present day: for example, that of an universal elastic ether pervading all space, yet without weight or appreciable resistance, while at the same time perfectly rigid and elastic; that of the vibratory motion of heat, or Newton's great law itself of gravitation, which is a flat contradiction of one of the fundamental laws of physics, and yet we believe them. Ridicule proves nothing. But we can show that here, as in the preceding steps, we have the testimony of generally admitted facts on our side. In fact, there is scarcely a person in the world who does not admit that there is some connection between the shape of the head and the mental powers. What else does this common talk about an intellectual head mean? How is it that in the pictures of the great the artist paints the high, expansive brow? How is it that we associate intellectual power with some heads, and naturally expect to find them when brought into contact with men of scholarly attainments and mental grasp? How is it that as soon as we see them, we set down some people as rascals and sneaks, and others as upright and honest, if not that we have a belief, perhaps more or less unconscious, in the facts of Phrenology? We may not understand the particular developments, but we take in the general effect. If we understood Phrenology better, our decisions would be more correct. We thus find that Phrenology, in its completest developments as well as in its more elementary truths, rests upon the testimony of generally admitted facts. If we proceed farther, we will find also that it meets the

requirements of experiment and observation more fully, perhaps, than any other science—more fully, at any rate, than any other mental science. These have been its methods from the very beginning. It has first ascertained its facts by observation, and then verified them by experiment, and back of all this there has been a philosophy which removes the results far from the domain of mere empiricism. If we read its history, we find that it was not formulated, as is too often the case, the theory being first constructed and then facts found or invented to bolster it up. No. First there were the facts, and the life of its founder was spent in close observation. The results of these observations were confirmed by experiment, and are still continuously and daily being confirmed, and as observation and experiment progressed, the theory emerged, to be still further tested and still more completely verified. This is the history of all true science, and it is the history of this science. After it has passed through these tests, after it has grown by these methods, we may accept it unhesitatingly and apply it fearlessly.

Phrenology, then, we have shown to be scientific in its evolution, which was by observation and experiment; scientific in its methods, which are general and systematic; and scientific in its results, which are universally applicable and, so far as it has been developed, universally correct.

There is another point to which we referred in the beginning—the question of practical benefit—that question *cui bono* asked by thousands of voices in all parts of the world respecting every conceivable subject. In many an inquiry and scientific speculation, in which years of time have been spent, and money and health lost, and things more precious still, faith and hopes which money could not buy, the answer must be *none*, but in this case it is *much* in every way. As the principles of Phrenology spread—as its influence widens—as its warnings and instructions are heeded, we may expect more perfect knowledge of ourselves and of

our fellow-men, fewer mistakes in life, fewer incompetent persons filling positions for which they are totally unfit, more health, more happiness, more harmony in all the relations of life. And still more, knowing ourselves as we have never before known ourselves, understanding the secret springs of character which have tinged our conduct, we shall see our deficiencies and needs, and know what is necessary in order to develop a full, perfect, complete, symmetrical character. Then the education of children will be conducted in a proper manner, and their character become something else than the uncertain product of caprice, affection, and passion, alike unreasoning, and alternating by turns. We do not claim for Phrenology all that has been claimed for it by some men who have never been regarded as the true exponents of its teachings; but we do claim for it all the results that have been mentioned, and many others as important as these.

Phrenology has been assailed on various sides. Some say that it makes man a mere automaton, the sport of his functions, impelled by them, with no power, no responsibility. But this is not the case. These organs are not the mind; they are the instruments of the mind, and over and above all is the soul, the personality, the immaterial principle, and it does not destroy this to suppose that it acts through one organ to accomplish this. Our responsibility, our individuality, all that gives life its dignity and importance, remain. That there is difference in character, difference in intensity and direction of mental power, difference in moral sentiments, every one admits, and Phrenology claims no more. It shows, however, where the seats of these powers are, and what is necessary to control and regulate them. Phrenology is a true science; it fulfills, and fulfills completely, all that is demanded of a science. It has been tested, and it has stood the test. In nothing is there less chance for fraud, more opportunity for detection, than in this science. If it had been false,

it would have long ago forfeited the respect and confidence of all thoughtful people. Its existence and success are a proof of its genuineness. If we neglect it, we do ourselves a wrong; if we accept and apply it, we will prove ourselves to be not hare-brained visionaries, but wise and practical people.

J. H. C.

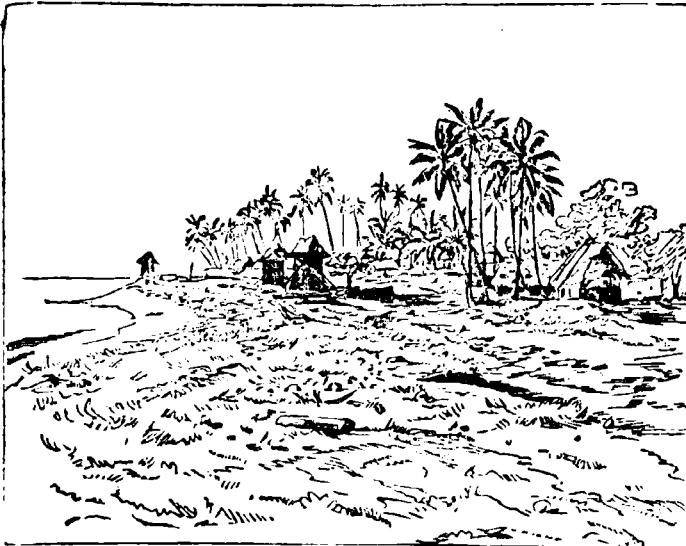
LIFE OF THE PATRICIAN IN ROME.—

When Horace and Juvenal walked the streets of Rome, and drew from life the thoughts that come to us now with the same force and vividness with which they struck the literati of the empire, Rome was mistress of the world. Her armies held in check on the northern border the ravages of savage Goths and Huns. They held with an iron grip the eastern provinces of the Empire, and laid on them day by day a heavier tribute. In the south the Roman soldier scorched and burned under the blazing sun of Africa, and fought and died for the glory of the Roman name, and the extension of the Roman Empire. In the city of Rome, the patrician, in his palace of marble, with rooms whose walls were frescoed in rich colors, and hung with heavy silken draperies, opening on a court cooled by the splashing of a fountain, and shaded by the foliage of plants of tropical growth and beauty, lolled at his ease on downy couches, wrapped in embroidered and jeweled robes, breathed in an atmosphere of most fragrant perfumes, drank himself into a heavenly oblivion with delicious wines, watched with indifferent eyes the sensual movements of fair dancing-girls, surrounded by obsequious flatterers, served by obedient, bending slaves, and listened and fell asleep to the soft music of the lute, and sweet songs of caged birds. In the street, the litter which carried a noble lord or senator was preceded and followed by a train of slaves, who cleared the way with shouts and blows for their patrician masters. The plebeian toiled and labored from early morn till dewy eve for a mean pittance. If he succeeded in keeping body and soul together, and maintaining a decent covering for himself, he was rich among his fellows. The annual compensation of a laborer in Rome was \$44.—*Argonaut.*

THE TONGANS.

ONE of the important groups of Islands in the great Polynesian section is Tonga, popularly known as the Friendly

Cook, and although fierce and cruel in many respects, there was more humanity in their treatment of strangers than was generally shown by Polynesians.



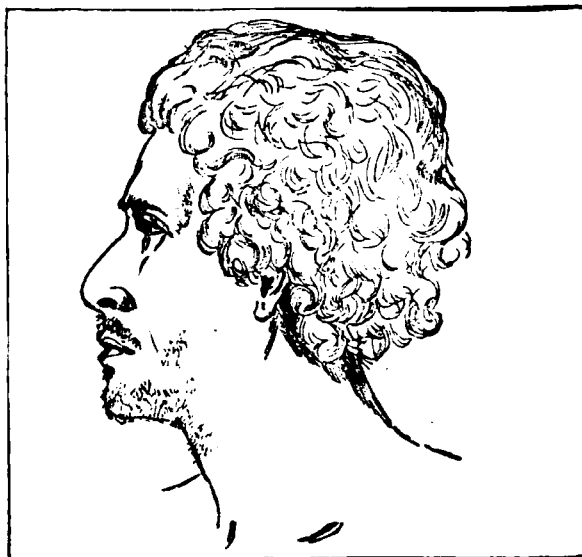
A TONGAN VILLAGE.

The organization of Tongan society is much more complex than is customary among uncivilized peoples. There are two distinct orders, the civil and religious, the latter taking the precedence. In the civil order from How, or king, down to the Tovas, or menials, there are five grades or ranks, while in the religious there are three, the lowest rank being composed strictly of the priests. Strangely

enough the first and second rank in the religious division are each held by but one man, who is regarded as a de-

Islands. The Tongans are geographical neighbors of the Fijians, but entirely different in racial characteristics; the latter are Papuans, with the very crisp hair, very dark and rough skin of those people, but the Tongans are much lighter in complexion, approaching often the whiteness of the European, and their hair, though coarse, is not by any means as woolly. Their heads are larger, higher, and more symmetrical, and their faces much more evenly formed than the Fijians, being on the whole a singularly handsome people in physical organization. They are, therefore, mentally superior to their Papuan neighbors, and show that superiority in nearly every feature of their life, in peace and in war. They were not cannibals like most of the neighboring tribes when visited by Captain

enough the first and second rank in the religious division are each held by but one man, who is regarded as a de-



HEAD OF A CHIEF.

scendant from the gods, and to him must even the king bow with great humility.

The women enjoy a singular freedom,



A YOUNG WARRIOR.

being by no means oppressed or compelled to severe toil, like those in most barbarous nations; consequently their bodies are more symmetrically formed and their movements more graceful than those of women who are merely drudges. They perform the lighter tasks of the household, such as preparing *gwatoo* or the bark which is converted into the garment worn in folds around the waist, plaiting baskets, making crockery, etc.

Besides their religious ceremonies and feasts and dances they have meetings at certain seasons where there are games, wrestling and boxing matches, and other doings which are analogous to the athletic sports of civilized life. Their boxing and wrestling are conducted on the principles of fair play. A plebeian meets a chief on a perfectly equal ground in these matches, and he who displays ill-feeling when beaten is

looked upon as a surly fellow. The women frequently join in the games and boxing matches, and are proud of their physical strength and beauty. The accompanying illustrations are from authentic sources. The head of a chief shows a profile of no mean proportions, and intimates susceptibility to civilized training and development. In fact, the majority of the Tongans have accepted Christianity, the Roman Catholic Church having long ago established missions upon their islands. Other denominations, however, have sent missionaries to them. Many of the natives have learned to read and write in both their own language and English, and some have made good progress in arithmetic, geography, and other branches of education.

In the chief's daughter and the warrior we have examples of the costumes which are worn by the men and women. Some slight distinctions are introduced to indicate rank, but these are matters of ornament rather than modifications of the style of wearing their scanty garments.

The Tongan Islands are largely of volcanic origin, their surface being broken by the remains of many extinct craters. Otherwise the soil is fertile and produc-



DAUGHTER OF A CHIEF.

tive of the usual variety of tropical vegetation, among which is the bread-fruit tree. This is very highly prized by the Tongans, and much care is taken in its culture and preservation. The landscape view shows the general character of the shore of an island; in the background

among the palms is the straggling village of Noatam, one of the more important Tongan communities.

[ACKNOWLEDGMENT.—For the cuts which illustrate the above sketch we are indebted to the courtesy of Harper & Brothers.—Ed.]

THE POETRY OF RALPH WALDO EMERSON.

PART I.

IN the preface to his compiled volume of poetry, "Parnassus," Mr. Emerson gives this memorable definition: "Poetry

a nation, save its poetry, painting, sculpture, and architecture."

Of Mr. Emerson's poetry good author-



RALPH WALDO EMERSON AT FIFTY-FIVE.

teaches the enormous force of a few words, and, in proportion to the inspiration, checks loquacity. It requires that splendor of expression which carries with it the proof of great thoughts; great thoughts insure musical expressions. Every word should be the right word!" Verily, poets are solid builders. A profound thinker has said: "Nothing remains of

ities have furnished these criticisms: Margaret Fuller argues: "His imagery wears a symbolical air, and serves rather as illustration than to delight by fresh and glowing forms of life. His poems are mostly philosophical—which is not the truest kind of poetry. They want the simple force of nature, and, while they charm the ear and interest the

mind, fail to wake the far-off echoes in the heart." Lowell thinks Mr. Emerson has "A Greek head on right Yankee shoulders, whose range has Olympus for one pole, for t'other the Exchange. Some poems have welled from those rare depths of soul that have ne'er been excelled." This opinion is from Whit-tier: "No living poet of the English-speaking tongue has written verses bearing more distinctly than his the mark of immortality." Walt Whitman declares: "He is not best as poet. He is best as critic, or diagnoser." More boldly says one in the *North Am. Review*: "He is a chartered libertine, who has long exercised his prerogative of writing enigmas both in prose and verse." Poe remarks: "He belongs to a class of gentlemen with whom we have no patience whatever—the mystic for mysticism's sake." Mr. A. Bronson Alcott tells us in one of his lectures: "He keeps a commonplace-book, or diary. If he sees a sentence that pleases him while reading, he notes it down; if he takes a walk and sees anything that interests him or suggests a thought which he wishes to preserve, he puts it down. How then to arrange and string these pearls? That is his art. He copies them on paper and sees how they will come together. One jewel after another is examined, until he finds one which he thinks will do in a certain place."

After these forerunners it may not be amiss to range some of our poet's work within the controversy.

"Daughters of time, the hypocritic days,
Muffled and dumb like barefoot dervishes,
And marching single in an endless file,
Bring diadems and faggots in their hands.
To each they offer gifts after his will,
Bread, kingdoms, stars, and sky that holds them all.
I, in my pleached garden watched the pomp,
Forgot my morning wishes, hastily
Took a few herbs and apples, and the day
Turned and departed silent."

"Hast thou named all the birds without a gun?
Loved the wood-rose and left it on its stalk?
At rich men's tables eaten bread and pulse?
Unarmed, faced danger with a heart of trust?
And loved so well a high behavior,
In man or maid, that thou from speech refrained,

Nobility more nobly to repay?
O, be my friend, and teach me to be thine!"

"When sea and land refuse to feed me,
'Twill be time enough to die;
Then will my mother yield
A pillow in her greenest field,
Nor the June flowers scorn to cover
The clay of their departed lover."

"The horseman serves the horse,
The neatherd serves the neat,
The merchant serves the purse,
The eater serves his meat;
'Tis the day of the chattel,
Web to weave and corn to grind;
Things are in the saddle,
And ride mankind."

"The sense of the world is short,—
Long and various the report,—
To love and be beloved;
Men and gods have not outlearned it
And how oft so'er they've turned it,
'Twill not be improved."

An admirer asks: "Is he who writes these things a poet? And where, within limitations, can we find such another among us?"

With all his manifest delight in Orientalism Mr. Emerson is neither a Persian imam, nor a Hindoo pundit. His knowledge of Asiatic lore was evidently obtained through German and English mediums. But the substance of the teachings of Saadi, Hafiz, and Nizami have entered his being, and hold him in constant tutelage. As we lay down the highest rendering of Owar Kbayyaur, the Persian bacchanalian of 800 years ago, and immediately recur to Mr. Emerson's lesser versions, we notice how some of their flavor has departed, and their individuality bears a "second-hand" character. This exception, however, will not apply to his best poems. Does not this stanza, taken from Owar at haphazard, read as if Mr. Emerson had penned it?

"The moving finger writes; and, having writ,
Moves on; nor all your piety nor wit
Shall lure it back to cancel half a line,
Nor all your tears wash out a word of it."

Here are some of our author's own critical summaries, that serve to illustrate his taste and judgment: "Moore's poems are external, and have only a superficial melody. Scott was a man of

genius, but only an accomplished rhymers and maker of the ballad. Wordsworth's best poems evince a power of diction that is no more rivalled by his contemporaries, than is his poetic insight. Byron has no sweetness, nor solid knowledge, nor lofty aim. He had rare skill for rhythm and unmatched facility of expression. Tennyson has felicity in all poetic forms, and is unmatched in rhythmic power and variety." Among American bards our author shows no affiliation with either Poe or Halleck. For a day only Walt Whitman succeeded in winning his suffrage. Indeed it was some of Mr. Emerson's rhythmic ventures, like these, that made possible such a volume as "Leaves of Grass" in our literature:

"let man of cloth
Bow to the stalwart churls in overalls:
They are the doctors of the wilderness, etc."

"In sooth red flannel is a saucy test
Which few can put on with impunity."

"Man was made of social earth,
Child and brother from his birth,
Tethered by a liquid cord
Of blood through veins of kindred poured, etc."

To myself I oft recount
Tales of many a famous mount,—
Wales, Scotland, Uvi, Hungary's dells,
Bards, Roys, Scanderbers and Tells.
My branches spread Italian,
English, German, Basque, Castilian,
Mountain speech of Highlanders,
Ocean tongues to islanders,
To Fin, and Lap, and swart Malay,
To each his bosom-secret say."

Thus rambling and alluding to things promiscuous, we do so in the belief that they afford additional insight into the nature and quality of our author's muse. As the record has it, the poet's earliest versions were printed in *The Dial*, a Boston magazine. In 1846 was published his first collection of "Poems," fifty-nine in number. They include several personal poems, two or three paraphrases from the Persian, and no sonnets. Twenty-one years later, in 1867, appeared "May Day and other Pieces," comprising forty-seven poems proper, and a number of distiches, quatrains, quinquains, etc. Among them are one personal poem, sundry translations from Michael Angelo

and the Persian, and no sonnets. In this second venture all the mannerisms of the former volume are repeated without stint or modification. In fact "May Day, etc.," begins where "poems" left off, and leaves off where the early collection began. The author had in no instance given away to the influence of criticisms. In 1874 came from him "Parnassus," a compiled collection of miscellaneous verses. This volume, indeed, raised high expectations, but proved a disappointment. Some selections appeared sadly curtailed; others mutilated. None of Swinburne's poems were contained therein. For this reason it was unfortunate that the English singer should have posted the American as "a blockhead," in the columns of a British magazine. Time ago Mr. Emerson facetiously remarked: "The first person who called another 'puppy' or 'ass' was a poet—perceiving in the individual contemplated a spiritual aptitude to bark and brag."

Our author's life-history may be thus briefly narrated: He was born in Boston in 1803, was graduated at Harvard, taught school for five years, then entered the ministry of the Unitarian denomination; thereafter became lecturer and essayist, and later revealed himself a poet, although he had attempted verse in his student days. For years past he has not been training in the "poet-business," nor run his rhythmic grindstone by water power, but loyally awaits the visits of his muse, within the umbrageous shelter of a New England farm.

Turning from biography to criticism, let us say, first of all, that Mr. Emerson is not always a harmonious singer: his ear is imperfectly attuned. The lyrist's graces, even those that are obligatory, are charity practiced: abundance of bad rhyme and halting rhythm deform the beauty and effect of some of his best passages. Among others instance:

"Strong Hades could not keep his own,
"But all slid to confusion—(Uriel.)"

In "The House" we learn of the muse that—

"She lays her beams in music,
In music every one."

Alas, that he who wrote these lines should ever permit the muse to jingle, or appear dropsically diseased and club-footed! Again, attempts are made to sound the unfathomable, to measure the illimitable, to reach the unattainable; several of the poet's long versions are fragmentary, and more or less incoherent; a deficiency in emotion, sentiment, and passion is to be regretted; over-fondness for allusions to such heroic characters as Cæsar, Cromwell, and Napoleon are noticeable.

Among quatrains we find *Sursum Corda*, and another with a Greek heading, of *five* lines each. Droll titles are frequently chosen, like: *Sursum Corda*, *Suum Cuique*, *Heu Cras Hodie*, *Wald Einsamkeit*, *Hush*, *Musketaquid*, *Thine Eyes still shined*, *Climacteric*, *The World Soul*, *Each and All*, *Initial*, *Daemonic* and *Celestial Love*, etc.

Of archaic words and strange expressions we have: *tortest*, *fringent*, *soovan*, *groined* (a verb), *rede*, *Adamhoor*, *clean jump*, *to suney*, *what boots it*, *leopard colored rills*, *light which eats the dark*, *the flower's tiny sect of Shakers*, *ostrich-like forgetfulness*, *hyacinthine boy*, *ear-shot*, *pleachéd*, *convenance*, *sitpast*, *sooth-fast*, *fire-seed*, *ensample*, *ill-betted*, *penal-worm*, *savage maples*, *Ethiops sweets* (for blackberries), *harp-like* laughter.

Here the author's ideas shoot over our heads:

"*Evil will bless and ice will burn* (*Uriel*)
"Who drinks of *Cupid's nectar-cup*
"Levels downward, and not up (*Tu Phed*).

Surely a poet may not rouse us by singing drowsily to the time-beat of a rocking-chair; nor should he cruelly mystify his lovers with paradox and hieroglyphics. We long since learned that Mr. Emerson's verses must be read warily and with care. Their meaning is frequently concealed by a *dearth* of verbiage. At his best our author's methods of presenting familiar things are truly novel and impressive, and his deductions

startling, in mood never morbid, but by turns quaint, facetious, and profound. His teachings are not deformed by hollow ethics, cheap morality, or scriptural platitudes. Impatient of word-finery and the trickery of art, smooth expletives and graceful line-extendors are to this substantial thinker an abomination not to be endured. Such an author is, indeed, a living protest that the popular gods are not always the true gods. What he has given is the irrepressible outcome of his convictions, promulgated only for its own sake. And we are quite certain he would never condescend to prepare or pre-study the effect of his offerings on the acclamatory susceptibilities of an audience. WM. WEIDEMEYER.

[To be Continued.]

FROM THE GERMAN.

A LITTLE bluebell
Peeped out of the ground,
At the lovely vale,
So green around.
Came a little bee
And kissed her free,
So blissfully,
That happy morn;
Sure they must be
For each other born.

LYDIA M. MILLARD.

"OLD ABE," the famous war eagle of Wisconsin, whose name is known to almost every man, woman, and child in the United States, died April 2d last. He was about twenty years old, and obtained his national reputation by having served with the Eighth Regiment of Wisconsin Volunteers during the war, and always at the front in the midst of the fiercest of the fight. In fact, he may be said to have participated in over thirty battles. After the discharge of the Eighth, "Old Abe" was carefully kept by State authority, yet doing constant duty as a "relic," and it is computed that he has earned \$80,000 for the various charitable institutions which have had him on exhibition.



"DEPLORES NINCOMPOOPS."

SUCH are the words in which one of our daily newspapers announces its attitude toward a particular class of the community. It "abhors fraud, pities fools, and deplores nincompoops of every species." The two last-named might easily be included in one word, as there is no difference between the Saxon fool and the Latin *non compos*; still, as it stands, it is forcible and strikingly charitable. It deplores, not despises.

But who are the fools, and who decides that they are such? Nothing is more characteristic of the average human being than his disposition to find fault with other human beings. Each one carries his own particular tape-measure, with which he confidently and complacently gauges the ability and capacity of every one he meets. We mentally sniff and scoff at others oftentimes when we are not at liberty, or indisposed to take the trouble, to express our sentiments. Oftener, however, it is not the least trouble in the world; and we state in the most glib and cheerful manner that "he was such a fool to marry a woman so much his inferior, or to educate his children in such a fashion, or to spend his time on such an invention, or to invest his money in such a way." Yet by what standards and from what point of view do we judge him? "I would not do so," is about as sound a reason as we could give for our ready condemnation. The deduction from such a syllogism is obvious. "I hold a certain opinion; John Smith does not; therefore, John Smith is a fool." Absurd as is this declaration, it is the only formula on which we can base many of our judgments of men. Strange how seldom it occurs to us that in their minds the position is in all probability reversed, and we

appear to them even greater fools than they seem to us.

Oftentimes the man so disposed of, weighed in the balance of another man's opinion, and coolly set aside, might well inquire, "Who made you a ruler or a judge over me? Why am I, honest Republican, Methodist, homeopathist, to be called a fool because I refuse to vote your ticket, go to your church, or swallow your medicine?" We are loth to say, Think honestly, intelligently, independently, whether you agree with me or not; but, Think as I do, or be hanged to you! is the spirit in which we appoint ourselves critics and censors. We despise instead of deplore.

Yet, after all, it is not so often our equals as our inferiors that we look upon as fools. The hardest-headed and most aggressive individual may have occasional glimpses of the truth that his opponent, of equal culture, may have reached his conclusion by as sound and sensible a process as his own. Not so, however, when the culture is less or there is none at all. 'Slow, stupid, blundering, vicious people—these are all, indiscriminately, "fools" to the more fortunate ones of the race.

The poet who has set life to a divine melody and made the world sweeter for his singing; the artist who has striven to express the soul of things on canvas or in marble; the enthusiast who believed in high possibilities for the race and devoted his life to accomplishing them; the martyr who has faced death for an ideal of honor or humanity—these, in the days of reverie preceding action and success, have been denounced as fools, visionaries, dreamers, one-idea men, rudely hustled out of the way of the drivers of wagons, the sellers of soap or shoes, the builders

of houses, the engineers of railroads. Their life was apparently useless, vacant, superfluous. There was no room for it in the crowd.

Our civilization is like a great fire on a sacrificial altar, which must be incessantly fed, lest the flame die out and the gods fail to be appeased. It demands the best that men have to give it of soul, body, and estate, of time, attention, and interest. The most symmetrical buildings, the most perfect machinery, the speediest locomotion, the grandest eloquence, the most finished literature, the finest art, the deepest science—nothing less will answer the enormous requirements of this educated, appreciative, ambitious nineteenth century. Sealed and open proposals are in order for the highest quality of work, play, and brains. The man who offers the best in the quickest time and on the cheapest terms, is the man who commands the market and succeeds in his business enterprises and social life. There is much to be done, great incentives toward doing it, great rewards when it is done.

Spiritually, "the race is not always to the swift, or the battle to the strong." Physically and socially the world contradicts the spiritual teaching. The soundest health, the strongest body, the clearest brain, the sternest will are the endowments which, as a rule, give their possessor a foremost place and chance. It is true that "nothing is so successful as success." The man who has money can afford to spend it to make more. The prestige of a happy hit in dramatic art, mercantile matters, literary affairs, gives the individual accomplishing it unlimited opportunities for its repetition. He secures respect and confidence. Men wait upon him, defer to him, trust him. Fortune favors the fortunate no less than the brave. To him that hath is given, and thereby is the Scripture fulfilled.

Whatever arguments and dissensions may be generated by the technicalities of a new and aggressive science—"protoplasm, persistent types, origin of species, and the physical basis of life"—there can

be but one opinion drawn from all experience and observation as to the "survival of the fittest." The world is in a hurry. Rush, scramble, competition, are the characteristics of the time. It is "Every one for himself, and the —" Prince of Darkness appropriate the individual who perambulates at the termination of the procession. It is inevitable that some should be trampled underfoot in the careless crowd, which, eager to get ahead at all hazards, looks neither to the right nor the left. We call these unfortunates, "fools," pass on and forget them. But it is easier to call a man a fool than to help him to be anything else.

"The greatest of all is charity," says the Book, which has stood for ages as the synonym for justice, wisdom, and humanity. "The hardest of all is charity," says the world, which is impatient and intolerant with those who most need it. Yet this difficult human duty is the most vital element of human ethics as well as of the Christian religion. The profoundest truth that Christianity was ever set to teach was, that the greatest of all things—greater than the eloquence of men and angels, the gift of prophecy, the understanding of all mysteries and knowledge—was charity. The grandest work it was set to do was to create among hard, selfish, worldly men the spirit of charity "which never faileth, which beareth, believeth, hopeth, endureth all things." And where can its exercise be more necessary and profitable than among the unfit, the morally and spiritually diseased, crippled, paralyzed, those who lag behind in the race, who stop short from weakness or discouragement, or who are willing to cut the throats of those who get ahead of them.

Years ago, a clear-headed, large-hearted clergyman of the Church of England made his name as familiar in this country as it was on the other side of the Atlantic, by a series of essays on topics of wide and general interest. To a younger generation of readers he is somewhat slow and old-fashioned; but the men and women who were young men and women

twenty years ago, will never lose the impression made "Concerning Veal, Concerning Things Slowly Learnt, and above all, Concerning People who carried Weight in Life, with some Thoughts on those who Never had a Chance." There is unutterable pathos in this last title, appealing to every heart in which the milk of human kindness has not quite run dry. It brings before the mind's eye an almost endless procession of the physically, mentally, and morally disabled, and has in it the spirit of a benediction for all the sad, sinful, suffering ones with which the world is filled.

Theoretically, most people believe that the sins of the parents are visited upon the children. They believe it, because they believe the Bible, which says so, or because they have seen practical demonstration of its truth. The study of heredity is doing much to teach the race that perhaps neither the man nor his parents sinned that he was born blind, but some remote ancestor for whose existence we can not hold any one responsible. But even the intelligence which recognizes this great law is slow to extend its charity or help to those who are under its dominion.

The world is full of men badly born, badly brought up, or many times not brought up at all—a negative neglect not always worse than the positive injury. The lame, the halt, and the blind appeal to our physical sympathy. We pity without condemning them; we deplore but do not despise them. Our hospitals and asylums give eloquent and practical solution to cases of this kind. Yet what chance has the lame, halting, blinded spirit, the feeble, deformed soul? Surely the need of the sick soul is as imperative as that of the body—much more so if one estimates the greater power of evil possible to the man with murder in his heart, than to the one with rheumatism in his back. A lame leg, or the loss of a leg altogether, is of less account than a hasty temper, which throws the man down at every step of the way. A withered arm is less hurtful than the be-

numbed conscience, which makes its owner a moral pestilence. A hump on the back looks insignificant beside the invisible burden of mistakes, regrets, and self-reproaches which many cowardly spirits drag along the highway of life. Many men are wicked only as they are weak. They are the negations of society, a dozen of whom could not make one affirmative, yet who always manage to create a vast amount of confusion and trouble.

It is a feeble shifting of the responsibility to declare that the dunce, or the sluggard, or the criminal "has only himself to thank," that he "must take the consequences," that "he has made his bed, and must lie on it." All this is true, and the amount of sympathy needed is in proportion to its truth. No power on earth can prevent him from taking the consequences in some form or other, though very likely not in the one we think most suitable or desirable. Perhaps the best thing we can do for him is to let him lie on the bed he has made, if it is not our anger, or obstinacy, or revenge which keeps him there. The highest charity does not always take the form of the tenderest treatment. It may be severe, uncompromising, apparently merciless, yet only so as is the surgeon's knife, a very different thing from the soldier's sabre.

Let those who can believe in a life that is to come, in which the life that now is will find explanation and recompense; in which mistakes will be prevented as well as rectified; things adjusted to harmonious relations, in which the individual can rest secure and satisfied. It is inhuman to disturb such faith, for it is often the only thing which makes life tolerable. But in the meantime and for this world, no man, whether skeptic or Christian, can ignore the claims made upon him at every step of the way by those who wear no labels around their necks, use no crutch, hold out no hat, but who, nevertheless, are spiritually starving or stumbling for the want of sympathy and encouragement from the active and pros-

perous people who pass them on the way. In the exercise of charity is found solution for many enigmas; compensation for many hindrances, hurts, and losses; patience with blundering, forgetful, careless souls; inspiration toward the best, because the most liberal, tender, and sympathetic manhood. Intolerance and hatred has built prisons, forged chains, invented the rack, and burnt men at the stake. Love has opened the dungeons,

broken the fetters, put out the flames. It pities as well as preaches and prays; it lifts up as well as points out the way; it comforts even where it must needs condemn; it gives food as well as philosophy. So far as peace is better than war, light better than darkness, liberty better than bondage, so far is the charity which helps and strengthens, a better thing than the judgment which condemns and destroys.

C. B. LE ROW.

A NEW DEPARTURE.

"WHAT a delightful satisfaction it is," said Eldred Holden, "to give away money in a good cause. The gratitude received in return, is something on which a man can live and be happy."

The man who uttered these words had just filled out his check for ten thousand dollars, and placed it in an envelope addressed to the treasurer of a society for ameliorating the condition of the poor.

"That money," he soliloquized, "will be enough to enable them to finish the west wing of their new building, which will add immensely to the comfort of the forlorn and destitute creatures for whom the society is so liberally providing."

Eldred Holden was young—at least, not very old—only thirty-eight, and unmarried. He had inherited a fortune of over three hundred thousand dollars. His parents and other near relatives were dead, and the only use he had had, so far as he could see, for the most of his large fortune, was to devote it to certain objects of public and private benevolence. He had been reared in the full and unrestrained enjoyment of every luxury that a refined and cultivated taste could require. He had no inclination, however, and had never shown any, to spend money in either large or small sums, for the sake of himself, beyond what a strict and prudent regard for his comfort and welfare required. His personal expenses had never exceeded at most three thousand dollars a year; the latter sum having been reached only on certain special

occasions when he traveled abroad, not for his own pleasure, but to learn how money could be used in certain charitable directions.

To spend money on himself, for things not actually needed, he regarded as not only wrong in itself, but the very thought of doing so disturbed him, for it would interfere with the one cherished purpose of his life—to make his money go as far as possible in the way of relieving the wants of the poor and destitute. As for active labor or effort, designed to add to the large fortune he had inherited, no such thought had ever entered his mind. In early life, his health had been rather feeble, and his parents had determined to bequeath to their only child the luxury of a life free from personal care. He had early developed a strong love for giving away money; and the greatest trouble he had experienced in youth was when he discovered that his weekly allowance was exhausted long before the recipients of his bounty had received as much as they were ready to accept.

In view of the charitable disposition which his son exhibited, old Mr. Holden had advised Eldred to be careful not to give away any more than he could afford. He had no reason to suppose that any desire to add to his fortune in any other way than by keeping it safely and profitably invested would enter the mind of his son; nor did it seem likely that he would be inclined to take upon him the cares of a family. He had one love, and

but one—to supply the wants of as many as he could of those unfortunate people who were unable to provide for themselves; and that love was enough, the young man thought, to fill his whole life.

"That check will be a great surprise to the directors of the society," Eldred Holden remarked to himself, as he opened the envelope again, and looked at the neatly-written order for ten thousand dollars—the one-seventh part of a fortune, which, when it first came into his hands fifteen years before, had been nearly five times as much as it was now. But he contented himself with the reflection that it had been used in ways that had made many hearts glad; and there was still enough left for him—only he could not continue to give away as much as he had heretofore done.

The young man had always sought the delightful satisfaction of knowing that his gifts were, in some measure at least, surprises to those who received them. People who asked him for money, either personally or by letter, seldom got any, although, singularly enough, those refusals did not appear to diminish the frequency and urgency of the applications that continued to come. The applicants knew that he was giving away money to others, and believed that, with a sufficiently strong pressure brought to bear upon him, they would certainly bring their share out of him in some way. He claimed the right, however, to judge for himself as to who were the most deserving objects of his charity, and in what way the money he was so liberally giving would do the most good. Hence, when waited upon by agents and committees (more especially ladies) urging the claims of their favorite enterprises, he was accustomed to bow them out very respectfully, at the same time permitting them to carry away a very slender hope that they might possibly hear from him some day.

"My fortune is now but a small part of what it once was," Holden continued, as his hand rested on that check, ready to be sent out the next morning. "It is

true, father's advice to me was to draw only my income, and keep the principal as long as I lived. But he did not exact from me any promise that I would do so, and it has seemed wiser and better to me to dispose of my fortune now while I am living than to leave it to be distributed by others after I am gone. I shall have fully sixty thousand dollars after this check is drawn. One-third of the income of that sum will provide for my personal expenses, and the other two-thirds I will give away, but very cautiously, and where it is most needed; and at the same time will be carefully providing for the disposal, in the best way, of what is left at the time of my death. That will be a pleasant and useful way to spend the remainder of my life, and any unoccupied time I may have, I can, of course, use in getting ready to die."

It did not, at that time, occur to our hero that on several previous occasions, when he had intrenched upon his principal, he had made an equally strong resolution never to do so again.

At last Eldred began to grow weary with the labor of thinking, and might, perhaps, have fallen asleep, had not his attention been arrested by the entrance of an old gentleman whom he had seen many times before. He was not, however, expecting a call from him just at that time. Turning upon him a firm and commanding look, the visitor said:

"Come with me!"

"But where do you propose to take me?" Eldred asked, trembling with awe and a strange apprehension, but unable to resist the weird influence that seemed at once to pervade every nerve of his body and soul.

"Come and see!" repeated the stern voice.

The young man arose and moved onward, wondering all the while what could be the purpose and destination of the midnight walk he was taking. He was stopped at last, however, at the end of an hour by a sight that chilled the very marrow of his bones. They had reached the Potter's Field, and near the entrance

of it, lying on the bare ground, as if there was no one to care for it, he saw the dead body of a man—that body *his own!*

"Look at what you see here!" said his guide.

He looked again, and a few feet from the body a man was hastily digging a grave, by the side of which a pine box was standing. Into that box the body would be thrown, and the burial ceremony would soon be completed. Eldred continued to gaze at the scene for a few moments like one chained to the spot. Then his attendant, and whom he had from the first recognized as his own father, struck him a heavy blow on the shoulder, at the same time exclaiming:

"Awake, fool!"

Eldred Holden *did* awake; and in a few moments more the check for the ten thousand dollars, with the letter that enclosed it, had been torn up, and the fragments thrown into the fire.

"That was my father, as surely as I am alive!" he exclaimed, as he mused over his strange dream vision. "I never saw him more plainly. He must have come from his grave or from somewhere, and is not pleased with the way I have been using the money he left me. He thinks I am on my way to the poor-house, and from there to a grave in the Potter's Field. Strange, very! I thought the course I was taking would be certain to gather around me all the honors I could carry, and furnish me also a sure passport to heaven!"

The next morning's mail brought Eldred Holden a bountiful supply of letters, every one of which was an earnest request for money for some worthy object, or a gracious acknowledgment of a generous and unexpected gift already received; in such cases, however, an intimation always followed, that a little more in the same way would be very acceptable.

"Zounds!" said Eldred; and that was the first approach he had ever made to swearing; but on that occasion it meant a good deal, for the letters were consigned to the flames as fast as they were glanced at. A new purpose had seized

upon the vital organization of that young man, and was turning his thoughts in a very different direction.

Five weeks passed. Eldred was sitting in his room at a hotel where he was stopping, far away from the scenes of his late benevolent operations. In his pocket-book was a certified check for sixty thousand dollars, and he had also a hundred or so for incidental expenses.

"I have never," he was saying to himself, "believed in the doctrine of the transmigration of souls; but my late experience leads me to think a transformation may sometimes occur. In my glass I look like one Eldred Holden, a senseless blockhead, whom I knew some time ago—but never mind that fellow—I have no time to spend with him now. After breakfast, I'll go and look through that cotton factory again, and will take with me that old gentleman to whom my lawyer introduced me last evening."

The person to whom Eldred was thus referring had been in that business all his life-time, having been owner and principal manager of a large factory which had been burned a few months before. The cotton factory that Eldred Holden had in his eye at that time was a large and well-known establishment that had, only a few years previous, been making a good deal of money, but extravagance, bad management, and trouble had followed the death of the owner. There were now some heavy encumbrances—the money the business had earned having been used by the eldest son in some outside and very unfortunate speculations, and the property would soon be on the market for sale, the court having so ordered, and would undoubtedly go at a low price to any one who was on hand with the cash.

Eldred did see the property that day and the next, and many times afterward, and went into its whole history. He knew nothing in regard to the factory business himself, but he would be able to learn a little, certainly, very soon; and in the meantime, the old gentleman, whose factory had been destroyed, and who was

a very competent manager, was ready to place his experience and services at his command.

But there was another fact in regard to the enterprise which especially enlisted Eldred's sympathy and interest. One of the heirs, a young lady, then twenty-five years of age, had been working continually, and with the most unflagging zeal, ever since the decease of her father, to save the property and continue the business, in which she had a half interest. The factory had been filling her whole mind, and there was no one who understood everything in regard to it so well. She knew every one of the operatives, and they had for a long time looked mainly to her influence and good words to secure to them the prompt payment of the wages they were earning.

There is a logic in the events of life that sometimes carries a man forward much faster than he could be moved in any other way, and with more certainty also. The tide has caught his little bark, and it must move on in that direction and no other.

Four months had passed since Eldred Holden first saw that factory, and learned a few facts in regard to the history and condition of the property. Now he knew all, and knew also that its subsequent history included some matters in which he was deeply interested. He knew that he and that daughter of the former proprietor were now the sole owners of the property; nor was it very important to know which owned the larger share, for the lady was his wife. The most of his seventy thousand dollars had gone there, but in the estimation of the best judges, he had made a very wise and fortunate investment.

Many inquiries were made in regard to the young man who had so suddenly made up his mind not to be buried in the Potter's Field. His abrupt departure had been known to and very deeply regretted by a large number of people; but strangely enough, it was not known that he had ever returned to look after the laurels he had won. He had passed into

a new sphere of life, where hundreds—in fact thousands, if all were counted—were depending on him for their daily bread. It is true they honestly earned the bread he gave them, and had no desire to obtain it on any other terms.

And to the new life upon which he had thus entered, there was added the love of a noble and earnest young woman, to whose rescue he had come at a moment when her heart was beginning to faint, and had proved to be the very one whose help she required. Marriage, although without any attraction for him heretofore, had now absorbed the deepest and most earnest affections of his soul, for he had learned that the work of life can be best and most effectively done when the wisdom and strength of man is united with the ready tact and active sympathies of a loving and devoted wife.

Another fifteen years passed, and the wife and children, whose lives were part of his own, and the business into which his whole interest had been thrown, and which had been and was still rapidly enlarging, made him feel sometimes as if he wished his father would come again and give him a chance to thank him for the lesson he had learned from that midnight visit, and the experience that had followed it. Now he realized that true benevolence and the right use of money consist not in indiscriminate and lavish alms-giving, as if that were or ought to be the principal use and object of a man's life, but in extending and enlarging the operations of substantial industry, and thus placing of honest, reproductive labor within the reach of the multitudes who are willing and glad to return a fair equivalent for what they receive. BONNE HEURE.

HUFFY PEOPLE.—One of the oddest things to witness, if not one of the most disagreeable to encounter, is the faculty some people have of taking offense when no offense is meant—taking "huff," as the phrase goes, with reason or without—making themselves and every one else uncomfortable for nothing deeper than a

mood or more than a fancy. Huff people are to be met with of all ages and in every station, neither years nor condition bringing necessarily wisdom or unsuspectingness. But we are bound to say that the larger proportion will be generally found among women, and chiefly among those who are of an uncertain social position, or who are unhappy in their circumstances, not to speak of their tempers. Huffiness, which seems to be self-assertion in what may be called the negative term, and which the possessors thereof classify as a high spirit of sensitiveness, according as they are passionate or sullen, is in reality the product of self-distrust. The person who has self-respect and nothing to fear, who is of an assured social status, and happy private condition, is never apt to take offense. Many and great are the dangers of action

with huffy people, and you are sure to flounder into the bog with them, while you are innocently thinking you are walking on the solidest esplanade. The dangers of speech are just as manifold. The dangers of jesting are, above all, great. It may be laid down as an absolute rule which has no exception anywhere, that no huffy person can bear a joke good-humoredly, or take it as it is meant. If you attempt the very simplest form of chaffing, you will soon be made to find out your mistake; and not unfrequently the whole harmony of an evening has been set wrong because a thin-skinned, huffy person has taken a pleasant jest as a personal affront, and either blazed out or gloomed sullenly, according to his or her individual disposition, and direction of the wind at the same time. —*Household.*

DOES PLEASURE PAY?

THE above conundrum was propounded by the New York *Herald*. "That greatest newspaper on earth" did not pause for a reply, but proceeded to enlighten its readers by answering its own question. That depends, says the *Herald*, on whether you take pleasure as a regular diet, or only as an occasional dessert. The rich idler, who spends his whole time in a gay round of pleasure-seeking, finds it very stupid business. But the industrious mechanic, who toils from sun to sun, gets a big slice of genuine joy out of a cheap excursion on Sunday. It is not the richly-dressed occupants of the dress-circle and boxes who get the most pleasure out of a play or opera, but the purchasers of cheap tickets, who earn their money the hardest, and only once in a great while feel able to squander even fifty cents for pleasure.

There is real good sense in this. If the people could be made to understand that the only road to happiness lies through honest and useful toil of hand or head, and that genuine pleasure is possible

alone to those who seek it but rarely, and then with a higher motive than mere sensuous enjoyment, the world would be the better for it. All happiness and all pleasure come to us as the result of gratified faculties. The executive faculties delight in activity of the muscular system. They prompt us to walk, run, leap, etc. The acquisitive faculty suggests the propriety of taking exercise in a way that will pay, and the mechanical presents a plan by which this can be done; the intellectual and moral sentiments approve, and the boy becomes an artisan; or, if Ideality is large, he is likely to be an artist. The faculty of Locality delights in traveling, Eventuality in books of history, Logic and Causality in philosophy, Ideality and Sublimity in fiction, poetry, and art; Benevolence in philanthropy; Veneration and Spirituality in religion and metaphysics; Self-esteem in power; Approbativeness in pomp and display; Adhesiveness in society; joined with Amativeness, its activities are expended in love; Alimentiveness seeks

pleasure in eating and drinking, and the faculties of Tune and Time in music, dancing, and marching. To gratify any one faculty or class of faculties to the neglect of the demands of the others is to dwarf the man and limit his enjoyment. He alone is happy who is harmoniously organized, and whose faculties are so trained and disciplined as to perform their proper functions, and who success-

fully seeks to give legitimate scope to the activities of all his faculties.

Pleasure may be defined to be the sensation produced upon the mind by the gratified activity of any single faculty or class of faculties. Happiness arises from the calm contemplation of the results of virtuous activities of mind and body acting under the guidance of the moral sentiments.

T. A. BLAND, M.D.

SPRING.

WHAT, gentle Spring, and art thou come?

Desire,

Under the iron scepter of thy sire,

Cried out for thee.

Fair truant! couldst thou not have flown

More quickly to our colder zone,

From those beyond the sea?

Or didst thou linger on, and grieve

The sunny southern land to leave?

Cease for awhile thy wandering,

Rest and be welcome, gentle Spring.

"WANTED—A BOY."

"WANTED—a boy to run errands and make himself generally useful."

Mr. Peppergrass came out, with his cap on the back of his head and his spectacles pushed high up on his forehead, to wafer this written notice on the side of his store. And five minutes afterward—it might have been less or it might have been more—a crowd of eager little lads assembled around it, standing on tip-toe to read every word.

Johnny Jarvis had been just discharged from his place as cash-boy in a dry-goods store, because business was dull and customers few.

He was a fine, tall boy of twelve, with bright black eyes and a laughing mouth, and he didn't at all like having nothing to do.

Charlie Warner wanted a situation because there were a good many little Warners, and nothing to feed them with since their father died.

Louis Brown had been out of regular employment ever since the china factory closed in the fall.

For these little fellows belonged to the innumerable army of boys who can not

play and enjoy the bright hours as they go, but must work and drudge, and count every day lost that does not bring in its corresponding wages.

Children, did you ever think how hard the world was on these poor little toilers?

It was not long before Mr. Peppergrass's store was full of boys who wanted to "run errands and make themselves generally useful."

Big boys and little boys, tall boys and short boys, well-dressed boys and shabby boys—boys who leaned up against the potato and flour barrels, as if they had left their backbones at home; boys who stood straight up—boys who took off their caps, and boys who kept them on. And still they kept coming.

"Hold on!" said Mr. Peppergrass. "This will do!"

So he took down the notice and bolted the store door.

"Now, I will proceed to business," said Mr. Peppergrass, rumpling up his hair and adjusting his spectacles so as to make his keen gray eyes sharper than ever.

A few penetrating glances, half a dozen questions, and the number of boys was

speedily reduced to our three little friends—Johnny Jarvis, Charlie Warner, and Louis Brown.

They were all three willing and anxious to work; all three brought good recommendations, had honest faces, wanted to enter on the situation at once, and wrote neat, round hands.

"Humph! humph!" said Mr. Peppergrass, with his hands locked under his coat-tails behind. "There's three of you, and I can't find work for three boys."

The little lads said never a word, but looked eagerly at the grocer, each one hoping that he might be the boy selected "to run errands and make himself generally useful."

Mr. Peppergrass stared hard at the spice-boxes and preserve-bottles in the window, frowned at the cracker-boxes, and finally made up his mind.

"Brown," said he.

"Sir," said Louis Brown.

"I'll try you on a few sums. I want my boy to understand the first principles of arithmetic."

"I am good at figures, sir," said Louis.

"Are you?" said Mr. Peppergrass. "Very well; I'll give you a trial."

He wrote down a labyrinth of figures on a slate, and then opened the door of a little room which communicated with the store.

"Sit down here, Brown, and work out these sums," said he. "I'll come to you in a few minutes."

Johnny Jarvis and Charlie Warner looked blankly at each other, then at the grocer.

"Please, sir, what are we to do?" said they.

"You are to wait," said Mr. Peppergrass, shortly. "Your turns will come in due time."

The sums were not especially hard, and Louis Brown was quick at figures. He soon dispatched his task, and began to look around.

It was a stuffy, close-smelling little room, with one window close up to the ceiling, and a curious, old-fashioned book-

case, or desk, with glass doors lined with faded red silk, in the corner.

"I do wonder what Mr. Peppergrass keeps there?" said Louis to himself; and after he had wondered a little while, he got up and went softly toward the desk.

"The key is in the lock," said he; "there can't be any harm in looking. Perhaps there are story-books, or, maybe, curious shells and stones, or—"

As these thoughts crossed his mind he opened the silk-lined door. Buz-z-zz—whew! out flew a beautiful, pearl-colored dove.

Louis stood aghast. In vain were his efforts to capture the little creature. It fluttered from the top of the book-case to a pile of boxes beyond, and thence to the top moulding of the window, as if it enjoyed the chase; and in the midst of it all in came Mr. Peppergrass.

"Eh! What?" said he. "How did this happen?"

"Please, sir," said Louis, hanging his head, "the bird got out, and I was trying to catch it again."

"Got out, did it?" said Mr. Peppergrass. "It must be a very ingenious bird, to be able to open the desk from the outside. You may go, boy. I'm quite certain that you won't suit me. I don't approve of meddlers."

So saying, he opened a door which led directly out into the back street, and dismissed poor Louis Brown without further ceremony.

"Now, Pearlle," said he to the little dove, who perched on his shoulder at once, "you can go back to your nest. You have helped me out of the difficulty this time."

So he let the little creature fly out into the yard, where it belonged.

Charlie Warner was the next one ushered into the stuffy-smelling room. He, too, speedily finished his sums, and began to look around him for something to occupy his attention.

"Oh, my! What a lot of boxes," said he, "piled up one above another, like a Tower of Babel! What can Mr. Peppergrass keep in all of them?"

Charlie listened. No advancing footsteps were near. He looked cautiously about him, but he saw nothing. Then he rose from his chair, and crept toward the mysterious pile of boxes. They were of all shapes, rather small, and fitted with loose wooden covers.

Charlie lifted the lid of one. It was full of English walnuts.

"Hello!" thought Charlie. "I'm in luck. Old Peppergrass will never miss two or three of these," and he pocketed a handful.

The next box was full of beautiful Malaga raisins. Charlie nipped two or three bloomy, wrinkled fellows off the stem and ate them. He was fond of raisins.

"What next?" he said, tugging at the cover of the third box, which seemed to fit a little closer.

All of a sudden, however, it flew off with a jerk, filling the air with Cayenne pepper, and setting poor Charlie to sneezing as if he meant to sneeze his head off.

Mr. Peppergrass bustled in.

"Ah!" said he. "I see! But you need not have been in such a hurry to examine my stock, young man. I haven't engaged you yet, and I don't intend to."

And poor Charlie sneaked away through the back door, which Mr. Peppergrass held politely open for him, feeling that his curiosity had ruined his cause.

It was some time before the Cayenne pepper was sufficiently cleared from the atmosphere for Johnny Jarvis to take his turn at the sums in decimal fractions, but he worked them patiently out, and then sat looking around him, as the others had done. But he was too honorable to dream of meddling. He, too, wondered what was in the boxes, but he didn't do anything more than wonder. He heard a mysterious rustling behind the faded silken doors of the old bookcase, where Mr. Peppergrass had shut up his pet kitten, but he never thought of opening it to see what it all meant.

He saw a glass jar of mixed candies on the mantel—sly Mr. Peppergrass had counted every one, besides covering it with a dusty lid, so that the least finger-

mark would have been quite visible—but he sat there quite still, until Mr. Peppergrass bounced into the room.

The old grocer looked at the candy-jar, he glanced at the unmolested boxes, and opening the desk, saw the kitten fast asleep in the corner.

"Ah!" said Mr. Peppergrass, with a long breath. "Yes, exactly! You are the boy I want. Come right back into the store, and I'll set you to work weighing out tea and coffee."

And that was the way Mr. Peppergrass suited himself with a boy.—*Golden Days*.

SHOO, MOSQUITO!—Apropos of the numerous witty reflections on mosquitoes going the rounds of the Press just now, is the suggestion of a writer in *Nature* that quassia-water is a protection against the attacks of those syrenic insects. He tried a weak solution on a child's face, which had become grievously tormented, and it worked to a charm, preventing the gray-backed suckers from dining on the baby's rosy dimples. All that is necessary is to moisten the face with the solution of quassia. It should be weak for this purpose, for a strong solution of quassia is an active poison to flies, sugar being mixed with it to attract them; but it is not powerful enough to kill the insects very quickly.

PRAISEWORTHY.—A new and very commendable departure from the usual routine of school management was recently exhibited at the anniversary of a Sunday-school of a neighboring city. Instead of the customary cakes, candies, or picture cards, there were distributed to the scholars packages of flower seeds, with instructions as to the sowing and care of them. Besides, the superintendent of the school offered a prize to be given at midsummer, at a horticultural exhibition to be made by the scholars, for the best result in cut or potted flowers. This admirable novelty in Sunday-school affairs is very suggestive to charitable people. A package of flower seeds, a pot and earth cost only a few cents, yet what great enjoyment, beauty, and life would they not bring to the unfortunate dwellers in many a miserable tenement-room or cellar!



GLIMPSSES AT "MODERATION."

WITHIN view of where I sit writing there is a brilliant array of pledge-cards in all the glory of the "red, white, and blue." One of them is brilliant red, and it reads, "I hereby solemnly pledge MY SACRED HONOR not to drink, as a beverage, any intoxicating liquors for the unbroken time of —, from the — day (date given)." The white card reads, "I hereby solemnly pledge MY SACRED HONOR not to drink, as a beverage, any intoxicating liquors until after the hour of — o'clock, in any day, during the full time of —, from the — day" (date given). The blue card reads, "I hereby solemnly pledge MY SACRED HONOR not to drink, as a beverage, any intoxicating liquors at the expense of any other person whomsoever, nor to invite another to drink, for the full term of —," etc. The fourth card bears a flag in red, white, and blue, and reads, "I hereby solemnly pledge MY SACRED HONOR not to drink, as a beverage, any intoxicating liquors stronger than wine or ale, and these only at meals, for the full term of —," etc.

One might well be pardoned for surmising that Dr. Crosby, in his late lecture in Tremont Temple, Boston, had this very system of pledges in his mind when he deals with the pledge as a "strait-jacket," calling it "a most pernicious instrument for debauching the conscience." He says, "It is a substitute

for principle. It is a sign, not of weakness (for we are all of us weak enough), but of readiness to reform. The true reform would demand a change of the underlying principles of life. *That* the pledge-taker refuses to make. Instead of that, he reforms the surface. Instead of turning the stream into a new channel, he contents himself with throwing up new dykes to prevent an overflow. A pledge that has no punishment for its breaking will command no obedience, while the moral convictions remain unchanged."

How vividly this brings up the picture of the man waiting impatiently till he can throw off the self-imposed restriction, or feeling that he has a right to throw it off at pleasure, since it recognizes no wrong in the thing itself, but implies a permission to return to the forbidden practice when the specified limit of time has expired. We could join him with some heartiness in calling these "unmanly," the veriest specimens of child's play in all the "temperance" literature afloat in this day of varieties. They will hardly bear comparison with the first toddling child-steps of the reformation, when Dr. Clark and Rev. Mr. Armstrong drew up the pledge of The Temperance Society of Moreau and Northumberland (N. Y.) in 1808. That document reads, "SEC. 1.—No member shall drink rum, gin, whisky, wine, or any distilled spirits, or compo-

sitions of the same, except by advice of a physician, or in case of actual disease, also excepting wine at public dinners, under penalty of twenty-five cents, provided this article shall not infringe on any religious ordinance.

"SEC. 2.—No member shall be intoxicated under the penalty of fifty cents.

"SEC. 3.—No member shall offer any of said liquors to any other member, or urge any other person to drink thereof, under penalty of twenty-five cents for each offence."

These at least had the merit of some penalty affixed to them, which is more than these aforesaid four cards in red, white, and blue can boast.

But what will the reader think when he knows that these four pledges are every one of them showily headed, "The Business Men's Society for the Encouragement of Moderation," which is under the especial patronage of Dr. Crosby? Not merely that they quote him—all the liquorites do that—but he works with them and definitely approves their measures, and especially their pledges. I was not present when he did this some years ago, but it was publicly reported and not contradicted; and, moreover, as it was quite in accord with what he was doing at the time, nobody thought of questioning it. It was reserved for the occasion when he came before the public at Tremont Temple, Boston, for him to talk in this manner about the total abstinence pledge presumably, though he does not say so. This is the most charitable construction we can put upon it, not that he disapproves pledges so much as pledging to total abstinence. Even while we correct the proof of this article, confirmation comes in the shape of the announcement that the Business Men's Society have dropped the total abstinence pledge.

After this glimpse at the inconsistency of the Apostle of Moderation, we will look at the practical outcome of the system he advocates, compared with that of total abstinence. With regard to the latter, he says, "I charge upon the total

abstinence system the growth of drunkenness in our land, and a general demoralization among religious communities." We are more than willing to take this up, for it is a common thing to call Temperance a failure in this country, because it has not reduced the drinking *pro rata*; perhaps it has not even kept it quite down to the figure per head where it was one hundred years ago. In Maine, we know the use has decreased from \$24 per head annually to \$2, if statistics are worth anything, and if they are not we may as well say we none of us know anything about it. Dr. Crosby himself admits the decrease in Maine, but intimates that the Maine people are so strong and high-minded that ordinary people can not be expected to follow their example. We might quote the remarkable series of failures all along the line in our great Temperance Reformation, to find anything effective short of total abstinence; but we prefer to go where the total abstinence system has not been admitted, where people have long had free use of the lighter drinks which Dr. Crosby so strongly commends. This is no other than Switzerland, the home of the grape, like the adjoining country, the south of France, where the condition of things is much the same. Hon. Horace Rublee, the United States Minister at Berne, in 1876, makes this statement, in a letter to the "International Temperance Conference," held that year at Philadelphia: "There has been no temperance movement here organized looking to total abstinence." He procured a paper, however, from Mr. Brigue, a "moderationist," and president of a society which has for its object the prevention of drunkenness in Switzerland. This Mr. Brigue says: "Total abstaining societies have never succeeded in Switzerland. It is not admissible to speak of abstinence, but only of moderation, and this is the basis upon which all associated temperance efforts have been made."

Here, then, is a man after Dr. Crosby's own heart, and his testimony is backed

up by that of the resident U. S. Minister, who knows what our total abstinence societies are. They have had no such thing there. They can not "charge the growth of drunkenness to the total abstinence system" there, and they do not attempt to do so; but they have growth in spite of the absence of this cause, and they themselves bear testimony to it. Mr. Rublee says:

"The use of intoxicating drinks, especially of distilled liquors, has greatly increased in this country during the past few years. In many localities, and especially in the Canton of Berne, great quantities of a most vile, fiery, and potent liquor, distilled from potatoes, is drunk. It is the favorite beverage of the poorer classes, who can not afford to drink wine or even beer. Its extensive production and use are of recent date, and it is said to be producing very deleterious effects upon the health of the people. Much of it is manufactured by the peasant farmers for their own use. For this purpose they have small private distilleries. The total population of the Canton, by the census of 1870, is 506,465. In the year 1874, the Cantonal government granted licenses for 9,770 of these private distilleries, not to manufacture liquors for sale, nor to exceed the production of about thirty-five gallons each during the year. Besides these, there were in the Canton 487 larger distilleries, manufacturing liquors for sale, the most of which are consumed in the Canton. The consumption of spirits (besides wine and beer) is set down at about four gallons for each of the adult population, the use of which is beginning to excite uneasiness and apprehension on the part of the thoughtful men of the country."

So drunkenness is on the increase even there. The abundance of wine and beer (compared with that in this country) has not prevented the large and increasing use of distilled liquors and even the manufacture of them by individuals for their own use. They have neither the rum-shops nor the total abstinence sys-

tem to blame for it. Doubtless other causes could be found, but if there are no general rules for Maine, Switzerland, and every other place you can quote, what is the use and where is the possibility for the united action so strongly urged by this would-be leader of our temperance hosts? But we have still other facts to quote from this model drinking country, even about the effects of the pure light wine itself, and our informant shall be this practical moderationist, who has it all his own way with his "temperance" measures in the heart of the wine country. Hear what he says of the districts where the wine is cultivated:

"Since this business places wine almost at the discretion of the vine-dresser, and since it affords special facilities for drinking between meals, it follows that a large number of the agriculturists have both the means and the temptation to much drinking. Probably the wine-growers of this part of Switzerland consume more wine than any people in any other part of the world. In the vineyards of the Canton of Vaud, the vine-dresser takes pride in his cellar; he even makes a parlor of it and leads his guests around from barrel to barrel.

"There are communes where the majority of the men are given to drink, and die prematurely,—where there have been counted twenty widows to three widowers. They drink comparatively little brandy, and the proportion of women who become intoxicated is small. Unhappily this state of things is changing in both these respects," in spite of plenty of pure light wine.

He next speaks of the districts where the vine is not cultivated. Here "the people are more readily led into the use of brandy, in which they can get more alcohol for the same money. This aspect of the case has led, in the mountains of Neufchatel, to the formation of associations for procuring wine of a good quality and at a low price. In the industrial centers they drink beer, wines, and liquors. Drinking-shops are very nu-

merous; in the city they number one for every sixty inhabitants. The custom of taking a glass of white wine or a little brandy in the morning, before going to work, is on the increase. They drink in the middle of the forenoon and after dinner, and in the evening they resort to the saloon. The sad consequences of such habits show themselves more and more. At the commencement of the century there were whole years during which not a single case of delirium tremens was entered at the hospital at Geneva. Now such cases average as high as thirty-five a year.

"The societies for public improvement have often turned their attention in this direction. That of Geneva has procured two successive investigations. That of the Canton of Vaud has appointed a permanent commission against drunkenness. Quite a number of the communes of the Cantons of Vaud, Neufchatel, and Bernese Jura, have made most praiseworthy efforts in this direction. The Geneva committee against drunkenness is preparing two pamphlets against drinking, for publication: one in favor of abstinence, and the other addressed to women upon the means to be employed to prevent their husbands' drinking." So it seems these happy people who know nothing of total abstinence, propose to try it, and, worse still, to enlist the women in temperance work. We call the attention of the Chancellor to the imminent danger threatening these unsuspecting people, the danger of thinking that they are sufficiently strong-minded and high-minded to follow the example of Maine, and abjure and clean out this terrible scourge. Fanatical totalitarians, no doubt, would conclude that they are going through the same phase through which the temperance movement in England and America has already gone; and thoughtful men there, as elsewhere, conclude that, if drunkenness is to be overcome, people must stop the drinking that which produces it.

We can not forbear to remark just here on the deceitful effects of alcoholic

drinks shown in this case, which is just a repetition of the experience of the entire drinking world. Whoever drinks is fascinated and deceived. His very judgment is warped whether he is a drunkard, an M.D., a D.D., or an LL.D. As Dr. Richardson most felicitously phrases it: "The judgment of the moderate drinker is not to be trusted, either with regard to the effects of the drink upon himself or upon others."

We think ourselves quite justified in saying that Dr. Crosby is plainly under the influence of this deceitfulness of wine, when he intimates that we would have been so much better off without the total abstinence system. They are growing worse in Europe without total abstinence much more rapidly than we are here with it. If, with all our labors, we have not actually gained on the enemy, how would he have gained on us if we had not made these efforts? Certainly we could not have developed the grand army of temperance workers, "so strong-minded and high-minded" as to be able to prove the perfect feasibility of the total abstinence system, and whose magnetic presence is almost entirely wanting in the wine-cursed regions of Central and Southern Europe. Surely it is quite in keeping that a man deceived by wine should be so illogical.

There is one class of persons, however, who are not deceived about the tendency of the light-wine movement, and that is the dealers. They, at least, do not expect that making wine cheap and abundant would diminish the amount of spirits consumed. A select committee in the English Parliament, on the import duties of wines, some years ago elicited most valuable testimony from wine growers, brokers, merchants, and retailers. They had studied the subject carefully and practically. One of these, W. C. Luke, says, "I do not believe it would replace one pint of beer, or one gill of spirits." Mr. P. F. Maise says, "I never thought or meant to say that they would throw off their beer to drink our low wines." Mr. Barker, a London retailer,

says the laboring classes or artisans do not drink wine; several who commenced and used it a week or a fortnight, have returned to ardent spirits." Others speak in a similar strain. They have no idea, and they do not intimate, that the introduction of low wines is going to reform any who are intemperate, because they do not expect those who already drink beer and spirits to accept wine in place of these drinks. Who, then, would drink the wine? Mr. O. White, retailer for thirty-eight years, says, "I should think there would be a new class of consumers." Another, a Mr. Henry Lancaster, says, "I believe the secret is going low enough (in price); there is a very large fraction of the water-drinkers who would drink light wines if they could get them at light prices."

There is no doubt this would be the effect, and when once the habit of wine-drinking is established, the drinkers will no more go back to water, than the beer and spirit drinkers will go back to wine. The valve opens freely in the other direction, however: the wine-drinkers go on freely to brandy, even vile potato-brandy, as we have seen, in the very center of the wine-growing world. Those who keep clear of the deceiver are much less likely to be deceived; but how shall we be able to convince the world of this deceit, if we do not study the nature and effects of the drink so as to expose the nature of the deception? This lecture of Dr. Crosby's is filled with the most notable misconceptions in this line which invalidates his arguments continually, and which would only hurt his cause if the people were better informed. For example, he quite ignores the well-known chemical fact that alcohol is the same in all kinds of drinks, fermented and distilled, and its effects are essentially and necessarily the same everywhere.

As Mrs. Hunt, who is at the head of the Department of Scientific Instruction (of the Woman's Christian Temperance Union), said to the college professor who opposed her, "If it were only a grain of strychnine, I suppose you would allow that it was just as certainly strychnine

as if there were half a pound of it," and he had no answer to make.

A writer in the November *Atlantic* says: "We hear much in America of the sober, honest, beer-drinking peasantry of Germany. In the section where I spent those months of which I write, intemperance raged fearfully. They manufacture and consume great quantities of a fiery liquor distilled from potatoes."

It has been one of the absurdities to say that, because wine and beer drinking did not hurt the peoples of Europe, they would not hurt us, when we had the proof continually before our eyes that they do hurt us.

I have always been quite willing to let everybody do all the good they can in their own way, and when the Business Men's Society claimed to have access to twenty-five millions that we could not touch, I thought they had room enough, and laughed at them when they complained that we would not let them work. Nevertheless, I was convinced that their object was to make us and everybody else believe that our work was a failure, and to bring us all down to their level and to follow their lead. The late despairing attack of Dr. Crosby only confirms that view. And here like an echo comes the closing sentence in the *New York Herald* announcing that this society had dropped the total abstinence pledge: "If every other temperance society would be equally sensible and exhibit ordinary human consideration for human nature, there would be less backsliding and more self-respect among the recruits to the temperance army, and there would be marked decrease in the annual total of liquor consumed." And we have thought it well to see whither that leading tends, and we have given you some of the glimpses of that tendency in this article.

JULIA COLMAN.

GOOD AND POOR GRAHAM FLOUR.—A great many intelligent persons entertain a decided prejudice against Graham bread, for the simple reason that they never knew, by experience, in what gen-

uine Graham bread consists. When wheaten flour and wheat bran are mingled together, the mixture is not Graham flour, notwithstanding it may be sold and bought as the *pure* Graham. A great many bakers purchase a low grade of wheaten flour, mingle wheat bran with it, make dough of the mixture, and denominate the baked dough Graham bread. But such bread is *not* Graham bread; neither is one loaf in twenty of such a mixture really fit for human food. Wheat bran and wheaten flour do not constitute Graham flour; and yet, Graham flour is made of the bran and the flour of wheat. Here is an important *distinction* with an important *difference*. Graham flour is nothing more nor less than wheaten meal, made simply by grinding the wheat to a given and satisfactory fineness, without separating the bran and flour. When wheat is ground into flour, all the bran, the rat-litter, and all extraneous material that may be mingled with the grain, will be separated by the *bolt* from the flour, and will be deposited with the bran. (Nice material, indeed, for making good bread).

During more than forty years past my practice has been to provide Graham flour (which *was* Graham flour in every respect) with which my wife made and now makes superb bread that *is* the

"Simon pure" Graham bread, which almost every person at our table would and *does* eat, from preference, to choice *white* bread. But it is not made of bran and flour mingled together, and yet it does consist of bran and flour. In the first place, white wheat of the best quality is obtained, and if there is any rat-litter, or anything besides the pure, clean wheat, it is picked or sifted out. Then the grain is simply ground into *meal* of satisfactory fineness. Bread, biscuit, and cake made of such flour is as much superior to the "stuff" sold by bakers for Graham bread as bread of the choicest stamp excels loaves made of the flour of sprouted wheat. In the country I procure three or four bushels at a time of pure wheat, and have it ground into Graham flour. In the city I find some dealer in wheat, and purchase my supplies, go with it to the mill in person, and coax the miller to do me a favor that will make a better man of him, by grinding my wheat into meal of medium fineness. Such Graham bread, and Graham mush, and Graham gems, and Graham other goodies are just luxurious—a dainty dish to place before a king and his consort. Graham bread is not *bran* bread. Let us have another slice of that superb Graham. That *bran*-bread is not fit for the fowls to eat.

SERENO EDWARDS TODD.

WALKING FOR EXERCISE.

ONE of our eminent physicians, Dr. H. I. Bowditch, in discussing the different kinds of exercise appropriate to developing and invigorating the body, deems walking the most appropriate, as it is the most natural method for man. To use his own words:

"The most universally applicable, and usually the best form of exercise, is walking. Unfortunately, our climate, with its snows and intense cold in winter, and equally intense and depressing heat in summer, prevents all of us from walking as much as would be useful, or

as much as can be done in some other countries throughout the year. Whenever it is feasible, it probably exercises the whole body better than any other method. It becomes, however, very uninteresting, even in a large city, if done simply for health's sake. Therefore it is always well to combine with it another object, either of business or of pleasure. Hence a profession that will require out-of-door exercise is the best prescription one can give. I have in recollection now a case of a naturally feeble man, who had very decided signs of pulmonary disease,

with bleeding from the lungs. He was a newspaper-carrier when he called to see me after one of his bleedings. I feared, at that time, that exposure during the winter would be very pernicious and perhaps fatal to him. Under this exercise, however, taken daily in rain and storms of all weather, and by the use of cod-liver oil (we should say, and notwithstanding he was dosed with—ED.), he wholly recovered. Those of my patients who have most frequently recovered are they who, by advice, commenced years since, and still continue, several times daily, their 'constitutional' walks around the 'Common' in Boston (about a mile). They will continue to do so while they live, because they know from experience now that not only their health, but their real comfort, depend upon a strict attention to that course. Omission of that exercise for a single day perceptibly affects them unfavorably. Two more obvious advantages arise from this course :

"1. Every muscle in the body is gently and uniformly brought into action by the swing of the legs and arms, and consequently of the trunk in a vertical direction. The undulations made by the head, chest, and abdomen in a vertical

plane are thus not only according to 'Hogarth's line of beauty,' but also in that tending to perfect health. Every internal organ is gently stimulated to more robust action. The circulation goes on more freely and uniformly.

"2. Never, in a common walk, does a person breathe twice the same air, because he is constantly changing. This fact alone is of incalculable advantage. Some writers profess that the re-breathing of air once partially used is one of the most fertile causes of consumption.

"The most favorable time for walking is undoubtedly midday in winter, and in the morning and toward evening in the summer. Late in the evening it is less useful, because of the liability to dampness and coldness, and absence of the sun's rays, which of themselves seem sometimes to put vigor into the animal frame, and their absence is correspondingly felt in a depression of the powers. Nevertheless one can not deny that there is a great energy sometimes given by a brisk walk in a cool, dry, starlight or moonlight night, when the atmosphere seems not only free from all chilling moisture, but absolutely pure and infinitely exhilarating."

"MALARIA."

I found the loveliest spot on earth,
Where sweet and odorous blooms had birth ;
I clapped my hands for very gladness :
"Good-by," said I, "to ills and sadness,"
When lo ! there sprung from out the green
A hideous imp upon the scene !
I cried, "Dread form, what is your name ?"
In mocking tones, the answer came—
"Malaria !"

I fled unto the nearest town :
Here I resolved to settle down,
'Mid dirt and grime, 'mid dust and mortar—
Myself, my wife, my son, and daughter.
The people crept about like snails,
Or lagging ships bereft of sails.
"What is the matter here ?" I cried,
And many a trembling voice replied—
"Malaria !"

From out the fated town we sped ;
We climbed the mountains ; overhead,
Where the proud eagle builds her nest,
We pitched our tent to take our rest.
One morning, bright with eastern gold,
I woke, and cried, "I'm hot !" "I'm cold !"

"I burn !" "I freeze !" "What can it be ?"
The answer came from crag and tree—
"Malaria !"

The doctors, now, who lack the skill
To diagnose each pain and ill,
To this one thing they all agree,
No matter what their school may be :
With "Hem !" and "Haw !" and look profound,
Your tongue they scan, your lungs they sound,
And then exclaim, "My friend, tut ! tut !
Your case, I find, is nothing but
Malaria !"

I've chartered now a big balloon ;
I hope to occupy it soon.
If "It" comes there to ache my bones
And waste my flesh, when 'neath the stones,
I hope my better part may soar
To some fair land, some golden shore,
Where I may never hear the cry,
That haunts me like a ghostly sigh—
"Malaria !"

—Baldwin's *Monthly*.

BATHING vs. QUININE.—Sir Henry Baker, in his graphic account of the sufferings of his party from ague, while they were exploring the river Nile, states that his entire stock of quinine had become worthless from some cause, and the whole party were so overcome by the disease, that it could not proceed. A native told him of a remedy relied upon by the inhabitants there, which consisted of a sim-

ple vapor bath. It was tried with the most gratifying success. The party went on its way rejoicing. Dr. Livingstone, in his book, gives an account of a similar experience, and found the same vapor bath a friend in need. This remedy has the advantage over quinine, in that while it does not shatter the nervous system, it has the positive excellence of helping the system to expel the malarial poison.

NOTES IN SCIENCE AND AGRICULTURE.

Large Heads in Children, Normal and Abnormal.—In a clinical lecture at St. Bartholomew's Hospital, after pointing out that a large head is normal in children, since the brain attains its full size certainly by the eighth year, Dr. Gee insists on the study of the *shape*, rather than the *actual size*, of the head. The outline of the longitudinal vertical plane from immediately below the occipital protuberance over the vertex to the root of the nose, is the cranial section which affords the most valuable data. An imaginary line through the skull, joining the above-mentioned points, would correspond to the basis cranii, and the outline of the section so limited would be that of an irregular pentagon. As the result of many observations, the author draws the following conclusions: 1. The base line of this pentagon does not vary as the other sides do, and may be taken as a constant. 2. The greatest antero-posterior diameter of the cranial cavity, measured by a line drawn parallel to the base line between the most prominent parts of the frontal and occipital bones, bears, in healthy children under three years old, a relative proportion to the base line from 6 to 5, or at most from 5 to 4. 3. When this proportion is exceeded, the skull may be termed "long," and is manifest by the projecting forehead or occiput, or both, such abnormality constituting one form of "big head."

In the other class of "big heads" the cranial section is circular rather than pentagonal, and gives rise to round or cyclocephalic skulls. The author goes to show that the "long" skull coincides, (a) with a brain which, though large, gives no abnormal indication in structure or function; (b) with a large brain which is diseased; (c) with a small brain, the remainder of the cavity being occupied by serous effusion. It is noticeable that in this form of hydrocephalus the fluid, which is both intraventricular and subarachnoid, is passive in character, reproducing on pressure effects on either skull or brain. Such is the head that is usually met with in rickets, and occasionally in congenital syphilis, thus giving grounds for the view that the latter may be a cause for the former disease. Another form of large head met

with in hereditary syphilis, never, however, attaining a great size, is due to extreme thickening of the cranial bones. The "round" head is associated with that form of hydrocephalus which is characterized by ventricular effusion previous to the closing of the sutures and fontanelles, thereby dilating the skull by equal pressure in all directions into a sphere, and compressing the brain. The author points out that the acute ventricular effusion occurring in tubercular and purulent meningitis does not produce the "round" head, even when the sutures and fontanelles are not closed, perhaps from the pressure not being of sufficient duration.

Quince Cultivation.—Quinces are best cultivated from cuttings. These should be from twelve to fifteen inches in length, and, unless those of the last year's growth are strong and vigorous, it is better to use the "two-year-olds." They may be as large round as the finger. The larger ones give earliest results. The best time for budding the cuttings is in March. Gather them before the buds start. Keep them moist by covering with earth. Plants may be obtained in a single year from three to six feet long.

To gain time, and also to utilize worthless trees, "budding" may be done either on the useless quince-bush or on the thorn. Fruit is sometimes obtained in this way in the second year. Plant the trees from ten to twelve feet apart. If economy of area is desired, the producer should remember that by planting in triangles instead of squares, one ninth of space will be saved. In planting trees, dig an ample hole from eighteen to twenty-four inches deep, scrape into it the rich surface soil, then put in the tree, carefully spreading the roots, and then fill in with rich earth, and cover with a mulch of leaves, straw, or other refuse. The fruit may be expected about the third year. The quince needs pruning in order to the greatest thrift in growth and fruit. A little salt thrown around the growing quince-tree is of great service. Quinces are easily propagated.

Ice-Making in New Orleans.—When we enter an ice factory in this city of the Gulf, and are admitted to a freezing

room, the intense cold of its atmosphere first impresses us, then the small heaps of snow lying around, and at last the shining mass of solid ice, made up of blocks sixteen feet high, thirty long, and over a foot thick. These immense cakes are frozen on plates of steel, which are hollow, pipes containing the freezing agent (ammonia) running through them. The water falls in drops from the ceiling, and freezes as it falls, thus forming the immense blocks. In another freezing-room the sight was beautiful beyond description, unnumbered columns of ice, sixty feet high, on a frozen floor, while from above came splashing drops of water, falling as steadily as summer rain. These icicles surround hollow iron columns, through which the ammonia passes, and freezes the falling water that comes from the roof. The icicles in a week or two unite, and in a little longer time they form a solid block of ice two thousand tons weight. This is then cut by ice plows and saws into blocks fit for sale. The mode for making the ice is briefly this:

Aqua ammonia is placed in two boilers, which are heated by steam. Steam pipes are used for heating the boilers, because it is necessary to keep the temperature uniform and steady. The effect of the heat is to generate ammonia gas, which passes from the boilers into a dryer, where all remaining moisture is removed. From the dryer the gas passes to a condenser, where it is subjected to a pressure sufficient to transform it into a liquid. The liquid is conveyed, still by pressure, to the column and pipes in the freezing-rooms. Released from pressure, the liquid again becomes gas, and expands to 2,300 times its former volume. The sudden expansion absorbs the heat, which is carried off with the gas to those pipes on the roof of the building, where it is mixed with water and carried back to the boilers, to go over the same process. The loss of ammonia is very small, and one charge in the boilers will last a long time.

How to have Pure, Sweet Milk.

—The following rules prescribed by a large New York company, who own twenty creameries, are offered for the consideration of our friends in the milk business:

Rules—1. Never under any circumstances put a pail of milk into your can before straining. One pail of unstrained milk may spoil a whole can, and one can of impure milk will certainly injure all milk or cream with which it comes in contact. In the name of decency, we beg of every patron to be particular about milking and properly straining his milk.

2. Cans containing milk should never be kept in a milking barn during the night. The scent of the stable (however well kept) will injure the milk and spoil the nice flavor fresh butter should have. An open shed a little distance from your barn, your woodshed or your kitchen, is the only proper place for keeping milk overnight.

Suggestions—1. Insist that your milking be done in a cleanly manner. Too much pains

can not be taken in this particular. Carelessness here will entail a great loss on the manufacturer and insult the consumer.

2. Bed your cows with sawdust, if possible; it will keep your cows clean and the stable sweet.

3. Do not, under any circumstances, leave your pails and strainer at the barn overnight. Please carry them to the house and insist that they be properly washed both morning and evening. Much depends on this.

4. Use only tin pails for milking.

5. The tin strainer pails are the best for straining milk. Some dairymen use strainer pails and also a cloth stretched over the can—thus straining the milk twice. We advise this double straining of milk. It costs you but little trouble while it will greatly add to the value of the butter and cheese made from your milk.

Sunspots and Rainfall.—Mr. Meldrum, of the Royal Alfred Observatory; at Mauritius, a while since furnished a new set of computations bearing out the theory with which his name is most prominently connected, that the weather of the earth has a relation to the display of spots on the sun. He offers two tables; one based on fifty-four returns from Great Britain, forty-two from Continental Europe, and thirty-two from America; the other from one station's returns in each of the foregoing—Edinburgh, Paris, and New Bedford being selected. In all these returns the period embraced is from 1824 to 1867. The general correspondence of the rainfall cycle with the eleven-year sun-spot period is very strikingly shown by the total averages, the first table showing that the rainfall gradually increased from the first to the seventh year, and then decreased to the tenth; the second table, that the rainfall gradually increased from the first to the sixth year, and then decreased to the tenth; both tables, that the rainfall lagged behind the sun-spots about one year.

Relative Merits of Refracting and Reflecting Telescopes.

—Mr. Thomas Nolan, B.S., contributes a paper to *Van Nostrand's Engineering Magazine*, on the principles involved in the construction of the telescope, summing up thus: 1st. At the present day the largest refractor is equal in optical power to the largest reflector. It is more convenient in use, easier to manage, and better adapted to general observatory work, and it enjoys the greater permanence of optical qualities. 2d. The reflector will be the great telescope of the future if (1) specula of large diameter can be produced free from imperfections of curvature and polish; and if (2) increasing difficulties of mounting and manipulation can be overcome. If these latter mechanical difficulties can not be entirely removed, the refractor will continue to be the "working instrument" of the future, as it has been in the past, although the future reflector may accomplish the grandest results in the domain of physical astronomy.

New Archaic Discoveries.—Several pyramids have just been opened in Sak-kara, Egypt, inclosing the tombs of kings of the fifth dynasty. The mortuary chapel of each contains about eighty square metres of the smallest and most closely written texts giving precise details of the religious belief of that age. Except the finding of the Rosetta stone in 1799 scarcely any discovery in Egypt equals this in scientific value. All the Sak-kara pyramids, about sixty in number, will be opened as soon as possible and new discoveries of value will probably be made.

Industrial Progress in our day is well illustrated by the new invention of straw lumber, which can be made to rival lumber of the better class, as there is no necessity of knots and shakes in the artificial material. It is manufactured into any desired length from twelve feet upward and as much as thirty-two inches in width, while the cost will compete with finishing grades of pine. The samples made by S. M. Hamilton, of Kansas, hold a nail as firmly as wood, is susceptible of high finish and can be polished to any extent desirable. It is waterproof and therefore must be durable as pine or oak, while it is as well adapted for roofing purposes as for fine interior work. It can be worked by the ordinary tools of the carpenter, and once fitted to its place, it will not be apt to shrink or swell. Samples resemble hard wood, are about as dark as oak, but more dense in texture, with a specific gravity of one-fifth more than thoroughly seasoned black-walnut. For finishing it will not be required to be as thick as ordinary lumber, as its tensile strength is about double that of wood. Paper in various forms and terra-cotta are being introduced as substitutes for wood in building, so that the days of that element for general use seem rapidly passing away.

Explorations in the South Polar Region.—While the energy of modern explorers has greatly extended our knowledge of the geography of the North Polar regions, comparatively little has been done in the exploration of the corresponding portions of the southern hemisphere. Lieutenant Wilkes, at the head of an American expedition, believed that he had established the existence of an Antarctic continent, and this discovery was verified a year later by Sir James Ross, who found the extensive Victoria Land with mountains 14,000 feet high, and an active volcano. Beyond these discoveries, nothing is positively known of these extensive regions of the earth. It is now proposed by the Italian Geographical Society to send out an Antarctic exploring expedition under the command of Lieutenant Beve, an Italian officer, who accompanied Professor Nordenskjöld in his recent Polar voyage. The expedition of Lieutenant Beve, it is given out, will be fitted out for a prolonged voyage, and it is announced to be the intention of the voyagers to winter in the Antarctic region, for the purpose of making a thorough study of its character.

Simple Method to Toughen GLASS.—The following recipe for keeping lamp chimneys from cracking is taken from the *Diamond*, a Leipzig journal devoted to the glass interest: Place your tumblers, chimneys, or vessels, which you desire to keep from cracking, in a pot filled with cold water, add a little cooking salt, allow the mixture to boil well over a fire, and then cool slowly. Glass treated in this way is said not to crack even if exposed to very sudden changes of temperature. Chimneys are said to become very durable by this process, which may also be extended to crockery, stoneware, porcelain, etc. The process is simply one of annealing, and the slower the process, especially the cooling portion of it, the more effective will be the work.

Cleaning Mica.—The coal fire went out the other day, and in lighting it the wood necessarily had a bad effect on the mica, smoking it to a deep brown. Our amateur housemaid did not like the appearance, and domestic economy forbade us to throw it away. So she took out the pieces, one at a time, soaked them in vinegar and water, rubbed them gently with a piece of soft flannel, and replaced them almost as good as new. For stoves where much mica is used, this should be worth remembering.—ANNIE L. JACK.

Mr. Edward Cowles, of the Cleveland (Ohio) *Leader*, is said to be the victim of a singular infirmity of hearing. He says it partakes somewhat of the nature of color-blindness as that affects the eye, he being unable to hear certain sounds at all. For example, he has never heard the sound of a bird's song in his life. A whole roomful of canaries might be in full song and yet he could not hear a note, but the rustling of their wings would be distinctly heard by him. He can hear all the vowels, but there are many consonant sounds which he has never heard. He can hear a man whisper, but could not hear him whistle. The upper notes of a piano, violin, or other musical instrument he never hears, but the lowest notes he hears without difficulty.

Alcoholism as a Cause of Crime AND EPILEPSY.—In a recent number of *Brain*, Dr. Clarke has published some statistics, which lead him to the conclusion that "alcoholism of parents is a predisposing cause of crime and epilepsy in their children." Forty-four per cent. of the epileptic criminals were the children of drunken parents. The proportion of epileptic and insane relatives is found to be very much greater with criminals than with ordinary epileptics. The convictions for bastardy are three times as numerous among epileptics as among non-epileptics. The statistics show that the amount of crime, as indicated by the number of convictions, is greater among epileptics than among ordinary criminals.



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THE MATERIALISM OF PHRENOLOGY.

A CABINET COLLOQUY.—NO. II.

"THERE are many interesting features in this system of Phrenology," said a visitor, "many very attractive features; but to be frank, I can not see how you can avoid the imputation of being materialistic. You divide the brain into sections, assigning to them specific functions. You say this is the region of Benevolence, that is the organ of Secretiveness, this is the place of Combative-ness or Courage, that the abode of Veneration, and so on, and that the activity and strength of these functions are dependent upon size and general physiological condition. Thus you limit the power or range of faculties, and practically define the type and tendency of one's disposition. You point to a person and describe him as selfish, obstinate, and imperious; you point to another, and declare him peaceful, kind, affectionate. The form of the head you claim serves you as a key to the character."

Are we not right usually in our estimate?

"So far as I have looked into the matter, I must confess that you are correct

with regard to the general tone and bearing of one's sentiments and practices."

Here are two or three letters lately received. They are from persons who sent us photographs, made expressly in accordance with our instructions, so that the contours of the head should be distinctly shown. From those photographs, their characters were described. You will see by the terms of the letters that the work was well done. Mr. J. H. A., for instance, says in this: 'You have done more than describe my character, describing how to regain my health also, for which I would willingly give a thousand times more than it costs to have the character written,' etc. Now, I call your attention to this department of the practical application of the science to impress you even more strongly with what you think is its materialistic phase.

"And you are certainly successful; for I was not aware that Phrenology had gone so far as to predicate character of a portrait. I deemed it necessary for the examiner to have his subject under his hands."

However skillful an examiner may be he prefers to have his subject directly under his hands. To discuss the character of an individual at a distance, even with the best aids of the photographer, has as many disadvantages, at least, as the attempt of a physician to diagnose an obscure disease by a letter from a patient a thousand miles away. In such cases the phrenologist must follow rigidly the indications of form, otherwise he is quite liable to mistake. Whereas, when face to face with his subject, he obtains other data, and suggestions of great importance and altogether necessary to a close analysis of character. There are subtleties of expression which no camera

can catch; there are psychological indications in the form and bearing which are indescribable by ordinary language; these the practiced observer can appreciate, and they must be taken into account if he would give more than a general sketch of personal traits. But more to the point of our discussion. As I understand it, sir, you are inclined to look askance at our science, because it finds occasion to say of Mr. A., "Your head is high at the crown, therefore you are firm and self-reliant"; while of Mr. B., whose head is comparatively depressed in the crown, it says, "You are lacking in decision, and too much disposed to undervalue and subordinate yourself."

"Yes, as a religious man, a professed member of a Christian church, I think Phrenology advances principles with regard to the phenomena of mind quite at variance with its spiritual character; in fine, you make a man, even on his mental side, scarcely more than automatic. So much brain, so much intellect; so much benevolence, so much caution, etc. You set bounds to his intelligence and morality. He is what he is by reason of his physical structure; his orbit is declared, and he can not exceed it. Free agency, spontaneity, originality, are mere speculations of the fancy."

Will you permit me to ask you a few questions?

"Certainly, sir."

You are much like your father in intellect, are you not?

"Yes, for the most part."

In physique, stature, and disposition you favor the mother's side?

"Yes, sir, decidedly."

How did you obtain these qualities?

"By inheritance. It would be strange were I unlike my parents."

It would indeed. The child must resemble his parents—that is a law of nature. Now we recognize very quickly the physical and mental resemblances of children to their parents, and do not wonder at them because of their universality; yet here is an ever palpable instance of limitation in human endowment. If born in the Brown family, I am a Brown in nature as well as in name, and must submit to the condition. In form and feature, in intellect, sentiment, and appetency I am recognized as a Brown; and in the community of my birth it will but render me an object of derision to pass myself off as a Jones. All attempts to be original, spontaneous, and free will fail to make me other than a Brown. It seems to me that if I apply the rule of logic which you illustrated a moment ago, and I am warranted in doing so, for the cases are analogous, we would find a deal of automatism in the every-day matter of inheritance.

"Excuse me, sir; I think I perceive the drift of your reasoning. You mean by this *ad hominem* method to show that our inheriting of the physical peculiarities and mental characteristics of our parents, and the consequent maintenance of family distinctions, are matters of positive law, and merely complemental or coincident with the type of nervous organization."

You have grasped my purpose. In moulding the head and body nature has a definite aim. In their form and consistence we find the great principles of correspondence wrought out—matter is made accordant to mental trait and peculiarity. You are as much a materialist in your way of considering the characters of men as the phrenologist is in his; but the latter has the great advantage of defining them systematically, and on the

basis of certain great and irrefragible principles, of which you—as representing the average of intelligent people who are not conversant with their technical bearings—entertain only vague notions. For instance, you admit it for an axiom that like produces like.

“Yes.”

Do you realize the absolute certainty of that principle in the evolution of human life? How terrible sometimes its tendency, as illustrated in the transmission of disease, or insanity, or the germs of vicious habit from parent to child? You know the fact—must you not admit that it has a most material bearing on the affairs of society? And would not the earnest Christian reformer, in his attempt to improve society, formulate his method of action upon the physical or materialistic indications of its decadence? And will not his method be practically a physical one?

“In externals, yes; but in motive and spirit it will be moral.”

Readily granted, my good sir; for a moral or mental impulse is usually behind all human action. In this practical age, however, people generally are inclined to look at the physical outcome of conduct—the damage or the benefit, the loss or the profit—more than at its morality, because one is objective, tangibly apparent to every observer, while the other is subjective, and appreciable only by the reflective mind. Here it occurs to me that every startling transaction produces a great variety of moral expression in the community. What a difference of views will be reflected by the Press from minds of the best culture! This you will at once admit is because of the difference of moral apprehension among men, a difference so great that

in some cases it goes to the extreme of entirely opposite views with respect to the same matter, and that, too, in persons eminent for intelligence and scholarship.

“Training and association have much to do with such results, although the young show very marked varieties of intellectual and moral discernment. If we only had sufficient light upon the sources of these varieties to enable us to adapt our training at home and our teaching at school to their proper development and regulation, what a great advantage would be possessed by society!”

We perfectly agree with you, sir; and are glad to assure you that it is one of the chief objects of phrenological science to unfold the nature of mind in childhood and to indicate the processes of its development. One boy, you know, is gentle and forgiving; another is harsh and revengeful. You say it is in their natures to be so different, and you may be found congratulating the father of the first for having so amiable a son, or pitying the mother of the second for the trial he must be to her. Now you, despite your profession of a religious connection—and I do not wish to be understood as rating you as inconsistent in this—are just as materialistic in viewing these boys as the phrenologist. You say that their contrasts of disposition are due to their different natures—that is what we say; but while you stand wondering how it is they are so different, and wishing that something could be done for the one who is unfortunately constituted to soften and elevate him, we point to their organizations, and explain their differences on physiological grounds. The phrenologist is told that a certain man is selfish, exacting, penurious. He looks at his head

and finds it largely developed at the base, Acquisitiveness being specially large while Benevolence is small. He says, here is a correspondence of organism with known character. Does he by this simple scientific procedure make the man the selfish and penurious individual he is? Certainly no more than the astronomer creates the comet, far away in the depths of space, which his telescope reveals to him; and no more than the physician makes the disease from which his patient is suffering by his diagnosis of its nature.

The moral in humanity has its physical or material side; it must have, otherwise it could not be discerned; and, as we have intimated, its tone is judged by its material outcome: at least, that is the unphrenological method of judging it. But the phrenological method is to study the individual himself and endeavor to discover the bearing of his character as indicated by organism. Granted that this course, like all scientific procedures, is material, it is therefore specific and systematic. Can we hope for any good accomplishment, any thoroughly efficient work in a sphere without going about it in a systematic way? No matter how elevated the motive, we can not obtain its end without using physical instrumentalities. Effort implies their use. As society is constituted, the higher the aim for promoting its welfare, the more labor is necessary; and the philanthropist who realizes this fact often despairs of success in attempting to set on foot measures for the general advancement of the community. Dr. Gall foresaw the long struggle of his system against old opinions and prejudices; he knew that it must share the experience of all new discoveries, and he

expected special opposition to his teaching on account of its revolutionary effects in mental philosophy—a subject which touched man's personality.

"The old philosophers, my dear sir," rejoined our visitor, "in nearly every case, discussed mind in a totally different way; they merely tried to classify its phenomena, and to indicate modes of thought, speculating meanwhile on the origin and nature of the soul. But when Gall went so far as to say that mental expression depended upon organization, and that he could tell what sort of an intellect and disposition a man had, by simply looking at his head, it was not strange that philosopher and priest joined in opposition to his teaching. It was revolutionary in the most radical degree. So to-day, men who have long entertained a devout respect for the super-physical nature of the thinking principle suffer a kind of shock when you bring it into so close a connection with anatomical structure, and feel that you are binding it in fetters which no power may break. I have entertained this view of Phrenology myself, as indicated by my first question to-day."

I trust, however, that you, sir, do not now consider the science an agent of fate. When understood, Phrenology is seen to have a most noble mission, for it comes to men with a hopeful, encouraging salutation. It declares the possibility of growth and improvement to every order of mental being. It says to the man who is weak in will, "You can become stronger"; to the timid, "You can acquire courage"; to the impulsive and passionate, "You can be made continent"; and as I have shown, it clearly points out the reasons for weakness of will, timidity, impulse, and passion. and

as clearly supplements its diagnosis in each case with a plan for their remedy. Read the treatises on Phrenology and you will be convinced of the practicality of this claim. Listen to the testimony of thousands in all walks of life who have been benefited by the study of its principles and their self-application, and you must be persuaded that the eminent Horace Mann uttered no strain of hyperbole when he exclaimed, "Phrenology is the handmaid of Christianity."

BEAUTY AND VICE.

COVERED with rich designs in gold, blue, vermillion, with scenes and figures suggestive of purity, joy, happiness, how beautiful they are! But unfold a package, disclose the interior, and what have you now? A substance which instantly suggests uncleanness, disease, wretchedness, death. Here is a specimen of this sort of trickery. On the wrapper is the figure of a graceful girl, reclining upon a grassy bank. Flowers are woven among the ringlets of her abundant hair, and heighten the pure and devoted tone of her face. At her feet runs a narrow brook, its surface almost hidden by the luxuriant grass of its border. In the background reaches of meadow, with here and there a tree, suggest peace and repose. Surely, the artist who designed this scene thought little of the purpose to which it would be applied by the enterprising men of business! There is not the slightest relation between it and the article it covers, for that is an arch-agent in the production of disorder, strife, and wickedness among men. The fact is so palpable, that the most stolid intellect must recognize the incongruity of such a label with the nature of whisky, yet the

whisky-dealer doubtless knows that it pays to cover his packages of whisky with handsome pictures. This is an artistic age. Everything sells the better for being decorated. So the bottle of alcoholic poison, the box of cigars, the bundle of cigarettes must have their covers ornamented, and the profits of the trade in liquor and tobacco are so great, that choice artistic work can be afforded.

How forcibly the Pauline admonition applies here, of "Satan transformed into an angel of light," that he may the more readily tempt men to their destruction! No class of tradesmen take more pains in fitting up their shops with elegant appointments than the retail liquor-sellers. Even in out-of-the-way, obscure and squalid neighborhoods, the dram-shop is bright, clean, and often elegant, the parade of polished glass and glittering liquors rivalling the show of bric-a-brac in a Madison Avenue drawing-room. No wonder an eminent reformer said that one of the chief causes of intemperance among the poor was the attractiveness of the liquor-saloon, its warmth, cheer, and brightness so strongly contrasting with the barrenness, cold, and discomfort of the tenement apartment. Sagacious tempter, appealing to that sensitive instinct of man, Ideality, which was given to heighten his enjoyment of the good, pure, and beautiful!

A NEW SUMMER SCHOOL OF PHILOSOPHY.—We are pleased to note the undertaking of the Rev. Dr. Deems and others to establish a Summer School of Philosophy on Christian principles, having its rendezvous in a most charming rural neighborhood conveniently near New York. The school will consist of a

series of lectures and discussions, in which several distinguished scholars will take part, among them Pres. Porter, of Yale; Prof. Young, of Princeton; Prof. Martin, of the N. Y. University; Prof. Winchell, of Michigan University; Rev. Dr. J. H. McIlvaine, etc. The session will cover nearly two weeks, viz, from the 12th to the 22d of July. The management have selected Warwick Highlands on Greenwood Lake, a most delightful summer resort but forty-one miles from New York, for the session of the school, and have made the terms of attendance very low, viz, \$5 for the course of lectures. Mr. James R. Boyd, No. 7 Cortlandt St., New York, will answer inquiries with regard to the school.

OUR POLITICAL DANGER.

ALLIED to the topic discussed in a paragraph among our editorials in the June Number, is the subject of the tendency to centralization of power in the National Congress and the State Legislatures. Acts have been passed at Washington which were, or are, interferences in the local affairs of States; and in some of the State Legislatures political stock-jobbers trespass upon the clear common-law right of cities and towns to control their own internal affairs with the coolness of a Russian or Afghanistan despot. The great City of New York, as we have seen, can not proceed to the execution of so essential a measure as the cleaning of refuse and filth heaped streets without obtaining the consent of the State Legislature. Neither can she undertake to pave an avenue without a similar recourse to the powers in Albany assembled. The large cities of Newark and Jersey City are

also grievously fettered by unjust and indiscriminating acts passed by the Legislature of New Jersey in the interests of hungry politicians and rapacious corporations.

The underlying force or motive for this tendency toward centralization is the desire for power and place. The importance of a seat in Congress, or a Legislature, appears to be estimated according to the number of official stations which its holder is presumed to control, and hence we find that the most bitter struggles between parties occur in districts where public affairs require a large number of officials, deputies, clerks, etc., who draw salaries from National or State treasuries.

So great has become the extent of the public business, that the number of persons paid for services, real or imaginary, by the National Government, is estimated at over one hundred thousand, or, as Mr. David D. Field says, one man in eighty of our whole adult male population is fastened on the Federal Treasury. Then there is the long list of State, county, city, town, and village officials, whose number we will not attempt to estimate in default of statistical information, but we would be safe, doubtless, in saying that every twentieth family in the land is dependent upon wages paid one or more of its members out of public funds. The grand aggregate of this wages account is in great part a burden upon the industrial resources of the country—a draft upon the brain and muscles of the workers—men and women—of society.

The tendency toward centralization multiplies officials, since they who promote it seek personal aggrandizement by obtaining legislative authority for the

creation of new bureaus, or departments of public service, in which certain of their followers may be comfortably quartered as a reward for faithful adherence. In fact, this creation and bestowal of public patronage has become one of the most conspicuous features in American politics, and it is "the lion in the way" of Civil Service reform.

If the producing classes can rise to the full appreciation of the need of solid and positive organization against the growth of the so-called "patronage" system, we may hope to destroy the machinery which has been so well devised by the corrupt and greedy demagogues of politics, but the first step is the choosing of upright and able men for public officers.

THE REVISED NEW TESTAMENT.

AS the last Number of the PHRENOLOGICAL went to press a few days before the publication of that result of ten years' labor, the revised New Testament, we were unable to make a suitable comment upon it. But it is not too late to express our hearty approval of the work, and our conviction that it marks an era in civilization only second to that of the Reformation. In fact, this century is comparable with the era of the great Renaissance in literature, science, and religious thought, for its wonderful discoveries in science, its industrial progress and political and social advancement; and now, as then, the activity in science and letters reaches its grand climacteric in a new translation and distribution of the Bible. Within a month upward of four million copies of the revised Gospel have been sold in Europe and America. Who can estimate the impulse to religious thought and the elevation of moral

sentiment which will result from this wide-spread reading of Christian truth? Will it not have a strong influence in stemming the growth not only of infidelistic views, but of that light, flippant, superficial fashion of regarding the more serious interests of human life which has been a prominent characteristic of cultivated circles? The reasons for the new Revision have been discussed everywhere for many years, and we need not enumerate them here; and we doubt not that every intelligent, candid man and woman who has made use of the opportunity to read and compare the new with the old, must express his conviction that the world's good in its most essential respects has been promoted by this combined result of science, scholarship, faith, and industry acting in earnest and harmonious co-operation.

THE INSTITUTE SESSION OF 1881.

THOSE who contemplate receiving instruction in THE AMERICAN INSTITUTE OF PHRENOLOGY at its regular annual course, are reminded that the session for 1881 will be opened on the first Tuesday of October, and continue about six weeks.

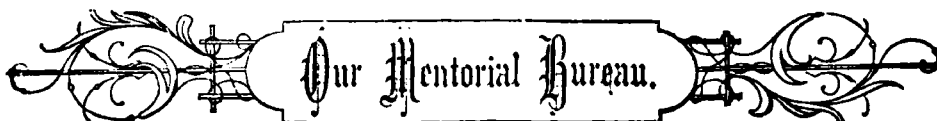
The main object of the founding of this Institute was to create a ripe and well-instructed profession of theoretical and practical phrenology, not alone to prepare men and women to teach and practice the science as a profession or life-work, but also to impart all that is known of the subject to those who are to preach the gospel, teach the schools, edit the papers, practice the healing art, enact the laws, or practice law as a profession, and last, but not least, to teach those who are to be parents the best conditions of parent-

age, and how rightly to feed, clothe, educate, and train the coming generation; in short, to make of mental philosophy, hitherto mainly in the hands of the schoolmen, a practical science, adapted to use where most needed, in *the family* and the *school-room*.

Most of the readers of the JOURNAL are pretty well informed in relation to the working of the INSTITUTE; being aware that there are in the field many noble and

successful workers who have received its instruction, and bear its DIPLOMA; and also that any person of fair culture, good character, and general information on the subject of Phrenology, is eligible to all its benefits.

Those desiring further or special information may ask for it, and also for the "Institute Supplement," and address FOWLER & WELLS, 753 Broadway, New York.



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.

COLOR OF EYEBROWS.—*Question*: Will you please to inform me why the eyebrows of aged persons remain dark, while their hair and beard are light?

Answer: This is generally the case, we know, and while we are not able to give a positive answer to the question, we think that the permanence of the color is due, in a great measure, to the fact that the eyebrows are not tampered with by cutting and dressing and what-not, as are the hair and beard.

ATLANTIC CABLE.—*Question*: Please to inform me of the diameter and length of the Atlantic cable.

S. R. M. R.

Answer: There are now three Atlantic cables in operation, and a fourth is projected which will have a foreign terminus in Brazil. We can not give you the exact length of these cables, but would say, in a general way, that the English cable, from land to land, is upward of 1,700 miles in length, while the French is upward of

2,200 or 2,300. The diameter of these cables is a little over an inch.

HIGH HEELS.—We have frequently taken pains to censure the wearing of shoes with high heels, yet a correspondent wishes us to express our opinion again respecting them. High heels are injurious for the reason that they throw the body generally out of balance, too much weight being forced upon the forward part, or ball of the foot, and the toes. The strain which results to the muscle of that part of the foot, affects more or less the whole muscular system. In some cases deformity is the result from the persistent wearing of the French shoe by ladies. We know two cases of severe neuralgic disorder which were traced to that practice. Nature designed man to walk flat-footed; in other words, to wear feet-covering with a flat sole, or with little or no elevation to the heel. Parents should be careful to dress the children's feet with shoes having thick soles but no heels, so that their limbs shall grow symmetrical and straight.

TEMPERAMENT AND INTELLECTUAL VIGOR.—*Question*: Which would have the most vigorous intellect of three persons, one having predominant Motive, another Vital, the other Mental, with same quantity of brain? G. W.

Answer: If by vigorous intellect you mean active, executive energy, the one possessing the Motive in excess would take the lead. Consult the work on "Temperaments" for a full understanding of their influence in the life and character of man.

BLUSHING.—*Question*: I would like you to answer in "Correspondents" column, the cause and cure of blushing.

D. C.

Answer: The primary cause of blushing is,

of course, the incident which excites the physiological action leading to the temporary congestion of the fine blood vessels in the skin. The occurrence of this physiological action is dependent upon temperament and organization. One who possesses a good moral development, Conscientiousness and Cautiousness being large, with but moderate Self-esteem and Secretiveness, the temperament being strongly mental, will be sensitive to criticism and delicately appreciative of duty and obligation. All occasions which make his personality a subject of observation, will awaken for a time diffidence or a vague sense of apprehension. The person who blushes so easily that it is a matter of real grievance to him, should cultivate a self-reliant disposition; should regard the world from its matter-of-fact side, encouraging the thought that he is entitled to other people's respect and honor for straightforwardness and honesty, and as a member of society has just as much right as others to think and act for himself without being criticised and annoyed. He should strive, also, to control his feelings, and cultivate the arts of silence and policy in his intercourse with others.

BAD TASTE IN THE MOUTH.—A. W. S.

—This is due to a disordered stomach in most cases. Of course, you are careful to cleanse your teeth every day, so that it can not be due to decaying food-matter in the interstices of the teeth. Eat good, nutritious food, mainly of the farinaceous and vegetable sorts, and but two full meals a day. Perhaps it would be well for you to be sparing in your diet for a week, and thus allow your stomach to recover its vigor.

ORGANIZATION OF THE PHYSICIAN.—

J. T.—The prime requisite of the skillful physician is good diagnostic ability, or power to understand the nature of a malady. There are very few good doctors in society, because there are few good diagnosticians. Individuality is a faculty indispensable to capability in this respect, while the perceptive organs generally, with Comparison, Causality, Human Nature, Constructiveness, and a good physical constitution, are important elements.

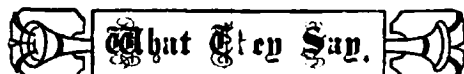
INSTINCT AND REASON.—*Question:*

What is the difference between instinct and reason?

Answer: A great deal of ink and paper have been consumed in the endeavor to define the nature of these qualities, and the more we attempt to set forth their distinctions, the more obscure they are rendered. According to the lexicographers, *Instinct* is an inward impulse; a disposition to a mode of action without a distinct apprehension of the end or object which nature has designed should be accomplished thereby. This is shown in the acts of animals

which are the result of unreasoning impulse, without thought of improvement, the methods which they follow being always the same. *Reason* furnishes a motive for action; is deliberate, considerate of circumstances and contingencies, and pursues its object with a regard at all times for the modifying influence of circumstances upon its methods; is progressive, elevating, perfective. Man possesses both instinct and reason, but the higher his development the more he exercises the latter product of his faculties.

HEAD PERSPIRATION.—W. H. B.—The disposition to perspire about the head and face is constitutional, but may be controlled to some extent, by eating food in which the proportion of moisture is less than in that which it has been your habit to eat. Drink less, and bathe the head every morning in tepid water, wiping dry with a soft towel.



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

EDITORS PHRENOLOGICAL JOURNAL:—

In the April Number of the JOURNAL, under the heading "Mind and Immortality," you say you can see no reason why the spiritual and physical should not be associated in the other world; that there is no impossibility about it, as God can do all things. Assuming that the mind can only act through the brain, to preserve our identity in the other world the same mind must act through the same brain, and in whatever way we may attempt to refine or spiritualize it, it must still be the same brain. Now, we would not if we could undertake to shorten the arm of God or rob Him of His power. We believe that He works by the use of fixed means. At the beginning all the laws or forces of this universe were put in motion which were necessary to its organization and working; and whatever God does, He does in conformity to these forces, else His plans were not first complete. I believe that when the body has gone to the dust, and the elements out of which it was formed have again mingled with the soil, that it becomes as though it never had been. I believe that God by miraculous power might form from matter a mature man, but I do not believe that there is any force in the universe that would discriminate and sift out the identical particles that would form a man such as had before lived. Besides, if the body could be restored and made an inhabitant of the other world, he would, in my opinion, be there, as here, a child of sorrow. We have no other light to guide us in our belief than the fact that

as matter has only changed places in the universe, it must conform to the same laws. It is accepted that matter does not go to waste, yet individualized matter is constantly changing, and that belonging to the animal structure needs constant replenishing, therefore its wants and the pain consequent upon violated law. The reader will have to guard himself against a refined belief that somehow this matter will be changed. It must be kept constantly in mind that if the mind can only act through the brain, it must be the same brain through which it has before acted, otherwise there could be no recognition. For your mind to live and act through some other brain is not to live at all. There can be no satisfaction in the belief that we shall live hereafter unless we can know ourselves. If, in the present life, the past were to be suddenly blotted out, we should have no means of knowing ourselves; we could give no account of who we were or whence we came. We believe that in the future as in the present, our means of knowing ourselves will be by looking back over the path we have come. We can know others by acquaintance or history, but not by mere conscious existence. I am a believer in spiritual immortality, and think that some good reasons can be given for such a conviction. I think that man's mission here as a physical being can be accounted for, and that the fulfillment of that mission is accomplished in this life. Of course, I do not believe a subject so deep can ever be fully fathomed by finite minds, but we know that by diligent search things are brought to light that otherwise would always remain in mystery.

G. C. WRIGHT.

THE AMERICAN ANTI-TOBACCO PLEDGE.—A few months ago a little anti-tobacco pledge, called, as indicative of where it originated, or from lack of broader thought, "The Cambria Station Pledge," opened its white pages in Pennsylvania; now, having gained many adherents, and desiring general introduction to our countrymen, it assumes a more fitting title, and becomes "The American Anti-Tobacco Pledge."

This simple and solemn pledge to refrain from the use of tobacco in any form, should be placed within the reach of every boy in our beautiful land. It is a national, not a sectional pledge—an aid to the development of physical and moral purity.

The unclean and degrading influence of the use of tobacco is thoroughly known to our enlightened people. There are few educated men who are slaves to the weed who desire their sons to fall into like bondage, and yet the chains of habit bind generation after generation. Theory will not unloose them; it requires a co-operative, practical effort.

Taking an abstract view of the undertaking, it may appear an impossibility to rid the air of America of tobacco film; individualizing the matter, it would be a comparatively slight task if every parent and teacher who believes with us would labor with us.

There are bright buds of manhood all over our land; dear, loving, kindly, aspiring boys, who would be glad to join our anti-tobacco van, and who would bless the little pledge in future years, when we meet in our American anti-tobacco conventions, and feel the strength of greater purity throughout the continent. The purity of a nation rests with its people, and the most insignificant of us wield an imperceptible but certain influence on those about us. We can not be neutral or nonentities; we may imagine ourselves such in a moral sense, but the reality is impossible. We all leave some impress of ourselves to live after us, to shade or brighten other lives. Each generation is but a reflex of the one passing or passed away. A bad neighborhood remains a bad neighborhood for centuries, if it is subject to no regenerative influence. A useless national habit can not be laid aside in a moment, but it may be buried as an unclean, outgrown, and worthless garment in a generation.

Cognizant of these facts, shall we not ask our dear boys in every State, county, and hamlet, to sign the American anti-tobacco pledge; to band themselves into anti-tobacco, literary, and reformatory societies that will make a general and indelible impress of growing purity on themselves and ages yet to be?

Grateful for the words of encouragement already received, and hoping for a full, broad response, in word and action, to the question which concerns us all,

I am, sincerely, S. L. OBERHOLTZER.

Cambria Station, Pa.

PERSONAL.

THE LATE ANDREW BOARDMAN.—Andrew Boardman, well known to the older phrenologists of America, for his able "Defence of Phrenology," and to the legal profession of New York, having been a member of the bar for over forty years, died in the early part of May last, at the age of seventy.

He was born in Lancashire, England, but came to this country at the age of 19. He was educated for the practice of medicine. Industry and high integrity won for him a very respectable place in public esteem; but subsequently abandoned that profession for the law. He was

often tendered judicial honors, but declined because he did not care to sacrifice his lucrative practice. He remained in active business to the last, and within a week of his death had been engaged in arduous labor on an important will case. He was a prominent member of the Bar Association of the city of New York. His first wife was a sister of Sir Edwin Chadwick, of England. She died some years ago, and about ten years ago he married a second time.

Mr. Boardman never took any active part in politics, but was a devoted lover of his adopted country and city. During the war he visited England, and wrote several articles to English journals which were credited with doing much to place the cause of the North in a right view before the English people. He took great interest in the sanitary ideas of his brother-in-law, Sir Edwin Chadwick. It needs scarcely to be added that he was interested in Phrenology, as his editions of George Combe's "Lectures" in America, and the "Defence," are sufficient proof of its practical character.

Mr. JAMES MCNEILL, associate author of "Brain and Mind," has been contributing a serial to be entitled "The Adventures of an Antediluvian in the Land of Promise," to the *Rural New-Yorker*. The story is interesting, full of useful suggestions, and shows power of invention much above the average.

WISDOM.

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

CHILDREN have wide ears and long tongues.

A POOR, idle man can not be an honest man.—
POINCELOT.

PLAIN good intention is no mean force in the government of mankind.

To select well among old things is almost equal to inventing new ones.

SILENCE is just as far from being wisdom as the rattle of an empty wagon is from being music.

A GENEROUS mind must be uneasy when it is laid under obligations which are beyond its power to return.

FAITH is letting down our nets into the un-transparent deeps at the divine command, not knowing what we shall take.—FABER.

HAVE love! Not love alone for one.
But man as man, thy brother call:
And scatter, like the circling sun,
Thy charities on all.—SCHILLER.

MIRTH.

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

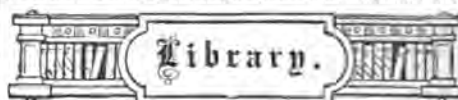
"Is that cheese rich?" asked Bloggs. "Yes," answered the grocer. "There's millions in it."

It was a four-year-old who asked: "Papa, have you done anything down town to-day that you think I ought to whip you for, if I was as big as you are?"

DANIEL WEBSTER's remark that it is employment that makes people happy, was a mistake. It is holding office which "just makes them too jolly for anything."

"Hi! where did you get them trousers?" asked an Irishman of a man who happened to be passing with a remarkably short pair of trousers. "I got them where they grew," was the indignant reply. "Then, by my conscience," said Pat, "you've pulled them a year too soon!"

"I don't like a cottage-built man," said young Sweeps to his rich old uncle, who was telling the story of his early trials for the hundredth time. "What do you mean by a cottage-built man?" asked his uncle. "A man with only one story," answered young Sweeps. That settled it. Young Sweeps was left out of his uncle's will.



In this department we give short reviews of such New Books as publishers are 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.

HISTORY OF WOMAN SUFFRAGE. Illustrated with Steel Engravings. Edited by Elizabeth Cady Stanton, Susan B. Anthony, Matilda Joselyn Gage. Complete in two volumes octavo. Vol. I. pp. 878. Cloth. Price, \$5. Sheep \$6.50. Fowler & Wells, Publishers, New York.

A natural outgrowth of the endeavor of woman to emerge from her old sphere of restriction and subjection, and stand by the side of man as his equal and co-worker in life—an endeavor which has been one of the conspicuous features of modern civilization—was her claim to the ballot. For thirty years or more, a steady organized effort has been prosecuted with this one object in view, and the current literature of the period has recorded its progress as an essential part of "movements" in society and politics, the latter

particularly, for in the political arena the effort has exhibited its greatest strength, and there its champions have won their brightest laurels. The aim of the editors, in preparing this important work, is to place within the reach of all classes a connected record of the inception and progress of the agitation. The reader has but to glance at their names to recognize them as belonging to women who have long occupied foremost places in it, and who, therefore, in putting pen to paper were relating things of which, for the most part, in America certainly, they had been participants. They have sought, as women in deep earnest, believing "the enfranchisement of woman as the most important demand of the century," to furnish a comprehensive and faithful survey of the suffrage movement. Most of the material from which they have drawn are records of Anti-Slavery, Woman's Rights and Temperance Conventions; the action of Suffrage Societies in different parts of the Union, and of cognate organizations in Europe; the proceedings of political conventions, and the action of legislatures in discussing resolutions introduced by those friendly to the cause. Woven in with the fabric of the history are many personal reminiscences and brief sketches of women who have shown a practical interest in the work. This forms one of the most attractive departments of the history, as the majority of the women like Lucretia Mott, Frances Wright, Angelina Grimke, Lucy Stone, Paulina Wright Davis, Elizabeth Blackwell, Mary Wollstonecraft, Ernestine L. Rose, must command the respect of all who respect great mental powers, and favor social reform. A considerable number of the personal sketches are accompanied with fine steel portraits, which constitute a very suitable decoration of the volume. It would be impossible to give the reader a satisfactory view of the character of the work without liberal quotations from its pages, and for that we have no space. A few summary allusions to its contents must therefore suffice. The volume opens with a retrospect of woman's progress in the last few hundred years, so that the reader is provided with the condition of society at the time when the Suffrage movement fairly started. Then follows a brief chapter on "Woman in Journalism." How the ladies insisted upon their rights to participate in the discussions of great moral and social questions is illustrated in the review of the World's Anti-Slavery Convention, which was held in London in 1840. Chapters IV. and V. are devoted to the First Woman's Rights Convention, which was called by Lucretia Mott, in 1848; and the First Woman's Rights Society, organized in South Bristol, N. Y., in 1843. The work which has been done in certain States, especially in New York, which has witnessed some of the hardest struggles between prejudice and progress, is

succinctly reviewed; and incidents, often of a deeply engaging nature for a general reader, are detailed. The book has its instructive sides for those who are indifferent to its special topic, for the editors have gleaned facts from our Revolutionary history which are not commonly known; set forth the practical working of property laws in some of the States (with which every husband and father should be acquainted), and indicated the moral effects of commonly accepted usages in the training of the young. A noticeable feature, too, is the many letters written by men and women of reputation on the subject: thus are represented, John Stuart Mill, Samuel Johnson, Harriet Martineau, Pauline Roland, Wm. Henry Channing, Horace Greeley, George William Curtis, Theodore Parker, and others.

THE PRINCE OF GOOD FELLOWS. BY Margaret E. Wilmer, author of "Glass Cable," "Silver Castle," etc. 12mo, pp. 367. Cloth, \$1.25. New York: National Temperance Society and Pub. House.

A story which illustrates well the evil influences which average club-life usually exerts in fostering drinking habits and undermining the home. The hero of the story is the son of a man who was hailed as the "Prince of Good Fellows" by his club and political associates until broken by drink in purse and health, and then discarded by them, he lingers and dies a burden upon his long-neglected wife and children. The naturalness of the tale will be apparent to every reader, for such "good fellows" are found in every community, and they appear to be the men who are most easily led into the errors of social custom. Generous, free, accommodating, bad or weak companions easily draw them into the channels of vice, and with the best intentions for friends and all concerned in their welfare, they sink lower and lower.

TEMPERANCE AND GOSPEL SONGS. For the use of Temperance Clubs, etc. By J. E. White. Price in boards, 80 cts. \$25 a hundred. Published by National Temperance Society, New York.

This is a well-selected and neatly printed compilation of reformatory and moral lyrics. The music is clear, and, as a rule, arranged in that double staff manner which pleases the leader or player. Most of the music is fresh, while there are some of the good old tunes which would be looked for in such a collection.

THE ORTHOEPIST. A Pronouncing Manual, containing about three thousand five hundred words, including a considerable number of the names of foreign authors, artists, etc., that are often mispronounced. By Alfred Ayres. 18mo, pp. 201. Price \$1. New York: D. Appleton & Company.

The latest edition of this useful little book has been placed on our table. We find that the industrious author has added some words, and

made several improvements of practical value. We have not met the man or woman whose pronunciation is faultless, and will own to occasional slips ourselves, and that in words belonging to the class styled ordinary. Hence we welcome the book as an opportune aid, and think every editor and speaker should have it at his elbow.

MUSIC AS A LANGUAGE, or the Meaning of Musical Sounds. Illustrated with Characteristic Examples from the works of the leading Composers. Compiled, analyzed, and explained by A. J. Goodrich, author of "Pianoforte Manual without Mechanical Exercises," "How to Sing," etc. 8vo, pp. 106. New York: G. Schirmer, Publisher.

That a work involving so many difficulties as this should have been undertaken by an American, is evidence in itself of the advancement of musical art in this country. In fact, no other treatise of a similar nature is in print. The manner in which the work has been executed, shows clearly that its author is no superficial maker of harmonies, no writer of cheap marches, and of mechanical airs to weak rhymes, but a learned and experienced musician, a close and careful yet ardent student of the philosophy of rhythmic sounds—the reasons for the existence of major and minor chords, arpeggios, and synopated movements. Mr. Goodrich has graduated his discussion of musical meanings, beginning with simple expressions, such as are found in "The Winged Messenger," for instance, and advancing deliberately until the most intricate forms are reached, such as are met with in Beethoven, Chopin, etc. His illustrations are numerous, from composers like Bach, Handel, Gluck, Haydn, Mozart, Cherubini, Schubert, Mendelssohn, Schumann, Reinicke, Franz, Berlioz, Gounod, Bishop, Smart, Molloy, Paine, Ritter, Buck, etc., etc. His explanations are generally clear and satisfactory. Well-informed musicians will most appreciate the volume, and to them it will open new views of the relation of music to human life, and furnish fresh incentives for study and advancement.

PUBLICATIONS RECEIVED.

THE NORTH AMERICAN REVIEW for June contains several papers of a very practical character, and pertinent to questions of national importance now agitated, viz: Our Future Fiscal Policy, by Hugh McCulloch; Shall Americans Own Ships? by Prof. W. G. Sumner; The Color Line, by Frederick Douglass; The Right to Regulate Railway Charges, by J. M. Mason; A New Phase of the Reform Movement, by Dorman B. Eaton. These are worthy of consideration, as the names of their writers clearly enough show.

FIFTY-SEVENTH ANNUAL REPORT OF THE OFFICERS OF THE RETREAT FOR THE INSANE, at Hartford, Conn. Contains an interesting ac-

count of the workings of a well-regulated asylum.

THE THORN PAPERS. By Kate Thorn. Humorous view of life in society. Price, 10 cts. New York: J. S. Ogilvie & Co.

USURY. An elaborate discussion of the customs and laws of nations with respect to the premiums paid for the use of money; their practical and moral effects, and an appeal for "Free Trade" in money, or for some simple statute making interest easy and similar in all the States.

THE ECLECTIC MAGAZINE is always neat in form, clearly printed, and filled with choice cuttings from the best literature of both sides of the big water. Our old friend, Dr. Bidwell, still conducts it with judicious skill.

THE POPULAR SCIENCE MONTHLY for June appears to us more than commonly attractive. In it the first place is given to Dr. Oswald's article on "Clothing," the hygienic spirit of which is most striking and agreeable. The papers on "Fruits and Seeds," "Sunstroke," "Value of our Forests," "Glucose and Grape Sugar," are very seasonable and instructive. We do not agree with the latter in regard to the healthfulness of the substance which is now so extensively used to adulterate sweet manufactures, as our own observation and good authority pronounce it incompatible with good digestion.

NEW MUSIC. Wm. Adrian Smith, Publisher, of New York City, sends us the following fresh *morceaux* from his press:

"O SILVER MOON," a song. Composed by D. Frank Tully; adapted to baritone or tenor. Price, 35 cts.

"I'LL BE A FRIEND TO YOU." Song and chorus. Words by R. L. Cary, Jr. Music by Frank W. Green. A pretty melody. Price, 35 cts.

"JUPITER LANCERS." Composed by Frank W. Green; in solo form 50 cts.; for duet 75 cts.; orchestra \$1. Quite appropriate to the graceful figures of this popular dance.

"QUICK TRANSIT" Galop. (From Harlem Bridge to City Hall), as performed by Theo. Thomas' Orchestra. Composed by D. Frank Tully. This piece is sufficiently commended by the manner of its production. Price, 15 cts.

GOOD-BYE: Composed by D. Frank Tully. A new song—pathetic melody, and an agreeable, though somewhat interrupted, melody. Price, 35 cents. Wm. Adrian Smith, Publisher, New York.

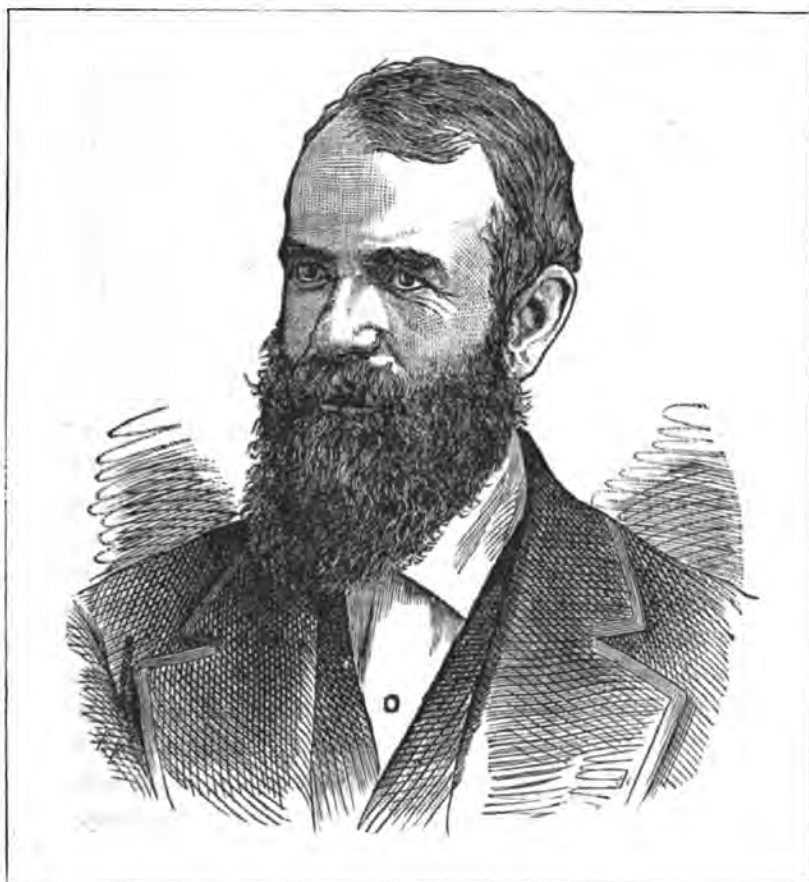
WAKE, LADY MINE: Serenade. By D. Frank Tully. A somewhat ambitious effort on the part of the composer, in the main well wrought out, and appropriate to the motive. Mr. Tully shows capability and talent. His accompaniments are not of the ordinary mechanical stripe. Price, 40 cents. Wm. Adrian Smith, Publisher.

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August, 1881.

[WHOLE No. 513.]



JAY GOULD,

THE EMINENT FINANCIER.

ONE of the most remarkable men among the multitude of remarkable men who have contributed toward the amazing development of railway and financial interests in the United States, is Mr. Jay Gould. Probably as a financier no man in America outranks him in the boldness and vastness of his operations, and in the sagacity with which he administers them. Certainly no name is

more widely known on 'Change than his, yet aside from his business career it may be safely ventured that few wealthy men are so little understood. He is a very quiet, unobtrusive man, avoiding conspicuity, and living in private, quite apart from his public or business career. Hence of his inner life and character he is one of the least known of men. With a photographic portrait, said to be excellent, before us, taking it as our guide, as we have never met Mr. Gould in person, and know him only as the newspapers have delineated him, we would say that, temperamentally, he shows a good degree of wiry toughness. We do not speak of him as a robust man, strong for a heavy lift, or capable of doing a great amount of muscular labor in a given time, but as possessing that wiry, tenacious endurance which, while it gives intensity and susceptibility, also gives sustaining power. His hair is fine, nearly black, wiry, and hard; while his skin, being thin and of fine quality, shows quickness of feeling and clearness of thought. The form of the head, the expression of countenance, and, indeed, the whole make-up, give an impression that the skull is thin, and, on that account, the brain large for the size of the head, and that the cerebral mass is endowed with an uncommon amount of gray matter, which serves to evolve thought and intensify the emotions. Those who are keen in their feelings, clear in their thoughts, and vigorous in their judgment and perception, have very deep and complicated foldings of the brain, the convolutions deepening sometimes to the extent of an inch and a quarter. In the *post-mortem* examination of men whose mental character has been of a low order, it is always found that the foldings

of the brain are much less deeply marked. We judge this brain to be decidedly large for the size of the man, and there are the signs of excellent breathing power and very good circulation, showing that the brain is well nourished.

In figure he is rather slight, but made up of fiber, without fatness; like a race-horse that is groomed and rubbed until there is not an ounce of fat on him, the subject before us has no waste matter; everything contributes to mental clearness and vigor; he is lithe and limber, quick as a cat, and sharp as an eagle, and thus there is ample foundation for whatever he has been able to do mentally. Whoever undertakes to judge of such an organization without taking into consideration the constitutional temperament and the amount and quality of the nervous system, will act without a just basis for sound conclusion.

From the opening of the ear to the root of the nose there seems to be enough distance to indicate a full share of the perceptive intellect, which enables him to acquire facts; but he is better known for intellectual grasp, the far-seeing power which deals with cause and consequence, or that mental grip which seizes upon all salient facts, and appropriates them to his use. Nothing escapes his attention or consideration which will minister to the furtherance of his plans.

He is a critic in a high degree; if he had been educated for the law or for the domain of philosophy, he would have been a sharp exponent of the distinctions and relations of facts and subjects. As a reasoner, he lets no fact escape; no cause or reason which may bear upon the conclusion is neglected. The upper part of the forehead seems to be large, not only, but has the appearance of later growth and

development, as if he had used his reasoning power more than the observing. The center of the upper part of the forehead is particularly full, and gives not only the power of analysis in general, but keen judgment of human character and motive—he looks through men, and is likely to know them far better than they know him.

If the reader will run his eye from the opening of the ear over the top of the head he will notice that the crown of the head is especially high; and in that crown of head, in conjunction with the intellectual sharpness which we have mentioned, lies the eminent power of the great railroad and stock operator. He believes thoroughly in himself, relies upon his own judgment; has an inward consciousness that he knows as much about the subjects which he treats as anybody, and then his Firmness, being exceedingly large, enables him to hold himself up to the work in hand, and to stand against any amount of opposition. He is ambitious to excel, not anxious to be praised, or afraid of censure, but has a "gamy" desire to overcome obstacles and win whenever there is opposition to him, even though, in winning, his victory may cost him more than the stakes are worth.

He has the power of construction, understands combination, appreciates the interworking of complicated affairs, and if he had been devoted to machinery, he would have been successful as an engineer.

His regard for property is strongly indicated, but his strife in the labor of life does not originate so much in the love of money as in the love of power which the possession of money gives. He was always anxious to be master of the situa-

tion, not so much through muscular force as through tact, policy, shrewdness, foresight, keenness, and persistency. He has wonderful ability for negotiation; he can find out what others know without telling his own plans—converses by asking rather than by answering questions. He can find out other people's strong or weak points without exposing his own.

The crown region of the head and the upper portion of the forehead—the first giving determination, self-reliance, aspiration, persistency, and independence; and the other giving the power to reason and criticise, and the ability to combine, organize, and arrange affairs, so that everything shall fulfill its proper mission, and be under his direction and supervision—these are the great features of his mental constitution. With him money-making is a profession; success a game. He aspires for triumph, and values the dollar less than many who have less ability and disposition to acquire.

Though he is able to make money rapidly, he has the disposition to manifest liberality. He may not be disposed to pay extra wages or make gifts at the street corners, but whoever thoroughly learns his character will find that he is liberal in his gifts and generous in many quiet ways. Mr. Gould in social life is polite, kindly, respectful, friendly, and confidential. We regard him not as warm, gushing, and impressible in friendship and affection; there would be a tenacious and reliable attachment between him and those whom he selects as friends, and those who are in his confidence will prize his friendship highly.

JAY GOULD was born among the hills of Delaware County, N. Y., in 1835. His father was a farmer and store-keeper. After the customary experiences of a

country boy thirty-five to forty years ago, which were working on the farm and attending occasional winter terms at the "Academy," Jay started in business for himself—by becoming at sixteen a clerk in 'Squire Burhan's store in Roxbury, a village two or three miles distant from his home. From clerk he advanced in a short time to surveyor. While engaged in this branch of semi-official service he made a survey of Delaware County, and published a map of his work, selling copies of the map by subscription at \$5 each. He was then about twenty years of age. We find him shortly afterward associated with Zadok Pratt in operating a tannery in Pennsylvania. A few years later Mr. Gould appears in New York City as an operator in stocks and gold. He is reputed to have been very successful from the first, and during the war found many opportunities for profitable speculation.

His relations to the Erie Railway were not so long ago that most of our readers can not remember the famous administration of Gould and Fisk. From that time on he has given attention to railroad securities chiefly, and from time to time added to his fortune vast sums, until it is stated that he bids fair to rival Mr. W. H. Vanderbilt in wealth.

Mr. Gould is a large owner in Eastern and Western railways, several important lines being in fact quite under his control, while some owe their existence to his far-sighted anticipation of the rapid development of certain regions in agricultural, mining, and industrial enterprise. He has been most prominent for a year or so in promoting a new telegraph company, his object avowedly being the introduction of a system of cheap telegraphy on a great scale. This is what he is reported to have said on the subject:

"When I was in Europe, in 1879, I was struck by seeing how much more freely the telegraph was used in ordinary private business there than in this country. This is especially true of Switzerland. Of course, the distances to be covered in this country are so enormous, and the population

is so comparatively sparse, that we can not for some time to come expect to see the work of covering the whole country with a telegraphic system done as cheaply here as in a little country like Switzerland. But I am very sure that under one system, without conflicting interests to look after, and with the expenses of only one organization instead of three or four to be met, such economies can be introduced into American telegraphy that rates both to the press and to the public can be gradually and systematically cheapened without impairing the efficiency of the service. My idea of a telegraphic system is to supply everybody who wishes the control of telegraph facilities with those facilities, giving private business-houses wires and operators of their own whenever they require them, and doing the same thing for newspapers, exchanges, railways—in short, all interests. Cables will also be laid from Cuba, where they will connect with our present system to the other West India islands, and to Brazil and other parts of South America, as well as from San Francisco to China, Japan, Oceanica, and Australia, with a northern line by way of Puget's Sound to Alaska and Northern Asia, connected in Kamtchatka with the Russian system; so that at no distant date St. Petersburg will be in communication with New York by way of Asia as well as Europe, and England will reach her Australian colonies through New York and by our American lines more cheaply and expeditiously than over English wires through the Red Sea and by way of India. We contemplate such a system as an American system, of which New York, and not London, shall be the center. I see no reason why the United States should permit a position which geographically belongs to us to be taken away from us by England."

He is convinced that the United States will eventually become the great commercial and financial center of the world, and it is his chief ambition to aid, so far as lies in his power, the practical development of this prospect.

Mr. Gould is of dark complexion, a trifle under the medium in height, and weighs about one hundred and twenty-five pounds. He is married and has several children. To his family he is more devoted than the majority of business men, usually going directly home at the close of his office hours, and remaining there after dinner. His evenings are passed with his family, and in his study,

which is provided with telegraphic wires, so that he can communicate with his brokers and assistants at any time.

In his habits he is one of the plainest and most temperate of men. Wine and tobacco are not used by him, but he finds more legitimate recreation among the books of his large library and the pictures of his fine gallery.

THE PHRENOLOGICAL COMMENTATOR.—NO. IV.

A RELIGION IS.

"And that He is a rewarder of them that diligently seek Him."—HBB. xi. 6.

THE text is the other part of a description of the first man who demonstrated to himself and the world the possibility of the immortality of the body, and the existence for man of another life. Having found that a God is, and that the question is not, "Is there a God?" but of all the gods, who is the true One? I will not seek a scientific basis for the fact of a religion, and prove that it is not a question of a religion or not; but of all the religions, which is the best one?

I, of course, have nothing to do with small parts of any particular phase of the common religion called sects, though too many in arguing against existing religion, really attack some particular sect, or its errors and abuses, and think they have demolished all religion. This was the attitude of the French, in their revolution, who, knowing no religion except the Papacy, thought in its overthrow all fell; and of men nowadays, such as Ingersoll, who abuse priests, when Christianity has no official priest except Christ. Such is the position of scientists who charge upon Christianity the persecution of Galileo, etc. But we desire to be fair, and, remembering that that religion is as old as the Adamic race, to go back to Eden where God-worship originated, and trace in all a religion, if such can be found, and see if there be any one that embraces all that is common to this religion, and by its fruits learn which is the best.

The argument runs thus:

I. It is historically true that men have always worshiped. The acts, ordinances, and aspiration of worship make up religion.

They may have worshiped a cat, and been so devout as they of Egypt as to lose a city rather than harm their god. Still he is worshiped, and around this or other deities are seen certain persons, ceremonies, conduct, and creeds. There is but one portion of the earth of which I can find no record of such persons, rites, etc.: primeval Africa, south of the Mountains of the Moon, and those descended from its aborigines—negroes, and our North American Indians, who are more closely related to these Africans than to the Asiatics. The Aztecs are not related to our Indians, but came from the south into the United States, and, like us, are related to the Asiatics. These Africans worship the "Great what is it" or "Mystery." So we rule them out because possessing nothing in common with Shamanism or Deism, except a semi-adoration, because having no *revelation*! The "Great Spirit" of our Indians is a Euphemism adapted to converse with us! They borrowed this from the Protestant, as they did captive-burning from the Priest! So all the lessons of this religion are ruled out in the argument, though it proves even a religion among a people of monosyllabic tongue.

Any element of Orientalism found among them is traceable to contact with Asia. There were two sources of religion, Asia and Africa. Europe originated nothing. It received by way of Spain African influence, and by way of Greece, Asiatic. We, from Western Europe.

II. Secondly, in complement to this universal fact, man has religious faculties, scientifically determined beyond dispute. He has seven of them, in ten organs: Benevolence, Veneration, Will, Conscientiousness, Hope, Spirituality, and Imitation. According to my humble judgment the will is four-fold, including Firmness, its perseverance; Self-esteem, its resistance; Approbativeness, its consideration; and Continuity, its isolating powers in *insulation*; all these being on the crown of the head where consistently they should be, as there are but three objects of knowledge—the world, self, and God, who is “The Highest.”

They are paired thus:

- | | |
|-----------------------|--------------|
| 1. Benevolence: | Good works. |
| 2. Veneration: | Adoration. |
| 3. Will: | Vows. |
| 4. Conscientiousness: | Sacrifice. |
| 5. Hope: | Immortality. |
| 6. Spirituality: | Revelation. |
| 7. Imitation: | Example. |

As to this last one being a *religious* organ, I so claim because of its *position*; because of its very appositeness in our experience, its paradoxical character, as Christianity is the paradox of the world; because of sin and of its ready access to mere form and hypocrisy. On the other hand because of its helpfulness, as a kind of side gate to the temple; of its necessity, and the history of religions. Then also we have Eph. v. 1, (*μυμηται* original for “followers”) and other Scriptures.*

My reader will instinctively feel, and experimentally know, that all these things apply to religion and include all that is

* The imitative duty, with the Incarnate One for the Exemplar, is considered to be a higher style of life than obedience to a law, as by conscientiousness; and really an easier, for according to all creeds this Exemplar lives in his exemplifiers. For example, as Christ is God incarnate, every Christian is Christ incarnate! So it is naturally placed farther from the “Selfish Sentiments”!

distinctive. There has never been a conception of religion without some or all of them. Whether all of them characterize every religion is properly the only question in dispute. Here are seven claimants for forms and phases of religion. Do we find them in all the great religions of the past? Of course it is from them we must reason.

III. All these seven phases of religion are in all the great religions of the past. In all that cluster around Babylon, Arabia where was Eden, and which was called on Egyptian monuments, “The Holy Land,” the first of the name. And in Egypt we find:

1. Alms-giving to the gods, temples, their officials, and to the poor.
2. An intense and ornate ritual.
3. The devotee who aspires after the secrets of his religion, or is an enthusiast as a proselyter. The man of consecration and a vow.
4. A doctrine of immortality more or less shadowy; the man of our text came from that region. Another life is the logical sequence to immortality, an undying body because immortality makes the man fit to live forever. The element of resurrection is the only distinctively Christian idea, and is the *mode*, not the thing itself.
5. Revelation, and *written* as a sensible adaptation for preservation.
6. The gods are described as examples of human walk.

7. Clearer than all, there are a doctrine and practice of victim sacrifice, and it is the representation of some one incarnate dying by substitute or actually for man, whose conscience cries for propitiation.

If we go to the center of what is called, philologically, Indo-European, taking India with Aryan and Sanscrit literature, China and the adjacent islands, and afterward Greece and Italy, and around them, we find the same elements in all the religions, and among the gods many One Supreme Deity.

When at a later period we come to the stream of religious history from which we immediately flow, we find Greece and

Rome the spreaders abroad of a religion, confessedly having its fountain from the new Holy Land, hard by the old one, where are yet phrenologically the most religious people in the world. Its name is Christianity, and all these ideas are more clear than ever before. No new religion, but one old as the race. If it is said the Greek and Roman had no "Bible," the Aryan had, and in those two languages, especially the first which was the principal one in the Rome of books at the time the "Bible," called such by us, was there. The loss of the first is only a proof of the truth of the last, a book distinct from all others, claiming divinity in that it is written, and is now published in many languages, and they in but one; showing their national and sectarian character as opposed to its universal one. If now they are published in other languages it is for literary, not missionary purposes, showing in them loss of power. Immortality and Universality, two tests of truth, are its alone.

I have not in this outline of religious truth as necessary to man's sevenfold religiousness, quoted chapter, verse, etc., but appealed only to a recognized fact, recognized by even the most rabid deniers of Christianity, and used by them against her, in their attempts to do two things:

1. To find an eclectic religion. Their eclecticism gives us our needed proof!
2. To overthrow her by the claim that because Christianity has only what all religions have in common, she is not the only religion, and therefore should be rejected! Strange purpose! Not only, but best form of the only, is sufficient answer. How can there be any discussion about the only when an only is admitted by all?

We thus see that man for fifty-nine centuries has been a worshiper in one and the same sevenfold way, and that the only question left us is not one of a religion or no, but of the grade thereof.

IV. Well, what is the best grade of the one universal religion of the divine Adamic-Eden started race? The *revelational* race?

1. It will have been noticed that it was shown that the center of the one religion universal to the race to which we belong, started in Arabia, and spread thereabout first. To this center points all migration and philology. Now if we find Christianity and its book containing these seven points of the true religion centers there too, much will be gained in the speed of settlement of the question. Without making any claim for our Bible over any other Bible old or new, it is plain that it centers in Eden and Arabia, and was most brightly clear in Egypt, Palestine, and Babylonia; some of it being written in the language of that last country. No one looking at it as a mere book doubts the record of all the seven points. So, too, no man comparing it with any of the other "Bibles" doubts but that it is clearest and fullest on Benevolence, Worship, Consecration, Duty, Revelation, Immortality, and a Sacrificial incarnate Saviour. Judaism is but one common name for the religion of the Old Testament, but Christianity is only the continuation and fulfillment of it. So as to ancientness, pureness, and directness of descent, the great religion of to-day called Christianity presents no doubt. No objection can be raised to the Book form as such; for that is universal, and it has always been, and is yet for two reasons: "To correct errors so likely to arise from tradition, and to preserve its revelation pure; for in all religions fraud grows out of Benevolence; idolatry from Veneration; physical, mental, and moral abuse from Consecration; formality and hypocrisy from exemplary duty; witchcraft, incantation, now spiritualism, and false visions, from Revelation; a mere shadowy, bodiless other life from immortality; "a den of thieves and robbers" in altars made money-counters, and false Christs and other anointed ones innumerable, from sacrifice and its necessary priesthood. The old must be renewed and ever kept fresh. "What advantage, then, hath the Jew?—Much every way; *chiefly* because unto them were committed the *oracles of God.*"

2. Christianity is best because its Book contains the truth of the others, and grades them up to their perfection. As I judged the gods by the superiority of the "Word made flesh" to all other incarnations, so I judge the religions by the superiority of the Word made scripture to all other religious records. We have the only book that is not a violation of true science, true philosophy, and common sense.

3. By its fruits in the civilization of the past and present, must we determine which is best. We claim justly to have the highest civilization and most humane life of the ages, whether we consider them in the merely worldly aspect of social, civil, literary, and political life; or in the exemplification of the true ideas that enter into the sevenfold human and divine conception of religion, that is, as scientifically and revelationally considered; for to deny revelation is to deny universal fact, experience, and common sense. Revelation is scientifically necessary, and faith is its mode of reception.

I need not enumerate all of the improvements we enjoy over past ages, but let us look at immortality as a sample.

It is where nature and science demand it should be, of the body, by the body of the Incarnate, and all by a force and mode recognized as divinely necessary—the metamorphosis of death, and development in another life, so that resurrection becomes a fact just as consistently as a seed planted, dying, and resurrected, becomes a plant of beauty and fruitful.

We conclude. Irreligiousness is violence to history, science, investigation, common sense and human nature. If a man is not a Christian, he is behind the times!—just two thousand years in the rear. To be a Christian is to be abreast of the flood of time, and in the march of all true progress. There never was, is not now, and never will be but one true God and one true religion. My reader must have them, or cease to be even human! If he has the best, he is a Christian. When a man desires to bethink himself, and reconsider his ground, his proper method is to postulate religiousness, a scientifically settled duty; and then ask himself as to his fullness under the "seven points" taught phrenologically and Biblically.

Trinidad, Colo.

ALEX. M. DARLEY.

THE INMOST TRUTH.

If by the meaner measures we would prove
The secret soul of truth's reality,
How light our chances of success! *O love*
Of what we seek to prove, we see
Alone in thy light clearly, for in thee
We stand at center, and our gaze is true.
All outer proofs live in the mystery,
That, touching all things softly, adds the hue
Whose presence postulates truth's fairest
light;
So that the *seeker* and the *sought* are such
Companions, in the mystic circle of His might,
Who made truth nature's friend, that when they
touch,
They know each other, in God's light indeed;
Nor any stranger's introduction need.

We babble much of *proof*,—let us talk less;
We can but prove the lesser, lower things,—

Things further from us; when God's blessedness
Dwells in us, as the light in dew, it brings
An instant recognition. How should I
Stand outside self (one little half within),
With testing-rod in hand, with "how" and
"why"
On the wise lip, and in this mood begin
To measure out the half of self, and call
The weak result the truth? Does not our need
That clamors most for the Unknown, which Paul
Declared at Athens once forever, plead
That, by its strong demand, its tears and cries,
Too near ourselves for proof *He* ever lies?
J. H.

LABOR to keep alive in your breast that
little spark of celestial fire called con-
science.—*Washington.*

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER VIII.—(CONTINUED.)

DEVELOPMENT OF THE BRAIN IN MAN, ANIMALS, ETC.

NOTHING in the whole realm of physics possesses more attraction for the student than observation of the gradual development of the organs of the brain in connection with the unfolding

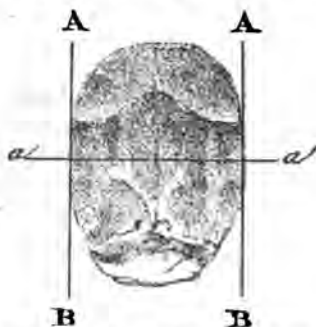


Fig. 231.—SKULL CAP OF CAT TWO WEEKS OLD.

activities and faculties of the mind. The student of physiology who neglects this can scarcely estimate the instruction and pleasure of which he deprives himself. If we take as an illustration the early stages of the cat's brain, we find as the conclusion of many observations* that the convolution in which the propensity to destroy lies, is so moderately developed at birth that the skull cap presents about as much extent anteriorly as in its middle region. At the period when young cats begin to receive from their mother small animals which they have caught for them to eat, and when young dogs begin to gnaw, the mid-lateral parts increase in a striking manner. Figs. 231, 232, represent two skull caps of young cats, one two weeks old, the other four. The parallel lines drawn upon their respective margins show a marked contrast. In Fig. 231 the skull cap is inclosed by the lines; in Fig. 232 its margins at the mid-lateral region, *a, a*, extend beyond the lines. This region, as we shall fur-

* Dr. Vimont alone watched the development of twenty cats from the moment of their birth to the third week, and then compared their brains with the cranial indications.

ther see by consulting the skull cap of a cat six months old and one full grown, increase in extent with time. In the adult the mid-lateral regions project greatly, while in the young cat they show but a moderate expansion in contrast. The same tendency of growth is noticeable in those cerebral parts which give to these animals the faculties of place, of cunning, and artifice, so that they can surprise their prey; of watchfulness, so that they are vigilant against danger. In fine, the whole basilar region which is related to self-preservation is marked by rapid development—particularly in the feline and canine families.

Quadrupeds with convoluted brains, as they grow old, experience changes in volume and consistency of nervous tissue, which are analogous to those occurring in the human brain. In old horses, old dogs, and old cats the two cerebral substances usually show more solidity; especially is this the case with the white or fibrous matter. There is often a marked alteration in the hues of the two substances in old horses, and

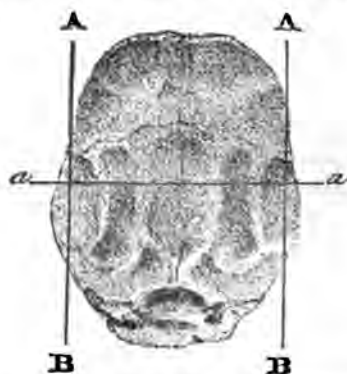


Fig. 232.—SKULL CAP OF CAT FOUR WEEKS OLD.

the expansion of the great bundles of the brain can be traced with facility. In horses the convolutions situated in the anterior and superior regions of the hemispheres undergo a very apparent dimi-

nution. Those who have much to do with horses know that in advanced age their heads show a contracted, wasted appearance in the parts over the eyes. Adhesions of the arachnoidal membrane to the brain are very common in aged horses.

Generally the changes in consistence and volume of brain in animals are accompanied with exterior signs which are easily perceived. Horses in advanced age lose suppleness of movement; dogs become more sleepy, and almost always, as it is commonly said, are crusty or snarling. Some species of apes which are very docile in their youth, become incorrigible and very vicious. The loss of facility in movement is coincident very often with softening of the spinal marrow; the diminution in intelligence and docility with the shrinking of the convolutions occupying the anterior region of the cerebrum. Observation of the habits and conduct of apes, dogs, horses, and pigs have confirmed this statement. As regards the pig it should be said that he is by no means as stupid as most people think. The attempt to train him has resulted in phenomena of a surprising nature; but it would appear that whatever instruction is imparted to the pig, is not retained long, for after attaining maturity, the anterior lobes of the cerebrum remain but a year or so in full development, and then begin to decrease in volume.

To recapitulate the points which have been discussed in this chapter:

1. All the vertebrates, without exception, are provided with a nervous system, situated in the skull and vertebral column. This system is composed of three distinct parts: (1), That related to the intellectual and affectional faculties. (2). That related to the sensory organs. (3). That controlling the mechanical movements.

2. Birds and gnawing animals develop most rapidly in cerebro-spinal structure. Next follow the carnivoræ. From eighteen to twenty months are necessary for the complete maturity of the nervous system

of dogs and cats. In the herbivoræ, specially the horse, ass, cow, goat, sheep, deer, from two to four years are requisite ere the brain reaches its highest development. Man, however, of all animals, is slowest to come to the climax of nervous growth.

3. In all vertebrate animals the parts situated at the base of the brain indicate earliest development. In some species, particularly in birds and rodents, the spinal marrow and geminal tubercles partake of this early maturity.

4. In the whole series of animals whose brains are provided with convolutions, these are at birth distinctly traceable. But after a time, which varies according to class, order, genus, and species, they are more pronounced, and their development coincides with the activity and breadth of the intellectual and affective faculties of the respective animals.

5. The family of animals whose brains are provided with convolutions, is that in which the most changes in cerebro-spinal organization occur as the effect of age.

CHAPTER IX.

DISEASED HEADS AND THEIR CHARACTERISTICS.

THE history of lesions of the brain, and of its envelopements, merits the attention of those who study cerebral physiology, for in possessing a knowledge of the alterations of structure wrought by disease, we are enabled to take definite account of the different phenomena or changes presented by the intellectual or affectional faculties in persons who are abnormally affected. Such knowledge enables us to understand also how craniologists may be led into error in the application of their rules if they do not take into account the pathological condition of the heads submitted to their examination.

LESIONS OF THE SKULL.

All lesions of the skull may be reduced to three classes: 1. Abnormality of form or configuration. 2. An excess or defi-

ciency of the calcareous matter entering into the composition of the bones. 3. An increase in the number of the bones composing the skull.

To the first class belong all the vices of conformation known under the name of monstrosities. We shall cite as examples of these the two kinds which appear to be more intimately related than others to the history of the development of the skull and the brain. One consists in a sort of atrophy of the cranial bones corresponding with that of the cerebral hemispheres (Fig. 233). This is designated commonly under the term *Acephalic*, from the Greek word *kephale* (head) and *a* privative, and signifying headless—an expression not strictly accurate, since it could be applicable exactly to beings only which come into the world entirely without heads. We will presume, however, to infer that as such monsters are entirely or almost lacking in brain, they

were named *Acephalic* on the ground that they might as well be destitute of a head altogether.

The other kind of lesion is quite op-



Fig. 233.—ACEPHALIC OR BRAINLESS CHILD, TWO-THIRDS NATURAL SIZE.

posed to the one just described; it consists in an effusion of watery matter in the ventricles and membranes, and is



Fig. 234.—SKULL OF AN IDIOTIC GIRL, THREE-FOURTHS NATURAL SIZE.

properly termed hydrocephalus. The result of this effusion is an increase of cerebral volume, the distension causing the channels between the convolutions in some cases to disappear. The bones of the cranium yielding to the pressure of the distended hemispheres separate, and the head may swell to a prodigious size. Hydrocephalic cases are on record, the volume of the heads measuring over thirty inches in circumference. Such a one was that of James Cardinal, who died in Guy's Hospital, London, in 1825, at thirty years of age. His head measured

Much more frequent in occurrence than the hydrocephalic form of abnormality is that defective condition of the anterior lobes of the brain which is known as Idiocy. According to the diminution of the cerebral volume, is the degree of the mental weakness. As the result of hundreds of observations, it may be stated as a general rule, that a head which measures less than seventeen inches in circumference is lacking in that integrity of cerebral function which constitutes a person a useful, intelligent, self-supporting member of society. There

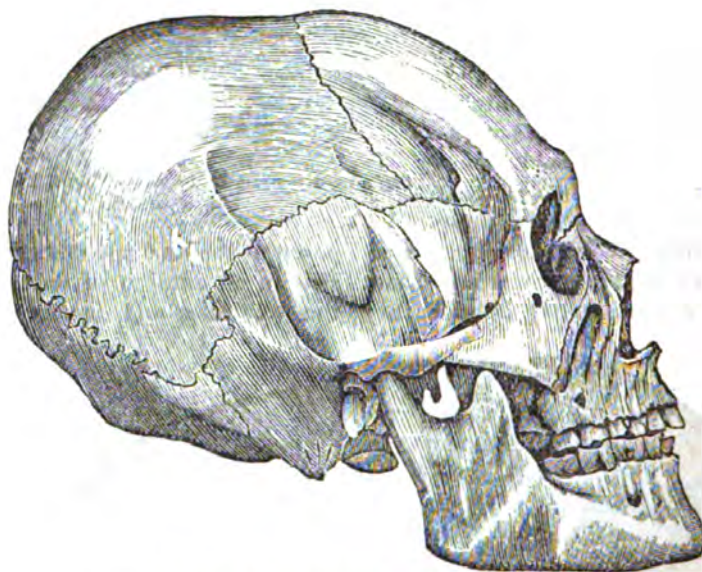


Fig. 235.—SKULL OF AN IMBECILE. REDUCED.

thirty-three inches in circumference, and was found to contain five quarts of water. He was intelligent and clear-minded in spite of the disease—a condition which is of very rare occurrence in connection with hydrocephalus. Generally the pressure exerted by the effusion suppresses the organic action, so that the faculties of sense or thought are more or less impaired. In almost all cases sight is imperfect; some have attacks of somnolence more or less prolonged: some can not endure the least noise; and frequently paralysis of the lower limbs accompanies the disease.

are many persons with small heads who show remarkable talent in some mechanical direction, and under the control of others are made useful, but they are incapable of exercising their intellectual faculties in a coherent and practical manner. Figs. 234 and 235 represent heads in which the degree of imbecility is strongly contrasted. Fig. 234 is that of a girl twenty-three years of age—a complete idiot, incapable of providing for her personal wants in the least. Fig. 235 belongs to the class of partial idiots, or, as they are now usually termed, feeble-minded persons. The difference in the

form of this head from Fig. 234, especially in the anterior lobes, is very marked, while its size was much superior.

It must be admitted here that we sometimes meet with men and women whose heads are very small, barely exceeding eighteen or nineteen inches in circumference, and who nevertheless exhibit striking intelligence, in special directions. But this, so far as our observations have extended, is always due to the fact that the cerebral organs, in which the intellectual faculties reside, are well-developed, while the parts belonging to the emotional or sentimental faculties are very small. In such a case a person may possess a high degree of the observing and reflective organs, and his head

may be high at the crown without showing a large circumference.

On the other hand a head may measure considerably more than the average in circumference, because the organs of the propensities and affections, at the base of the brain, are very large, yet be wanting greatly in intellect and moral sentiment. The Cretins of the Alps offer a suitable illustration of this type of development, and so also do criminals of the most debased type. It must be remembered that the bones of the skull associated with low types of cerebral organism are usually thick, and their prominences at the supra-orbital ridge and mastoid process, etc., are more conspicuous. D.

(*To be continued*).

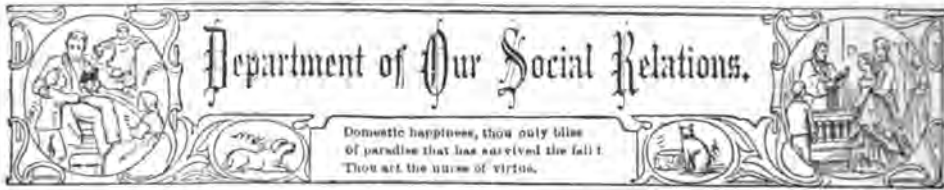
THE SELFISH FEELINGS OR PROPENSITIES.

THESE are related to the lower lateral region of the head, a space which may be described as a semicircle whose center is in the ear. When the organism here is largely developed, the base of the head is wide and prominent; and if the selfish instincts dominate in the mental character, the head from the ear upward, when observed in front, has a pyramidal contour.

While a good degree of these instincts is essential to mental integrity, as they lead one to provide for his physical wants, to protect himself and property against wrong and robbery, their excessive influence is destructive to the mental balance, and may lead to vice and crime. They who break the laws of order and propriety often, they who are found in the grated prison, are, as a class, largely developed in the lower side-head. Destructiveness, Combativeness, Secretiveness, Acquisitiveness, Appetite, when active give energy, strength, vigor, and efficiency to man; but unless restrained by the moral sense and directed by the Intellect they become elements of disorder and perversion.

The child with a large base of brain in the intellectual, social, and propensitive regions is endowed with what is termed

a physico-mental organization; he is naturally strong and robust in body, fond of exercise and everything related to muscular movement. His appetite is vigorous and needs government; his temper is easily aroused, and stormy. He is impatient of restraint, and liable to commit improprieties under the influence of passionate impulse. He is "a difficult subject" to manage, and taxes the intelligence and kindness of parents and teachers in their effort to train him in ways of order and decorum. In school particularly does he try the patience of a teacher, for he has little aptitude for the study of books, and chafes under the confinement of desk and bench. His vigorous limbs demand free play; he would be abroad in the free air of field and forest; the outer world affords him the school of his choice as it furnishes employment for his sturdy muscles and coarse nervous fiber. Such as he are well constituted to perform the world's strong work; to build the bridges, railways, steamships, highways, to clear the forests, level the mountains, fill the valleys, and perform the other grand services demanded by an advancing civilization.—*From "Indications of Character."*



THE PURITAN CHILD.

PROMISES.

IT is a common practice for parents and teachers to bind children down to good behavior by exacting a promise from them, and almost all reforms involve a pledge. As I have before said, from my earliest years I had a dread of making a promise. It seemed to me, in my exaggerated consciousness, that some perilous catastrophe might supervene if I should break my word; and so it would, for the sacred world of pure truth would have been destroyed. I never knew what it was to tell a lie, or violate the truth in any way. Some writer has said all children are liars. I do not believe it; they are made such by fear or by example; if honestly and kindly, and judiciously treated, they will return candid developments.

I remember there was a collection of old books on a high shelf in a closet at my grandfather's, which I stumbled upon in my quest for something to read. I was perched in mid-air devouring "Tom Jones," when my grandmother found me. I was nine years old.

"Elizabeth, those books are not good reading for a little girl," and she took the volume from my hand. "Promise, child; you will not touch them again."

"Grandma, grandma, it is beautiful reading; I can't promise, never," and I ran off to escape the promise.

It was not long before I was reading again, but not slyly; I said openly, "I am reading the book again." Addison was given me, but the book of story and dialogue and poetry failed to interest me. I read Fielding, Smollet, Le Sage, Richardson, and "Don Quixote"; the latter cost me many a tear. I loved the Don and

hated Sancho, so true are the intuitions of a child. I wept over the "Death of Abel," read Werter, and thought Charlotte stupid. Many of these works I did not read again for twenty years, but at the time of which I speak, I had no conception of the amount or intimation of the indecency lurking about some of them. A pure-minded child lacks the key to evil.

I read Doddridge, Allan's "Alarm," Baxter, Bunyan's "Pilgrim's Progress," and "Robinson Crusoe," all in the same breath.

As this subject is associated with that of veracity, I will relate an incident as illustrative, and indicating the quality of our household. I was six years old, and we children in the nursery were turning somersaults from one bed to the other. In the course of these evolutions I stuck my foot through the window, cutting it not a little. Seeing how it was, my step-sister, in the goodness of her heart, ran down-stairs to inform my mother.

"What did she say about the window?" I eagerly inquired. "What did you tell her?"

"I told her I had broken a pane of glass, and cut *your* foot, and all that."

"You broken it, Eleanor! What did *ma* say?"

Eleanor looked comical. "Of course she said she was sorry, and all that, but as I had been such a good girl, to come and tell the truth, that was enough about it."

It was now my turn to run down and give the right version of the affair, which was settled with the usual homily denouncing all deceit and falsehood, even

for a good motive, as in itself evil. It has been said that children are natural liars, as I before remarked. I do not think so. Few are heroic, and they lie from fear, interest, or vanity.

SECOND MARRIAGE.

I think I have not before mentioned that after the death of my father my mother, in due course of time, married again, when I was little more than two years and a half old. I remember even at that early age the pain I felt at some unkind manifestations on the side of my father's family against my mother at this time. I had new dresses, my mourning taken off, and was the object of great pettings and indulgence, but the under-current of disaffection troubled me. Children suffer thousands of times by the indiscreet discontent of those about them, and thus a needless shadow is cast upon their sunshine. The new experiences superinduced by the changes of their elders, are things to which they do not easily adjust themselves.

My sister and I went eagerly to work to make the new sister and little brother (for the step-father was a widower), perfectly happy, but I had to study them to see how they conformed to my preconceived ideas of grace and prettiness, and I was some time in getting used to them. I felt also many misgivings about myself, and consulted the looking-glass in a sort of dread that they might dislike my looks; but as they never thought anything about it, matters turned out comfortably.

The step-father was a kindly-hearted, hospitable, generous man, who used to say playfully, "I am king of the ship, and Sophy is queen of the house"; so all things moved in harmony in the little household kingdom. We children were taught to run and open the door at his approach; to place a chair for him, and meet him with kisses. He was fond of me from the first, and instinctively penetrated my extreme sensitiveness and my habit of trying to find out the meaning of everything, which seemed greatly to amuse him.

When his vessels came into port they

brought us something from foreign ports, so that our store-room was not only filled with the common necessities of a family, but with the fruits and luxuries of every climate. I was a dainty child from the first, and lived in a great degree upon milk and fruits; and having oranges, pine-apples, and bananas added to our home apples and vegetables, afforded me a keen sense of enjoyment.

Notwithstanding this abundance, we children were never pampered; never allowed any idle lavishment. We had each of us beautiful manilla bags and baskets, and I remember the delight we felt when these were filled with oranges, lemons, etc., and we were deputed to carry them to the sick or disabled; to some lonely widow, some dejected spinster, who would else be totally neglected. Trifles of this kind were not wanting to wealthy friends, but their gifts were mostly for the diseased, the poor, and distressed. I was supposed to do my "spiriting" in a more acceptable way than the other children, hence I was more frequently sent on these errands of mercy; but at one time I fell into hopeless disgrace in this very connection.

A DISASTER.

Among the beneficiaries of my mother was an excellent widow lady who had been ruined by the war of 1812, the embargo having made the vessels of her husband to be laid up high and dry. She was also a beneficiary of the church to which my mother belonged. She had been ailing many years, but was lovely in her patience and piety.

I was eight or nine years old at this time, and had imbibed a horror of sickness and disease. I had no physical pains myself, and thought there should be none; they seemed unnecessary and unnatural. This did not preclude pity for the sufferers, though I felt internally that they ought to die. I could see no reason why persons should be stretched out year by year, in white caps and clean linen, and people to go round their bed in perpetual care for them, and they not in the least to mind it, when I thought it would be

so easy to die. This was the under-current of my crude thoughts, and will explain what followed.

On my way to school I was almost daily deputed by my mother to carry some tempting morsel for the weakened appetite of the invalid, and with instructions to inquire as to her health; accordingly, I one morning wended my way thither, in company with a little school-mate, who was pouring into my willing ear some breathless piece of confidential gossip. We knocked at the door, which was so suddenly opened that my polite message was not forthcoming, and I blundered out: "Ma's compliments, and these oranges and pie to Mrs. Fenton; and she wants to know if she's dead yet."

The daughter of the widow eyed me savagely, as I well merited; and I, always so sensitive to any blameworthiness, was ready to sink into the earth. My companion giggled. At length the daughter found tongue:

"I shall go this very day, Miss, and tell your mother"; and she jerked away at the pretty basket with violence, but I soon recovered my self-possession and replied:

"I am very sorry, indeed, ma'am, and ashamed; I shall tell my mother myself, as soon as school is done," whereat she slammed the door in my face.

She was as good as her word, and made a special errand to the house to inform against me. I was ill at ease through the long school hours, and at the earliest moment hurried home to make confession, which was half atonement with my mother, who forgave me, but did not for several weeks send me on these pleasant missions.

Alluding to the luxuries of our store-room, I well remember the disgust I used to feel at witnessing the avidity with which school children crunched apples and raisins and nuts, biting after each other, and even taking *spruce gum* from a companion's mouth. These animal demonstrations were repugnant to my taste, and not at all *nice*, which was a favorite word at this time.

MY DEMENTED FRIEND.

The life of an observing child is full of incident. In the neighborhood was an insane woman, who inherited this sorrowful malady from a long list of ancestry. She was very nice in her person, and delicate in her tastes, and went about with a short scarlet cloak and hood. The children were all afraid of her, for she abhorred dirty hands and nails; if she caught one in that condition alone, she would scour the offending member till the blood came. One day the family were all away, and several little girls of the neighborhood were passing the holiday with us, when a loud knock came to the door, and upon reconnoitering it was found that "crazy Mrs. Stevens" was there, and we knew she would break the windows if not admitted, and if admitted there was no knowing what cruel mischief she might do us.

Now I never was afraid of this poor demented woman, who from some reason or other was fond of me, and would throw her cloak and hood over me and call me Little Red Riding Hood. I opened the door after stipulating that she would be good and kind, but the other children all hid themselves. This enraged her, and she began to call and threaten them, at which I told her I would walk part of the way home with her if she would be good. This she promised, and throwing her cloak and hood over my seven years' head we went out. She was very gentle for about half a mile, when we reached an eminence a long distance from any house, and she seized me by the wrist to drag me down the hill. I stood my ground and looked her in the eye, at which she let go her hold, and I said firmly: "Now, Mrs. Stevens, I shall go no further"; and I took off the cloak, at which she sat down on a rock and began to cry. I waited till she moved onward, and remember the pity I felt as she went over the lonely road in the dusky light, weeping. I was sorely perplexed about her, for I had imbibed the idea that she was possessed by a devil, and I felt no

scruple in commanding her, and tried to impress upon my mates that the poor woman being thus possessed ought to be *resisted*, for the devil and his works occupied a large space in the teachings of a Puritan child.

MY SNAKE.

About the same time I had an experience that was connected with this belief. We children and those of the neighborhood met together in fine weather to play games incident to our age, a favorite one of which was hide-and-seek, abbreviated to "coop," that being the cry when we hid. One evening I was *coop*, and had hidden myself down behind a large tank placed under a spout from the *porch* for the sake of rain-water. Hardly had I cried coop, when lifting my eyes I beheld an immense black snake towering from the opposite side of the tank. Did I run and scream? By no means. That was not the way of a Puritan child of hereditary stamp, and full of Bible reading. I sprang to my feet and confronted the enemy manfully, his head above mine. I uttered in perfect faith and in low, firm tones, "The seed of the woman shall bruise the serpent's head," at which he slunk aside and I saw him no more.

I related the circumstance, and was as usual met with the response: "It was your imagination, Elizabeth. It was most likely a pole standing against the tank."

A few evenings afterward, however, we were playing the same game, when we were alarmed at the loud shrieks of one of the children, who ran frantically to the house, saying, "There is a great snake drinking out of the tub." Search was made, but nothing found; and my little "I told you so," did not avail. However, the next day the underpinning rocks of the porch were removed, and there, in his black coils, was found a huge snake, which might have made the little dark cellar his den for years. Thus was I vindicated from the imputation of being misled by my imagination, which was always a trial to me.

MENTAL PHENOMENA.

The renowned metaphysician, John Locke, in his conduct of the understanding, speaks of a mental phenomenon, which I am inclined to believe is by no means uncommon to children, and which is the cause of many mental states and much of vague uncontrollable terror. Locke seems to imply that these experiences are confined to adults and are consequent upon the use of tea. Now I, as a child, never took stimulants of any kind; never tea, coffee, cider, wine, or brandy; nothing stronger than milk or water, yet I was haunted by a succession of images floating before my mental vision, pleasant or otherwise; a procession that never stayed; never looked their eyes into mine, but passing, passing in endless variety.

For a long while these images were "beautiful exceedingly," surpassing all the loveliness of my poetic fancies; and I, trained in the spiritual, solemnly believed I saw the angels of God; saw those beings of whom Milton says:

"Myriads of spiritual beings walk the earth,
Unseen, both when we wake and when we sleep."

I used to say to my sister when we went to bed, "Now keep still, sister, so that I may see my angels," and she would lie motionless for a while, and then ask in a whisper: "Have they come, sister? How do they look?" which I could describe rather negatively. "They never have a turned-up nose, sister, nor big lips; they are nice, with blue, dark eyes, and golden hair."

But "a change came o'er the spirit of my dream," consequent, I suppose, to an approaching period of exhaustion. Images that hitherto had been only beautiful were all of a sudden transformed into hideous, distorted shapes, with lolling tongues and wide, ugly mouths, red eyes and elfin black locks. These did not frighten me, but they gave me a sense of mortification, for I firmly believed these were devils. Of course they were devils. I was educated in full faith as to these

evil spirits, that wandered up and down the earth like a roaring lion, seeking whom they might devour. To my mind it was no more anomalous for me to see spirits of darkness than spirits of light. The only difference was, that the latter indorsed my spiritual state and rather flattered my vanity, while the former seriously wounded my self-love, the more as I conceived them to be poor, miserable, impish creatures, devils of the meaner sort. I read the first chapter of Job, and even then felt that the satan there spoken of must be a better sort of devil than mine were.

My sister nightly inquired about my spirits and grew uneasy about this change, *but I held to my integrity*, and explained to her that the devils did not come to me because of my badness, but to tempt me and frighten me because I was a weak, good little girl—an opinion in which she coincided, and gave me all possible aid and comfort. As I recall this period, and remember us two children, my sister under eight years, and I less than six, lying at night in our little bed, discussing grave theological questions, penetrating moral and religious states, simple and tender, and sleeping with a sense of a father gone onward to the beyond, it strikes me as something very weird, for we two lived our best life together, devoid of other companionship in matters of this kind; but I am of opinion that most children have experiences akin, though perhaps less understandingly encountered.

At length came another aspect of my visions, and the image was a unit, not a succession of forms; one vast resplendent creature, majestic and darkly beautiful. No sooner did I close my eyes than he stood before me. His finger pointed onward, peering into the distance, which I intently strove to penetrate.

"Sister, satan has come," I would whisper, and we would lie in silence, till a placid sleep dispelled the image, and then I was up with the early morning, at my books, my "stint," my dolls, my swing, content and happy.

All this period I was doubtless over-

using my brain, but unconsciously doing so. I did not mope; had no ailments, and played as vigorously as my mates, and, except to my sister, rarely spoke of my good or evil visitants. I passed the spring and winter with my mother, and early in the summer went into the country to pass that period and the autumn at the old homestead with my grandmother.

My aunt describes me at this time, not yet six years old, as of slender make, with skin of transparent whiteness; no color in the cheek, but plump in flesh, eyes of a dark gray-blue, golden-brown hair, very abundant, and wavy. I was a general favorite, at home and abroad; petted by every one, yet children did not envy me, but seemed as if this were a matter of course that everything pretty and nice should come to me. My mother would say, "Everybody is bent upon spoiling that child." Before I go further, I ought to tell what came upon me when less than six years old.

A SAD EXPERIENCE.

I have an old "Reward of Merit" in the shape of a little volume presented to me at school by my teacher. It bears the date of June, and I would not be six years old till the next August. This meager child's book, "The History of the Holy Jesus," with its paper yellowed by time, its poor blurred type, and crabbed illustrations (what a contrast to a modern child's book!) brings back the whole sad period of which I am about to speak, all my unchildish grief, and unconscious precocity. I see the face of my kind teacher, Mr. Butler, with his stiff hair erect from his forehead, his pale face and pale blue eyes. I see the scholars with their eyes fixed upon me as I stood beside him and read in Scott's Lessons, and spelt from Morse's Dictionary, a child less than six years ranking with those three times my age. I see children twice my age, to my infinite pity and disgust, blundering through Webster's Spelling Book, and reading b-a-k-e-r. I am sure I felt no conceit nor vanity at my position,

for in my simple piety, I thanked God for helping me to learn, and giving me a love for it. I recall my little fervent prayers and thanksgivings, and my efforts to inspire my mates with a like spirit. Ah! children are naturally so religious and so desirous to be helpful!

There was a servant in the family named Philip, or "the man," as he was called, for Pilgrim people never called the "help" by the name of servant. In the experience I am about to describe this poor ignorant negro from the island of Guadaloupe, was a great help and comfort to me. When in any doubt or perplexity I used to follow Philip where he was at work on the grounds and expound my theories to him, and put hypothetical cases to him, and somehow he assured me, though he was apt to take my own version of things and say: "Oh! Miss Elizabeth, you must be right, for the dear God helps you."

I had a fair-complexioned step-sister, a cheerful, engaging child of robust health, equable temper, and quite as forward as a little one of six years need be. While I was perched up in a high chair to make my head visible above the desk in the "first class," she was patiently struggling with words of two syllables. I used to offer to help her between school hours, but she would stick her tongue in her cheek, laugh, and point-blank reject my proffered aid, winding up with, "Don't bother." She was very sensible in all this, but it did not comport with my ideas of things, accordingly Eleanor became the subject of my most persistent prayers, even proposing that God should resume some of my knowledge and bestow it upon her. I grew very intent in this matter, for nothing was done by halves by me.

I presume my habits of thought and reflection had seriously undermined my nervous system, for about this time I became conscious of a hesitancy in my reading and recitations; I seemed to be "going back," the teacher said. Suddenly it flashed over me that God had granted my prayer, and Eleanor was to be helped

thereby. I watched her narrowly, and to my astonishment perceived that though I was fast losing, she had not gained. I think I soon ceased to think of her in this relation, for my own state was becoming most mortifying; I blundered till I was ashamed, and sank from class to class till I stood at the teacher's knee trying to learn the alphabet. I was completely humbled and forlorn. Mr. Butler, who regarded me as a show pupil, grew quite angry and threatened the ferule. He took my hand; I had never been subjected to blows. The blow never came, for I sank upon the floor in a dead swoon.

When I recovered consciousness I was lying in "the guest-room," filled with my schoolmates and my mother weeping over me, and all the neighbors waiting, doubting if "I would ever come to." Medical advice followed, and I remember only a delicious sense of ease, of rest. I had no desire to move; had no pain, no appetite for anything but bits of cracker and milk and fruit. I nearly lived upon oranges. I was treated most tenderly, and what was strange to me, remember I had no self-consciousness; no desire, no care for others; no prayers. Thoughts of these things floated indistinctly about me, but I was content to rest.

Gradually I must have grown strong, for I recall the image of good Philip as he went about the garden with me upon his shoulder; he was a wise, patient helper, always in search of something "to make Miss Elizabeth smile." My first sense of pain was in overhearing the children at school stumbling over their lessons, and I recalled the exclamation of my aunt: "Elizabeth, are you a fool!" What was I? I opened a book, and it was as unintelligible to me as the Chinese characters upon the tea-chest in the store-room.

My teacher told me I should "come round all right," and the Rev. Mr. Wines, our pastor, who visited the family frequently, related to me a similar incident that befell a classmate of his in college, "who went back and forgot all his learning, and had to learn his A B C again, but it all came back to him, and he be-

came a very great preacher, and a most holy man."

Such comfort, if comfort it could be called, would only be administered to a Puritan child with her deep spiritualism and incipient ambition. Even she was not comforted. A deadness, a kind of chaos came over her.

All this time my memory of what I had learned was unimpaired. I had forgotten only the symbols of learning. I remembered everything I had ever read with a painful distinctness, and was glad to sleep, that I might not think, and I did sleep, I am told, much and often, and without dreams. I shrank from my young playmates, and dreaded grown people, who wounded my little pride by their pitying looks. Good, ignorant Philip alone ministered gratefully, and his simple talk about flowers and birds, and my being just like them, was an inlet to something better than books. At length I was sent to my grandmother, where my mental state was never alluded to, and where I was allowed to be "as wild as a young Indian," as they phrased it. In this eager, extreme, idle existence I seem to

have forgotten it myself under new and beautiful experiences.

The summer months and autumn passed away, and as winter approached, my mother directed me to return home. My health was good; I had become plump, but there seemed little change in my mental condition. The children all went to school, but I was condemned to inaction. At length one winter evening Mr. Butler being at the house said to me "Elizabeth, I think you can read now." I had not looked at a book for months, and had no desire to do so. He produced a book from his pocket, and opened at the tender tribute of Mason to his dead wife. I at once recited:

"Speak, dead Maria! breathe a strain divine;
Even from the grave thou shalt have power to charm.
Bid them be chaste, be innocent like thee;
Bid them in duty's sphere as meekly move;
And if as fair, from vanity as free,
As firm in friendship, and as fond in love," etc.

Mr. Butler stopped me at this, and held the book to my eyes. I looked at the page, an intense glow passed over me, and I could read. It seemed like an electrical shock passing over me.

ELIZABETH OAKES SMITH.

THE SUNBEAM.

ONLY a little glimmering, dancing ray of light, but on its golden wings what blessings did it not bear. It came to the window of the room where all through the long dreary night the weary sufferer had restlessly tossed to and fro. The hired nurse had carefully closed the shutters, to exclude the light of the early morn, and availing herself of a few moments' rest, had fallen asleep in her chair. But notwithstanding all her precaution, the little sunbeam found one crack where it could peep through, and throw all its soft shimmering brightness full upon the face of the invalid. The sick woman gave a start of glad surprise, for it had been many weary days since even one ray of the glorious sunlight had fallen upon her vision. She spread out her thin, almost transparent hands to catch the genial

glow, and a faint smile passed over her emaciated face. Silently she feasted upon the golden brightness, as it whispered to her of the great blue arch above, and the earth with its carpet of green, awakening to new life and beauty at its touch; forgetting her pain, she sank into a quiet slumber. And when the physician came, a smile of satisfaction wreathed his lips, as he saw the improved state of his patient. Ah! Doctor, what all your drugs failed to do, that little golden messenger from heaven accomplished, for it wooed sweet sleep to the eyes that before had refused to close. It came to the cell of an innocent man condemned to death. As it glided through the heavy grates at the window, it found him in despair; his face buried in his hands, and his form writhing in agony at his fate; it struggled

through the locked fingers, until some of its gentle presence was felt upon the face. The man looked quickly up, and as he beheld the ray of light streaming across the dingy cell, a glimmer of hope came to his heart. So thoroughly had circumstances seemed against him, that he had not struggled against them; he roused to new energy, he sent for his counsel, and before the bright sun had set, measures had been adopted which resulted in the complete restoration of his freedom, and the discovery of the guilty party in whose stead he might have suffered.

Lightly the little sunbeam danced upon the floor, and the infant sitting there, laughed in glee as it stretched its tiny hands to catch the golden treasure. It softly passed through the church window and kissed the brow of the fair young bride in holy benediction, as she

united her destiny with the choice of her heart.

It came to the mourner, who with bowed head and grief-stricken heart beheld the remains of a loved one lowered into the cold earth. It pierced even the confines of the tomb, and whispered of the sunlight of the "Summer land of song," and of the Sun of Righteousness, who with healing in His wings would come to their hearts. But we may not enumerate all the gladness and peace it brought as it glided on its mission of light and beauty. Ah, blessings on thee, little sunbeam; may we open our hearts and homes, and give thee a hearty welcome. Come to us, and with thy healing rays dispel the selfishness and unkindness from our hearts, and the black-winged messenger of disease from our homes.

E. H. D.

TWO LOVERS.

Two lovers by a moss-grown spring:

They leaned soft cheeks together there,
Mingled the dark and sunny hair,
And heard the wooing thrushes sing,
O, budding time!
O, love's blest prime!

Two wedded from the portal stopt;

The bells made happy carolings,
The air was soft as fanning wings,
While petals on the pathway swept.
O, pure-eyed bride!
O, tender bride!

Two faces o'er a cradle bent;

Two hands above the head were locked;
These pressed each other while they rocked;
These watched a life that love had sent.
O, solemn hour!
O, hidden power!

Two parents by the evening fire;

The red light felt about their knees,
On heads that rose by slow degrees
Like buds upon the lily spire.
O, patient life!
O, tender strife!

The two still sat together there;

The red light shone about their knees,

But all the heads by slow degrees

Had gone and left the lonely pair.
O, voyage fast!
O, vanished past!

The red light shone about the floor

And made the space between them wide;
They drew their chairs up side by side,
Their pale cheeks joined, and said "Once
more!"

O, memories!
O, past that is!

GEORGE ELIOT.

BURMESE NOTIONS ABOUT DAYS.—

The Burmese are an exceedingly superstitious people, and believe in good and evil spirits and omens of all kinds with a tenacity that not even conversion to Christianity will eradicate. One of the most curious is the belief, that according to the day of the week on which a man is born so will his character be. Thus, people born on Monday are jealous; on Tuesday, honest; Wednesday, quick-tempered, but soon calm again; Thursday, mild; Friday, talkative; Saturday, hot-

tempered and quarrelsome; while Sunday's children will be parsimonious. The matter is rendered all the more serious because a man gets his name from the day he was born on, without any refer-

ence to his father's appellation. He may change his name as much as he likes, so long as he does not change the initial letter of the essential portion.

TEACHERS IN THE SUMMER SCHOOL OF CHRISTIAN PHILOSOPHY.

SUMMER or vacation courses of lectures, or semi-conversational studies, in woodland retreats, are becoming common. From the very first they have received a cordial support from the cultured, and are regarded with favor largely by those in society whose vocations permit them to indulge the very natural disposition to live in summer-time amid rural scenes. Originally gotten up for teachers and advanced students, they now have a broader field, or rather, by their multiplication, they offer to the intelligent of nearly all classes opportunities for mental refreshment and instruction, associated with good companionship. To the majority of people who manifest an interest in them they afford a change or break in the monotonous round of life which is very grateful to their minds and invigorating to their bodies.

The latest development in this line is the "Summer School of Christian Philosophy," which owes its organization mainly to the Rev. Dr. Deems, of New York, who, by the way, had not a little to do with the origin of the Concord Summer School, which held so successful a session last year. The aim of this new scheme is to provide a brief season of instruction and discussion on leading moral and religious topics, men of learning and prominence in theology, science, and literature being engaged to deliver lectures and conduct the discussions.

The place selected for the session is in a charming region, sufficiently near New York City to enable one to make the journey there and back, besides attending a lecture and its succeeding discussion, on the same day, should it not be convenient for him or her to remain

overnight. Warwick Woodlands lies on Greenwood Lake, a beautiful sheet of water, owned in common by New York and New Jersey, whose forest-clad shores are fast becoming known to summer visitors and tourists as among the most attractive of regions within a hundred miles or more of the metropolis.

The gentlemen announced for the platform already are, Charles F. Deems, D.D.; Pres. Noah Porter, of Yale; Prof. B. P. Bowne, of Boston University; Rev. Thos. Guard, of Baltimore; Prof. C. A. Young, of Princeton College; Prof. Alex. Winchell, University of Michigan; Rev. Lyman Abbott, of New York; Rev. Dr. J. H. M'Ilvaine, of New Jersey; Prof. B. N. Martin, D.D., of New York University; Pres. Bascom, of Wisconsin University. Six of these we have been enabled to engrave from the accompanying group and to add the few notes relating to their careers.

PRESIDENT NOAH PORTER.

Dr. Porter, of Yale College, has so long been a representative of the ripe thought of American scholarship in its bearing upon ethical philosophy, that we are not surprised to find his name among the teachers. He is a native of Connecticut, and born in an atmosphere of old New England Congregationalism, his father having been a life-long minister. He is a graduate of Yale, and while a young man served for a time as tutor in his *Alma Mater*. For several years the work of a Congregational minister engaged his attention. In 1847 Yale offered him the chair of Moral Philosophy and Metaphysics, which he accepted, and occupied for twenty-five years. On the



CHAS. F. DEEMS, D.D.
J. H. McILVAINE, D.D.
PROF. ALEX. WINCHELL.

NOAH PORTER, D.D.
PROF. C. A. YOUNG.
PROF. B. N. MARTIN, D.D.

death of Dr. Woolsey he was elected to the presidency of the institution. Dr. Porter is a voluminous author on topics relating to education and mental philosophy, his more important works being, "The Human Intellect," "Books and Reading," "American Colleges and the American Public." He is known for great strength of character, positiveness of conviction, and for excellent practical judgment. His intellect is well developed, especially in the reasoning organs; is specific in its action, and keenly critical. His administration of the affairs of the great institution at New Haven has been marked by energy, economy, and enterprise. As one of the corps of lecturers of the "School" he will lend his disciplined mind to the determination of the meaning and spirit of Christian Philosophy.

CHARLES F. DEEMS, D.D.

Dr. Deems is a Baltimorean by birth, having first seen the light in that city about sixty years ago. His father was a minister of the Methodist Episcopal Church, and after his graduation at Dickinson College, young Deems was appointed General Agent of the American Bible Society for North Carolina. When but twenty-three he became a teacher in the University of North Carolina. Five years later he accepted the professorship of National Science in Randolph Macon College, Va. Other positions of responsibility were held by him in Southern colleges, while at the same time prosecuting the duties of a minister. In 1865 he came to New York City for the purpose of attending to some literary engagements, but in the following year he became interested in a religious enterprise, which resulted in the establishment of a very successful church, known as the "Church of the Strangers," and he has remained in this city since.

Dr. Deems is below the average height, but of striking appearance. He is quick, nervous, energetic in movement, and of remarkable endurance, both mental and physical. Few clergymen perform so much parish duty as he, nevertheless he

finds time for much outside work, philanthropical, literary, and social. He is in almost constant demand as a contributor to periodicals and as a lecturer, and has written several volumes, and been editorially connected with several publications, both religious and miscellaneous.

Dr. Deems has borne an eminent part in the general polity of his denomination; the existence of the system of lay representation, of which he was an advocate when a young man, is largely due to his efforts.

PROF. C. A. YOUNG.

Professor Young was born at Hanover, Ohio, December 15, 1834. He was educated at Dartmouth, taking his degree in 1853. Then he became an assistant teacher in Phillips Academy at Andover, Mass., remaining there in 1854 and 1855. With a view to the ministry, he studied theology in Andover Seminary, but, changing his purpose, accepted a professorship of Mathematics and Natural Philosophy in Western Reserve College, Ohio. He had occupied it little more than a year when he was called to Dartmouth and made Professor of Natural Philosophy and Astronomy—a post that had been filled by his father and by his grandfather (Ebenezer Adams).

Professor Young was associated with Harkness in the discovery of the spectrum of the solar corona in 1869, and in 1870 of the reversal of the spectrum by the lower strata of the sun's atmosphere. In 1872 he discovered the presence of sulphur, cerium, and strontium in the sun by observations upon the spectrum of the chromosphere made at Sherman at an elevation of 8,000 feet. He was chosen an Associate Fellow of the American Academy of Arts and Sciences in 1871 and a member of the National Academy of Sciences in 1872. In the latter year he was elected a Foreign Associate of the Royal Astronomical Society of Great Britain. He is the author of numerous papers on scientific subjects, which have been published in periodicals and special treatises. At present he is Professor of Astronomy at Princeton College,

New Jersey. The subject which he will discuss before the school is "Astronomical Facts for Philosophical Thinkers."

A fine organization, symmetrical and clear, with abundant vitality, is the property of Professor Young. His mind is keenly alert and apprehensive, and strongly influenced by high moral impressions. As a scientific investigator, his cast of intellect is perceptive and indicates a natural adaptation for the sphere he has chosen.

BENJAMIN N. MARTIN, D.D.

Professor Martin is a descendant on his father's side from an old South Carolinian family, whose record in the Revolution is creditable for patriotism and bravery. He was born at Mt. Holly, N. J., and prepared for college at the Trenton Academy under the direction of Gilbert N. Speer. He was graduated at Yale in the celebrated class of 1837, which numbered among its members Chief-Justice Waite, Professors Silliman and Lyman, William M. Evarts, and others, who are eminent in one way or another. Choosing the ministry as his profession, he entered Yale Seminary, and after the completion of the course of study, came to New York and for a year had charge of the Carmine Street church. Then he accepted a call to Massachusetts, where he remained five years. Next, a call to the Fourth Presbyterian church in Albany was accepted, and five years were spent in pastoral duties there.

He had become interested in the study of philosophy while a student in the Seminary at Yale, and during his ministerial connections, devoted considerable attention to it, occasionally writing for the press the results of his study and thought. This brought him into prominence in scholastic circles, and in 1852 he was appointed to the chair of Metaphysics and Belles-Lettres in the University of New York. From that time to the present he has remained in that important relation, performing the serv-

ices of his professorship with marked ability and honor.

Dr. Martin has inherited for the most part the temperament of his father. Although under the medium height and of light frame, he possesses a very tenacious and enduring vital organism. In spirit, sentiment, and affection he probably resembles his mother. He is endowed with fine reasoning faculties, excellent memory, and more than average ability in the expression of thought. His impressions are very quickly formed and are acutely analytical. The fullness of the head in the temporal region indicates superior esthetic taste and capability for the appreciation of the higher departments of physical science.

Professor Martin will discuss the bearings of recent physical theories on Teleology, or the doctrine of final causes.

J. H. McILVAINE, D.D.

Dr. McIlvaine is between fifty and sixty years of age, and has for a long time been eminent in the Presbyterian Church. He is the pastor of the High Street church in Newark, N. J., one of the most influential in the Presbyterian denomination. As shown in the engraving he possesses a well-balanced brain and the indications of a finely-balanced temperament. He should enjoy good health, and his mental functions should be exercised with more than average facility. Some men think closely and continuously on a given topic only by effort, which wearies them in a comparatively short time. Dr. McIlvaine can give prolonged attention to subjects demanding earnest reflection, and experience little sense of effort, because his faculties work so easily. His acquisitions of knowledge and scholarship are held in such a way that they very promptly respond to the demands of occasion. He has ability to organize and classify his knowledge, and can therefore plan, arrange, and systemize the details of any undertaking in which he may be interested, with a nice exactness which few

men possess. So as a reasoner he arranges his argument in a clear, definite manner, and supports every step with appropriate facts or illustrations. He has a fine moral development; the top-head being broad and high. He should be very sensitive to the requirements of duty and integrity; a prudent, circumspect man, and very kind and liberal in feeling. The subject he has selected for discussion is "Science and Revelation."

PROF. WINCHELL.

Alexander Winchell, whose reputation as a writer on geological topics has become widely known, was born at North-East, N. Y., in December, 1824. After having been graduated at Wesleyan University, he became a teacher of Natural Science in 1853, taking a professorship of Physics in the University of Michigan. From 1855 to 1873 he was Professor of Geology and related sciences in that Institution. At the same time and subsequently he performed

services (official and otherwise) for the State, among them a survey of the Grand Traverse region, and geological and zoological studies, the results of which are embodied in reports. He was elected Chancellor of Syracuse University in 1872, and resigned in 1874 to fill the professorship of Geology and Zoology. For several years he was thus connected until recalled to Michigan University.

Professor Winchell has been an indefatigable worker in his chosen field, and several volumes and a long list of critical papers on scientific topics bear witness to his industry. "Sketches of Creation," "Lay Theology," and a recent volume on pre-historic man, are his more conspicuous productions.

He has a spirited, clear-sighted, ready mind; is ambitious, refined, earnest, and thorough-going. He possesses ability as an analyst, and much ardor for extensive and varied acquirements.

His topic in the course will be "The Philosophical Consequences of Evolution."

THE GOLD OF HOPE.

BRIGHT shines the sun, but brighter after rain;
The clouds that darken make the sky more clear;
So rest is sweeter when it follows pain,
And the sad parting makes our friends more dear.

'Tis well it should be thus: our Father knows
The things that work together for our good;
We draw a sweetness from our bitter woes—
We would not have all sunshine if we could.

The days with all their beauty and their light
Come from the dark and into dark return;
Day speaks of earth, but heaven shines through
the night,
Where in the blue a thousand star-fires burn.

So runs the law, the law of recompense,
That binds our life on earth and heaven in one;
Faith can not live when all is sight and sense,
But faith can live and sing when those are gone.

We grieve and murmur, for we can but see
The single thread that flies in silence by;
When if we only saw the things to be,
Our lips would breathe a song and not a sigh.

Wait then, my soul, and edge the darkening
cloud

With the bright gold that hope can always
lend;

And if to-day thou art with sorrow bowed,
Wait till to-morrow and thy grief shall end!

HENRY BURTON.

THE OLD ORCHARD.

IT slopes to the south, back of the house, and at the farther end you are almost out of sight of the street. How delightful to wander in its cool shade, or, reclining at the foot of this great, old apple-tree, look up into the blue sky, watch

the changing clouds, and listen to the birds cooing their love-songs while playing hide-and-seek among its branches. A cheery, cosy place is this old orchard. So neat, and green, and sweet! The sun shines hot in the dusty street, but it is

cool and restful here. The grass is just high enough to make a soft carpet, and there are clover, dandelion, and strawberry blooms mingled with it in delightful confusion.

As you enter, in this corner is a sweet-brier, permeating the air around with its subtle, fascinating perfume. Next to it is a thrifty wild-rose bush, full of buds, promising a reckless display of bloom and beauty by and by.

Here is a patch of currants, red and black and white. They have flowered, and now the tiny mystery of fruit is forming thick and fast. Here are raspberries in long rows reaching the entire length of the orchard. They are not in blossom yet, but are full of wee buds; and here are blackberries, also budded, but in a still more embryonic state of development.

Scattered here and there are holi-hocks, in their rough, homespun dress; and sun-flowers, tall and lank, just beginning to hold up their heads, and feel as proud as their neighbors, the elderberries, who are never so fickle as to pass through the changes of birth, growth, and death all in one season.

Let us look, now, for four-leaf clovers, as we looked in those early days, and when tired we will lie down beneath this old tree and rest, and dream again the dreams of youth. The grass that died last year is matted thick beneath the new of this, and gives a feeling of safety from the insects that inhabit mother earth. An orchard oriole whistles down from one of the topmost branches, and peering upward you discover a diminutive bunch of animated feathers, golden and black, from whence issues that clear, jovial, honest note: "Fiew, fiew, fi-e-e-w-w." Then he goes rollicking off, leaving you to contemplate a brown thrush, who regales you with his gushing, musical medley.

How the trees are loaded with blossoms—or were a week ago. They are nearly all gone now, save the stamens, and these are undergoing a transformation so wonderful and mysterious that none can explain it. This old orchard is one of Nature's laboratories—and how

busy she works, Sundays and all! These limbs, now so erect, will by and by be laden with fruit, and perhaps bending with their burdens until they touch the earth; and if too many are allowed to grow on one limb, it will break, wither, and die, just as human hearts break sometimes, from the great loads heaped upon them.

You know every tree in this old orchard. The one beneath which you lie is a pound-sweeting. You have tasted its fruit, and I need not tell you how delicious it is. Often when a child you have stood among its branches and shaken down the great apples for your brothers and sisters to pick up and put into baskets.

You can hear their merry laughter now, as the golden fruit rattles about them. In yonder corner is a golden pip-pin. Beneath that tree was some one's trysting-place, years ago. Again you see a tall form standing there. He holds the hand of a fair young girl. Words are spoken which none else may hear. Words which in memory will live forever in one soul. . . . Memories cluster thick around that familiar spot. How they come before you unbidden, the scenes of other days, as you lie beneath that old, old tree! Spring, with its beauty and bloom; Summer, with its growth and ripening; Autumn, with its fruition and fruitage; and even Winter, with its cold, naked unloveliness—each paints you pictures from memory's sacred urn—pictures which only you may look upon, and which come to you only now and then, in such times and places as this.

Dear old orchard! How many carry a picture of thee, or such as thou, all through life, as a green oasis to which they can turn for rest and refreshment from the weary desert of life. But alas, how many more have no such pleasant spot in their childhood life, around which happy memories cluster. God help them, and give them something else green and beautiful and lovable to lighten and gladden their lives.

OLIVE A. DAVISON.

THE CAUSE OF SOMNAMBULISM.

A CRITIC'S OPINION.

THE *Dial*, an excellent Chicago publication, is mainly devoted to criticisms and notices of new books. It has characteristics of honesty and frankness which please us, and make it trustworthy. In the March number, Mr. J. S. Jewell has a review of a volume which treats on "Nervous Derangement, Somnambulism, Hypnotism," etc., published by W. A. Hammond, M.D. In the course of the review its writer makes the following remarks, which are pertinent to Phrenology:

"But it is to the description given of the physiology of somnambulism that I would particularly direct the attention of the reader. Dr. Hammond is correct in saying that somnambulism is 'analogous to sleep.' It is incomplete sleep, from one point of view. It is true, also, that the brain, as a whole, is in a 'quiescent state' during profound sleep. In dreaming, or in somnambulism, the brain is asleep only in parts. In parts it is awake. But this is not Dr. Hammond's view. He says (referring to the state in which the brain is during sleep):

"If this quiescent state of the brain is accompanied, as it often is in nervous and excitable persons, by an *exalted condition of the spinal cord*, we have the higher order of somnambulistic phenomena produced, such as walking, or the performance of complex and apparently systematic movements,' etc., (p. 33).

"Somnambulism depends upon 'an exalted condition of the spinal cord,' while the brain is 'quiescent,' or in a state of profound rest. The somnambulist is practically in the same condition in which he would be if the brain had been removed, at least so far as the actions performed are concerned. From this view I dissent entirely. In the first place, I do not see by what means, in this case of Dr. Hammond's, the 'exalted condition of the spinal cord' is produced. There are just two ways in which such a condi-

tion may be brought to pass: either by way of the peripheral (sensitive) nerves, which proceed from all sensitive surfaces and parts of the body to enter the gray matter of the cord and medulla, or by the excitations, which enter this same gray matter by the way of fibers which descend from the brain. So far as is known to nerve physiology, there are no other directions from which excitations can come by which the spinal cord can be aroused to activity. Then it must be remembered that the cord is not a self-acting, self-determining mechanism. It must be excited to action, *ab extra*, or it remains inactive. But if the brain is 'quiescent,' the excitation to activity can not come from that source. It certainly does not come by the way of the peripheral nerves directly to the cord, without the intervention of the brain. My own opinion is, that in somnambulism the brain is only in part asleep. Certain portions are awake and in a state of intense activity; and from these excited regions (its cortex) the stimuli pass along fiber-systems which extend from the cerebral cortex down to the motor mechanisms in the spinal cord, through which, in their turn, the muscles are set in action which produce the motions involved in the acts of the somnambulist. To fully discuss this question, however, would require a statement of the modern doctrine of localization of function in the brain, of the singular peculiarities in blood-supply to the brain, and besides, at least the statement of certain facts in regard to the mechanism and modes of action of subordinate parts of the nervous system, for which I have no space in the present brief notice. But all that is known would go to make clear that limited parts of the brain may be awake and active, while others are asleep; that certain parts of the brain may be in a condition of hyperæmia, and hence active, while others may be at the same time in

a state of relative anæmia, and hence of inactivity, as in sleep; finally, that the acts of the somnambulist imperatively

require that the spinal cord must be excited from the brain, and hence that it is not in the 'quiescent state' asserted."

THE SEED-TIME OF YOUTH.

THERE is no harm in a certain moderate and occasional amount of innocent pleasure. But a young man who has his own way to carve in life, can spare neither the time, the strength, nor the expense of much social pleasure. In the country, where the style of living is simple, one can get all the gayety he needs without spending much money. We recommend to every young man who is starting in life the most rigorous economy in expenses; in clothes, food, and equipment. Young men usually do not take their measures of economy from what they can actually endure, but from what society around them is accustomed to demand.

By far the greater number of young men have only their hands, their good character, and their mother-wit for capital. Success will require ingenuity, industry, and rigorous economy. The practice of these qualities for ten years ought to put a sensible man on good foundation, on which he can build an enduring prosperity. But if a young man must have three or four "outings" a year; if he must join various societies which tax his slender resources severely; if he must be counted upon for parties, balls, suppers, or drinking bouts; if he must pay for billiards and prime cigars, he will find uphill work to save enough to make his mid-life and old age comfortable. Youth may be the time for pleasure, but that is no reason why a man should squander the best part of his life. Youth is good for pleasure; but is the very time, too, for learning, for work, or self-discipline. And pleasure itself does not need to be peculiarly expensive. Do not be ashamed to economize, no matter what the girls think,

nor what the boys think. Build yourself up in intelligence and sound morals. Acquiring an honorable competence, you will have a chance to lend money to the fools that ridicule your rigid economy and your scrupulous employment of them.

Resolve that except the most imperative necessities required for health and strength, you will not spend a penny, either for charity or luxury, except out of your income. Earn your money before you spend it. The effect of this will be to curb all expensive impulses, and reduce your actions in the spending of money to a conscientious rule. We believe that sixteen men out of every twenty that begin life poor, remain so to the end of life; but that every one of these sixteen earns enough, if it be saved, to make himself entirely independent.

Foolish spending is the father of poverty. Do not be ashamed of hard work. Work for the best salaries or wages you can get, but work for half price rather than be idle. Be your own master, and do not let society or fashion swallow up your individuality—hat, coat, and boots. Do not eat up and wear out all that you earn. Compel your selfish body to spare something for profits saved. Be stingy to your own appetite, but merciful to others' necessities. Help others, and ask no help for yourself. See that you are proud. Let your pride be of the right kind. Be too proud to be lazy; too proud to give up without conquering every difficulty; too proud to wear a coat that you can not afford to buy; too proud to be in company that you can not keep up with its expenses; too proud to lie, or steal, or cheat; too proud to adopt any bad habits because others practice them.

THE YOUNG FOLKS OF CHERRY AVENUE.

CHAPTER XII.

AFTER THE ENTERTAINMENT.

TWO hours later the sleeping convalescent was aroused by laughter and merry exclamations. He ran to the window, and found that most of his school-mates of the Avenue had entered the lawn in company with his sisters, and were talking in a very lively strain about the entertainment. He listened quietly, but in a few moments was discovered by Sophie, who exclaimed:

"There's Tal listening as sober as a judge, poor fellow!"

All looked up, and greeted him with a shout. Milly ran close to the house, and said:

"Well, Tal, I'm really sorry you couldn't come to the exercises. They went off nicely, and (lowering her voice) Truman Burr—he's over there by the maple tree—did so well, that everybody is surprised."

"Much obliged to you, Milly. I'm glad to hear about Tru. Say, girls, did you have a good time, and eat all the nice things, and leave nothing for a fellow when he gets well?"

Ha! ha! ha! they laughed in chorus, and Lizzie replied:

"They were so good, Tal, that we put them away as fast as we could, fearing that if any were left they might be lost or spoiled. But there," she continued, drawing a large orange from her pocket, "that's what I captured for you, and I know Truman was so busy filling his pockets for somebody, that he didn't have time to eat much himself."

At this every one of the happy group, Edith included, held up some dainty which she had saved for the compelled stay-at-home, while Truman dove into his pockets, and brought to light a bunch of raisins, a fig, an orange, an iced cake, and a handful of sugared almonds.

"Heyo!" shouted Tal, in delight, "I guess it's the most fun to stay at home;

for if I'd been there I wouldn't have had so much waiting on. Oh, girls, I'm so much obliged for your kindness in remembering me! And, Tru, you just come up, and I'll put those things where they'll keep till I can try 'em."

"Can't we come up, too?" asked Sophie, with an air of mock jealousy.

"I've no objection; and I guess Auntie wouldn't say no, if it is her room."

"Auntie says yes," Miss Manley replied from the piazza, where she was sitting with Mrs. Manley, "provided Tal feels strong enough to entertain his friends in such close quarters."

Without waiting for further remark, the girls sprang into the hall, and, led by Edith, flocked up-stairs and into the room of the convalescent. Truman followed, carrying his booty in a little tray which he had made with catalpa leaves. This he deposited on the bureau, and the girls laid their goodies there also, and then flocked around Tal, to shake hands with him and congratulate him on his recovery.

"You don't look as if you'd been very sick," said Sophie.

"I haven't been much, Sophie; only the first day I felt real bad, and then the folks all said I must stay in; and then I had such a red face, you'd a-thought I was an Indian. When I saw myself in the glass, I concluded I'd got some other fellow's skin besides Tal Manley's, and that I'd better stay in the house until mine came back. It seemed to me as if it never would; but here I am just as white as ever—I guess a little whiter; as mamma says, I've got some of the tan off."

"Yes, you look now like a Caucasian," said Milly; "and we'll own you a member of that highly interesting branch of the human family, as Dr. Miller says so often, you know. But I had the measles when I was only nine years old, and you should

have seen me. Indeed, I was as red as a peony, and I was kept in the house three whole weeks. Dr. Moore said it was on account of my liver, and oh, the pills he gave me!"

"Well, I think the pills you take won't hurt much, as they're only sugar," laughed Edith. "I could eat a pound of 'em."

"I am glad, at any rate," retorted the scion of the house of Sommers, "I don't have to swallow such bitter stuff when I'm ill as Dr. Whipple gives. We always send to Easton for our old doctor."

"About all the medicine I had to take was lemonade," said Tal; "and that isn't bad stuff—is it, Milly?"

"Oh, no, it's very nice; I would prefer it, indeed, to sugared pellets."

"Tru," said Tal to that worthy, who was standing a little apart and quietly looking over a juvenile magazine, "I'd like to hear you recite your piece, if you feel like it. They say you did so well, that everybody was delighted."

"Oh, yes, Truman, do give it to us here," cried Lizzie. "He was complimented, Tal, by Dr. Miller for his good elocution."

Truman hesitated a little, and then said:

"Tal heard me often enough, 'cause he kind o' coached me; but if yer want to hear it now, ole feller, yer can."

"Why, yes, I do, because," here Tal stepped close to the boy, and half whispered, "you are dressed up, and look so nice, and," he went on in a louder tone, "it'll seem as if I was in the school-room listening."

"And then you'll recite yours, won't you, Tal?" asked Sophie.

"Why, I haven't heard it myself," exclaimed Edith; "and don't we all make a very respectable audience?"

A general laugh followed this sally, and Tal rejoined:

"It's a bigger one than I had the last time I tried it, and of course I can't refuse. Let the meetin' come to order, and we'll proceed to business."

The young people found seats, and Truman stepped into the middle of the

room, made a grave bow, and then contracting his brows, and assuming a fierce and threatening attitude, he spoke:

"Get out of my way! quick, clear the track!
No nonsense I'll stand from any one.
I'll drop on his pate with a terrible whack,
If the least word's said 'gainst what I have done.
I've been treated by some just like a brute;
They say things about me stupid and wrong.
Urrr—had I a gun, the whole lot I would shoot.
Urrr—very soon they'd sing a different song.
Look out there now, for I'm bound to fight
Any one of you lubbers who dares to squeak.
Just snap your finger ever so light,
And I'll show in a jiffy who's the aneak.
You'd put me out, would you? Yes, you would.
Let anybody try it on now—just once.
Urrr—I'd pitch him out, I know I could,
And show you for certain who's the dunce.
I'll have my own rights—urr—l'll have 'em all;
I'm bound to go through thick and thin.
Look out! I guess you'll soon hear a bawl;
For somebody 'll get a cracked nose or chin.
Just look at me! How serenely I stand
The insults and stuff they've thrown about.
Just let me get hold of their noses or hair,
I tell you there'd soon be a very loud shout.
I'm in a rage, and don't know what I say!
What? Do you all take me for a born fool?
I was never so much myself before—
Urrr—my Combativeness never so cool.
But, zounds! must I give way to every one,
And be a meek and tender young lamb?
No, sir! no, sir! That's not the sugar for me;
I'll let you know my corns you can not jam.
I won't cool down, I won't be nice and kind:
I'm bound to have my rights or fight;
And if they're not given me pretty soon,
There'll be some broken heads to-night.
Look out! Don't contradict me, if you dare,
Urrr—I'm big Indian, going to smash and tear."

This, rigmarole though it be, was recited with spirit and accompanied with the gestures of towering rage, Tru having learned it for his personation of Anger; and when he finished, and quietly walked over to his former place by Tal, the girls clapped their hands and screamed in loud applause.

"You'd make a good actor, Tru," said his friend, patting him on the shoulder.

"I believe he would, too," rejoined Milly. "He'd be famous as Spartacus, the gladiator, and as King Lear, in Shakespeare's play, you know. Why, there's your supper bell, Edith, it must be late. Girls, aren't you going?"

"Yes; but I don't care anything about supper," replied Sophie. "I've had enough to eat for the rest of this day."

"I must go home, though," said Lizzie, "else mamma will wonder where I am, and she'll expect me to tell all about the entertainment, because, you know, she could not go; and I am so sorry for poor mamma."

"And I am, too," said Edith. "I know she would have enjoyed it. My mother stayed home with Tal, and let all the rest go; but she isn't sick, like your

"Oh, that'll be splendid," replied Sophie.

"Yes, yes, I'll go," rejoined Milly and Lizzie.

"All right. Understood?"

"Yes, yes; good-bye—last look," said the trio of maidens as they tripped downstairs and ran merrily through the garden to the street.

"I'll be off, too," said Truman



TRUMAN RECITES HIS PIECE.

mother. Dear me, it must be so hard to stay in the house nearly all the time."

"Thank you," said Lizzie, softly, her eyes filling with tears at this unexpected expression of sympathy from Edith.

The girls were going out of the door, when Tal stopped them, saying:

"Hey, Sophie, Lizzie, and the rest of you, who says for a blackberry excursion next Wednesday down in Field's meadow? Guess I'll be well enough to shin round then."

"No, you needn't, unless you must."

"Yes, I've got ter look after the cow purty soon, and might 'swell be about it, so's you can eat yer supper."

"Oh, I don't care much about supper. One of these biscuits will be enough for me. Were any of your folks at the exercises?"

"Yes, pop and Kit; Tip aint well enough yet to be out."

"Did your father like them?"

"I kind o' think he did, for he said to

me, 'Bub, yer did purty well. I guess you're larnin' sumthin' here. Thought I'd put yer in the right place this fall; but I guess it won't hurt yer to try another term or two.'"

"Pretty good. I'm glad to hear that. I am so, Tru," cried Tal, seizing the boy's hand, and shaking it heartily.

Tru's eyes watered, and he turned his face from his young friend, as if ashamed to show so much feeling.

"Never mind, my boy," the latter went on. "You'll come out ahead yet. There's good stuff in you, and your father's no fool either. You try to do right, and he'll help."

Truman at this broke right down and sobbed; but after a few moments he controlled himself enough to say:

"You wasn't there, but when Miss Julia told the folks who'd been good scholars, she put in my name, and afterwards she just went up to pop, and told him that I'd greatly improved lately, and I'd ought ter have a good education. Pop told me that himself."

"Jingo, that's good!"

"And pop said if I'd help on the farm putty regl'ar this vacation, he'd give me a dollar a week."

"That's the talk. That's encouragement of the substantial sort, as my papa says. Now, you can do what you want to do. In four weeks you'll have money enough to get a nice jig-saw, and you can make some money by it. I've been wanting to have one for ever so long; and if papa and Mr. Bartholomew 'll let me, I'm going to help down in the mill this vacation, so's to earn some money toward it. I get five cents a week for helping mamma, and sometimes Horry gives me a cent or two for doing things for him; but it would take me nearly a year to save enough for the saw. My, they are so dear."

"Well, ole feller, don't nice things gener'ly cost a pile? That's wot's the matter, and a poor chap aint got much of a chance to get 'em. If I git mine fust, yer can come over an' try it when yer want ter an' git yer hand in, so yer'll be all right wen yer own comes."

"Aint you comin' down to tea, brother?" asked Paulie, running into the room. "Mamma said you might come down, and she'd be glad if Truman would come, too."

"What do you say, boy, to that? Let's go down," said Tal.

"Thank yer, thank yer very much; but I must be off. I'd like ter, yer can bet, Tal, but aint got time."

"Come some other time, then, Truman, won't you?" urged Paulie, peering artlessly in his face.

"Yes, ma'am, guess I will."

The tea-bell rang, and the three went down-stairs together.

"Say, boy, do yer know that windmill yer made 's put 'n idee into my head. I b'lieve I'll make a carver of myself."

"What, Tru, a carver? What's that?"

"Why, man, a wood-carver—make fancy things for furniture an' so forth, heads and leaves, and such as they have on the pulpit in the meetin' house, yer know."

"And I think you'd make a first-rate one, you're so handy with a jack-knife. Papa says that a good wood-carver makes a great deal of money. And it's real nice work. Now I see why you want the jig-saw, old fellow."

"Huh! huh! huh!" chuckled Truman, highly pleased by this encouragement. "You've hit it plump. By-by, pick-a-ninny; by-by, Tal—see yer tomorrow—hey?"

"Yes, of course, if you can come over. I'm going to put up the windmill. Good-bye."

"Good-bye, Truman," cried Paulie, as the exhilarated boy tore down the garden walk, and being too much in haste to unlatch the gate, he sprang clear over it.

CLARE.

THERE is a secret pleasure in hearing ourselves praised; but, on such occasions, a worthy mind will rather resolve to merit the praise than to be puffed up with it.



THE INJURIOUS EFFECTS OF TOBACCO.

MAN is endowed with large and varied capacities for enjoyment. Apparently it was intended that he should derive much pleasure from his existence. Mere existence with the lower orders of animals is seen to be attended with keen enjoyment. For instance, recall to mind the busy and joyous hum and notes of gladness, which fill the air on a summer's eve, coming up from myriads of insects on every hand. The birds in early morning during June and July, show forth somewhat the joy there is in existence by giving utterance to their happiness in an ecstasy of song. Witness also the evidence of enjoyment shown by the young lambs frisking and prancing about the pasture; and, in fact, the young of all animals. The young especially give expression to their exuberance of animal spirits by outward actions, and indicate, to some extent, the joy which naturally arises from healthful play of the animal functions. Man in a state of health also feels this exuberance of life and keenly enjoys it. The healthful play of the mental faculties is another source of exquisite pleasure, and the exercise in a natural manner of the spiritual and moral qualities of the mind affords a still higher enjoyment. All these are legitimate sources of pleasure which it was intended man should enjoy, and which, if rightly improved, will afford the greatest possible measure of pleasure of which he can be made partaker.

When, however, man seeks to lay hold of the mysteries of nature, and manufactures pleasures at will, then his very eagerness frustrates the attainment of his object. He who seeks to bring himself into a pleasurable state by resorting to the use of stimulants and narcotics, miserably fails of his object, and finds the tempting fruit filled with bitterness, instead of the expected luscious juices. A degree of pleasure, sufficient to allure the deluded votary onward, may be obtained; and many thus become enslaved to the use of stimulants and narcotics. It is this desire to extract at will pleasure from life that induces mankind to resort to the use of that narcotic substance known as tobacco. That its use at times is pleasurable, soothing, and agreeable must be admitted; yet the pleasures thus attained are purchased at too great a price. More pleasure and more exquisite enjoyment could be derived from a healthful condition of body and mind, overflowing with an exuberance of animal spirits, than can be extorted from the use of tobacco.

If tobacco's offense were only that it diminishes the pleasures which its votaries might otherwise enjoy, its use would be less objectionable than it is. Very serious ills, which are not generally realized, result from its use. There is, to a large extent, with people generally, incredulity regarding the injuriousness of tobacco-using. Hundreds of persons are

seen who have used tobacco freely for years with no perceptible impairment of their health. That many thus apparently suffer no injurious effects from the use of tobacco is regarded, generally, as pretty good evidence of its harmlessness. The whole story is seldom made known in regard to such cases. Not a few of these persons, apparently in robust health, who use tobacco to excess, are carried off suddenly by some disease, and the part which tobacco had in preparing the way for the fatal event is never revealed. The late lamented Bayard Taylor used tobacco to excess. He smoked much of the time, and ridiculed the idea of tobacco being injurious, referring to his own robust appearance in confirmation of this opinion; yet we all remember how soon, after his sailing to Germany, came back the news of his death. There is very little doubt that excessive tobacco-using was a prominent, if not the principal, cause of his sudden death.

The opinions of prominent physicians who have closely observed and investigated the various causes of disease, should have considerable weight with the public in regard to the injuriousness of tobacco-using. Dr. Laycock, Professor in the University of Edinburgh, says that he thinks the inveterate habit of smoking and snuffing tobacco is worthy of the special notice of physicians, and practitioners of medicine in general, as a very frequent but inconsidered and unthoughtful cause of disease. Dr. Higginbottom, of Nottingham, England, says: "After forty years of most extensive and varied practice in my profession, I have come to the decision that smoking is the main cause of ruining our young men, pauperizing the workingman, and rendering comparatively useless the best efforts of ministers of religion." Numerous other similar testimonies from physicians might be adduced, but it does not seem necessary to do so. The attention of physicians of late years has been more prominently directed to the tobacco-using practices of the people as a cause of disease, and the causative effects of these pernicious habits

in predisposing to diseases and aggravating diseases, have been traced where previously such influence had been unsuspected.

But all are affected alike by the use of tobacco. While some persons of robust constitution can apparently resist its deleterious effects for years, others of weaker constitution may in a few years have their health seriously disordered by even a moderate indulgence in tobacco. Persons of nervous temperament are usually more sensibly affected than those of a phlegmatic temperament. Those whose occupations are sedentary suffer more derangement of the system than those whose occupations are more active and in the open air. The well-fed are less injuriously affected than those whose food is insufficient.

The primary effects of tobacco-smoking are exerted upon the blood and nervous system. Of its effects upon the blood, Dr. B. W. Richardson, a well-known authority in hygienic matters, says: "In the blood, the prolonged inhalation of tobacco produces changes very marked in character. The fluid is made thinner than is natural, and, in extreme cases, paler. In such instances the deficient color of the blood is communicated to the body, altogether rendering the external surface yellowish white and pasty. The blood being thin exudes so freely, that a cut surface bleeds for a long time, and may continue to bleed inconveniently, even in opposition to remedies. But the most important change is exerted on those little bodies which float in myriads in the blood, and are known as the red globules. These globules have naturally a double concave surface, and at their edges a perfectly smooth outline. They are very soluble in alkalis and are subject to change of shape and character when the quality of the fluid in which they float is modified in respect to density. The absorption, therefore, of the fumes of tobacco leads to rapid changes in them. Microscopically examined, they are found to have lost their round shape, to have become oval and irregular at

their edges, and, instead of having a natural attraction for each other—a good sign, within certain limits, of their physical health—they lie loosely scattered. Indeed, they indicate to the learned observer, as clearly as though they spoke to him, that the man from whom they were taken was physically depressed, and deficient both in muscular and mental power." Although the blood quickly recovers its natural condition after cessation from smoking, yet, if smoking is frequently repeated, the blood does not have the opportunity to recover its healthy state, and consequently the nutrition of the tissues and nerves must suffer in consequence. Hence the production of various functional derangements and diseases.

Smoking does not increase the activity of the mind nor tend to develop the intellectual faculties. Says Dr. Laycock: "On the brain the action of tobacco-smoking is sedative. It appears to diminish the rapidity of cerebral action, and check the flow of ideas through the mind." Dr. Pugh, in a communication to the *London Lancet*, says: "No smoker can think steadily or continuously on any subject while smoking. He can not follow out a train of ideas—to do so he must lay aside his pipe." In view of these opinions in regard to the effect of tobacco-smoking upon the action of the mind, it will readily be inferred that its practice by students will not conduce to their proficiency in their studies, and such has been found to be the case at several institutions of learning. Those who win the highest honors in scholarship are those who use very little or no tobacco. The pupils in the Polytechnic School of Paris were once divided into two groups, the smokers and the non-smokers. The smokers in the various competitive examinations showed themselves far inferior to the others. During the year in which the experiment was continued, the average rank of smokers constantly decreased, while that of the non-smokers constantly increased. Dr. Solly, an eminent surgeon in St. Thomas'

Hospital, London, says: "I may be mistaken, but I believe that all our greatest men—I mean intellectually—statesmen, lawyers, warriors, physicians, and surgeons, have either not been smokers or, if smokers, they have died prematurely."

Various diseases are attributed to the effects of tobacco. Among those more early proven to be thus produced, are congestive affections of the throat, ulcerations of the mouth, dyspepsia, indigestion, functional disturbances of the heart, derangements of the nervous system. Dr. Solly, of London, who had extensive opportunities for observations, regarded tobacco-using as a frequent cause of general paralysis. Dr. Lizars, of England, attributes insanity to the same cause, and narrates the cases of two brothers not hereditarily predisposed to insanity, who, by excessive smoking, became deranged and committed suicide. In the Massachusetts Insane Hospital, in 1843, there were reported to be eight cases of insanity caused by the abuse of tobacco. Dr. Lizars relates the case of a man affected with epilepsy, supposed to have been caused by tobacco chewing and smoking, who recovered after abandoning the habit. Dr. Carson, of New York, in 1854, published a case of heart-disease, which closely resembled the fatal disease known as angina pectoris, in a man over sixty years of age. The patient had used tobacco for many years, but was finally induced to leave off its use, and in a month he recovered from his heart-disease. The well-known Dr. Adam Clarke gives an account of an acquaintance who, having been an inordinate snuff-taker for upward of forty years, was frequently afflicted with a sudden suppression of breathing, occasioned by a paralytic state of the muscles of respiration. These attacks increased in severity, and threatened her life, until finally she left off snuff-taking, and in a short time entirely recovered from her disorder. Many more cases of disease caused by the use of tobacco, and relieved by cessation from its use, might be brought forward, but sufficient have been given to

serve as illustrations of the various effects which this drug is capable of exerting upon the health of those who are addicted to its use.

The use of tobacco by the young, before full development has been reached, is particularly injurious. An unhealthy state of the system is induced, and growth interfered with. On this point, a prominent London physician says: "Smoking weakens the digestive and assimilative functions, impairs the due elaboration of the chyle and of the blood, and prevents the healthy nutrition of the several structures of the body; hence result, especially in young persons, an arrest of the growth of the body, low stature, a pallid and sallow hue of surface, an insufficient and unhealthy supply of blood, weak bodily powers, and in many instances complete emasculation." Of the effects of smoking upon the young, Dr. B. W. Richardson says: "It causes impairment of growth, premature manhood, and physical prostration." In view of the large number of young boys who in every city or large town are seen with cigars, cigarettes, or pipes in their mouths, there is certainly sufficient cause for feeling some apprehensions for the effect which this rapidly-increasing practice is to have upon them and the future of the race.

It is a lamentable fact that the evil effects of tobacco-using do not end with the votaries of the weed, but are, like other sins of the parent, visited upon the children. Dr. J. Pidduck, in the *London Lancet*, Feb. 14, 1856, says: "In no instance is the sin of the father more strikingly visited upon his children, than the sin of tobacco-smoking. The enervation, the hypochondriasis, the hysteria, the insanity, the dwarfish deformities, the consumption, the suffering lives and early deaths of the children of inveterate smokers, bear ample testimony to the feebleness and unsoundness of constitution transmitted by those addicted to this pernicious habit. . . . By this, a man injures his own health and that of his children. Ought not this consideration to restrain every wise and good

man from contracting or continuing such a senseless and destructive habit of self-indulgence?" An eminent London physician says: "I have constantly observed that the children of habitual smokers are, with very few exceptions, imperfectly developed in form and size, very ill or plain-looking, and delicate in constitution." These are words of warning which the habitual user of tobacco may thoughtfully ponder over and choose his course.

The practice of tobacco-using is evidently rapidly increasing. The introduction of the use of cigarettes has greatly extended its use among the young. A larger proportion of the rising generation is likely to be consumers of the weed than of the present generation. If this practice is to continue to increase at the rate it has for a few years past, we shall soon nearly all use tobacco. In such an event, the effect upon the race can scarcely be otherwise than disastrous. What that effect will be may be inferred from these words of Dr. B. W. Richardson: "If a community of youths of both sexes, whose progenitors were finely-formed and powerful, were to be trained to the early practice of smoking, and if marriage were to be confined to the smokers, an apparently new and a physically inferior race of men and women would be bred."

The injurious effects of tobacco upon those who use it, and upon their offspring, are sufficiently grave to deserve the serious attention of all those who have contracted the pernicious habit, or who contemplate contracting it. Are the artificial pleasures which the use of tobacco affords worth the cost which they exact? Would not natural and more continuous pleasures spontaneously arising from a healthful condition of body and mind, be the preferable portion? Every one must answer for himself.

HENRY REYNOLDS, M.D.

LIFE insurance tables of mortality are proving a most valuable aid to the temperance reform.

INEBRIETY IN THE OFFSPRING OF CONSANGUINEOUS MARRIAGES.

THE alarming increase in the number of confirmed inebriates in this country, with the attendant horrors of insanity, suicide, and murder, calls for the investigation of all the factors in the production of this terrible affliction, now threatening our social structures, as also the life of the nation. Some years ago in reading an article on inebriety and epilepsy by Dr. E. C. Mann, I was very forcibly impressed by the following statement, the more so as I have never seen it alluded to by any other writer: "Consanguineous marriages may be the connecting link between inebriety and epilepsy. I have known cases in which the intermarriage of blood relations, where there was inebriety that had lain dormant for one or two generations, has resulted in the old hereditary neurosis reappearing in the form of epilepsy in the offspring. It is a curious fact, also, that the sons born as the result of the union of cousins in marriage appear to have a strong tendency to inebriety.

My own observations during the last twenty years fully confirm these views; indeed, I was strongly impressed by seeing inebriety of the most extreme and helpless character in the offspring of consanguineous marriage before reading Dr. Mann's article, and wondered why no allusion had ever been made to it by writers on this subject.

It is not at all necessary, however, that there be inebriety in the ancestors for this infirmity to be developed in the offspring of consanguineous marriage; the marriage of cousins alone, without any hereditary predisposition, will develop inebriety in their children—liquor-drinking in males, and opium or chloral habit in females; for I know of cases in which all the children of cousins in marriage were addicted to pitiable excesses of this kind, while their parents and grandparents, to my own knowledge, were strictly sober people, and even farther back, from reliable accounts, there had been no inebriety in their ancestors.

The explanation of this fact is that children of cousins are almost invariably born with a peculiar nervous temperament which leads to a craving for stimulants, and the habit once formed, they have no will-power to abandon it. They are what may be termed self-destructives. Of all the victims of drink they are most to be pitied, for, through no fault of their own, and with no power to save themselves, they work their own destruction. I could give some saddening illustrations of the deep sorrow and utter ruin that have befallen families of my acquaintance in this manner; how sons gifted with talent, manly bearing, and many noble qualities, have grown up, and one after the other sunk into the drunkard's grave, and the daughter has broken a fond mother's heart by giving herself up to the use of deadly drugs.

The only way in which children of consanguineous marriages can safely pass through life, is never, under any circumstances, to touch or taste alcoholic liquor or narcotics, for if the habit is once formed, they are doomed. But young people everywhere should be taught that marrying a cousin will almost surely result in offspring that will prove a curse instead of a blessing; and above all, the laws of every State should strictly prohibit such marriages.

L. H. WASHINGTON, M.D.

SOME "MEDICINES" OF OUR ANCESTORS.—The following remedies were prescribed by Sir Theodore Mayern, the great doctor of the day, when the Princess Royal of England was going to cross to Belgium in 1642. Cinnamon, coriander, anise, ambergris, musk, and sugar were to be made into long tubes, which she was to munch from time to time. She was to drink a warm posset, should there be an excess of vomiting. A plaster made of the balsam of Peru, of gum mastich, and of laudanum, was to be applied to the pit of the stomach. She was

also to smell the comforting vapors which arose from the following compound: Well-toasted bread, orange and citron-peel, rose-leaves, flowers of lavender, and cloves, to be hashed up together. On this Canary wine, elder-flower vinegar, and cinnamon water were to be poured; portions to be successively applied to the nostrils. When she arrived on the other side she was to have an aromatic plaster applied to the stomach, and, what was more to the purpose, she was to have her

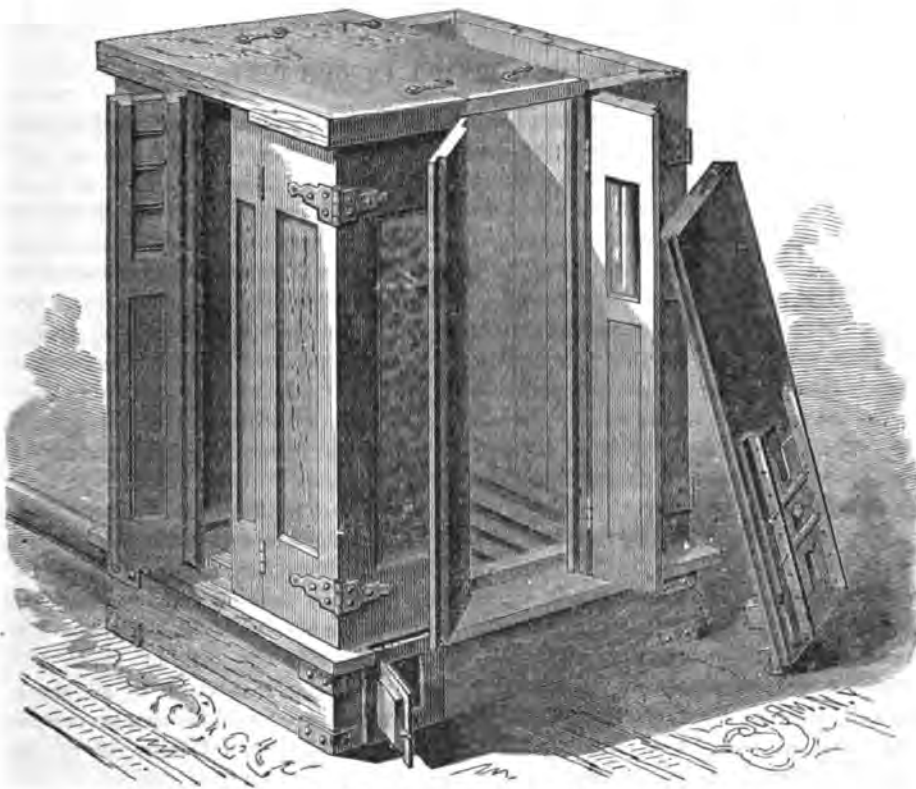
stomach strengthened with burnt claret having in it a sprig of rosemary, some cinnamon, and sugar, or with a caudle of ale or small beer made with Canary wine, eggs, sugar, and cinnamon! Such were the ways of comforting that distressed organ.

One marked feature about this treatment, although it was severe enough, is, that the prescriptions were not so potent in poisonous matter as the mineral compounds of to-day.

A NEW BATHING MACHINE.

THE engraving shows a portable bath chamber adapted to all kinds of baths, but especially designed for the application of hot air in the treatment of disease. The inventor, Dr. Lee, is a physician of considerable reputation, settled in one of the most unhealthy malarial districts of the South. He claims

that after years of careful observation and experience in the application of *heat* as a curative agent, he regards it alone as far more valuable than all other remedies combined. Steam being objectionable on account of the humidity, rather repressing than eliminating exhalations from the skin, he proposes to make the



A NEW BATHING MACHINE.

use of hot-air baths practicable and cheap among families and physicians, and avers his belief that when this process is generally understood and applied, it will help much toward the disuse of drugs.

This portable chamber consists of a detachable top made in three parts or sections, and the walls made up of four corner sections and eight doors. The doors are hung upon lift or loose hinges to the free edges of the swings, which, joined together in pairs by strap hinges, make up the connections. By means of spaces or recesses cut, one in a door and another in one of the top sections, the chamber can be put up around a heating or cook-stove without at all disturbing it or its pipe, and after use its light parts being detached, it may be set up and used as a child's bedroom or carried to another room or house for bathing purposes. All this setting up, taking down, and removal can be done by a woman without the aid of a hammer even.

As will be seen in the engraving, the superstructure is furnished, when desired, with a base containing a heating apparatus for the use of those who do not desire to utilize the heat of some stationary stove.

One or more of the doors contain glass lights, and the plan of construction throughout is so simple and perfect that each part, whether door, corner, or top section, is interchangeable with all other like parts, and thus the windows, etc., may be changed from one side to either of the other three sides at will. This ingenious device is adaptable to all times, places, and circumstances, and will make the hot-air and Turkish baths practicable and cheap everywhere.

Perhaps the most singular and valuable feature of this invention is its capacity for being set up so as to inclose a hot stove and allow the pipe to pass out, whether vertically or horizontally.

SPOILING vs. COOKING IN OUR DIET.

A NEW YORK *litterateur* has been going the rounds of the restaurants, and trying the food which they daily spread before their customers. He reports a dismal list of failures in attempting to find a good meal, and that, too, irrespective of prices. His experience accords with our own in restaurant diet; the fault not being on the side of the materials, but on the part of the cooking. We do not wonder that there are so many dyspeptics, when the cooks of society seem to be bent more upon spoiling than preparing good food for the table. A well-informed writer on the subject truly says:

"To ascertain just how much really good material is spoiled in the cooking would form an interesting and quite fruitful subject of research, and set some housekeepers at least to thinking. If every loaf of bad bread manufactured from good flour, every overdone or underdone piece of meat prime in original

quality, every mass of potatoes ruined in the kettle, every muddy cup of coffee made, every dish of every sort that might be palatable and nutritious, but which by carelessness, ignorance, or neglect is made tasteless and mediocre—if all these could be written down in a book, with dates and specifications, and the average cook confronted with them once a year, what consternation would or should fill her heart, and what a fearful aggregate of material wasted beyond redemption would appear in the account.

"The fact is that cookery is entitled to rank among the exact sciences, and that happy accidents are of rare occurrence in the culinary domain, while unhappy accidents are constantly happening. There is continually the golden mean to be sought in the admixture of all the elements that are to make up a savory meal, and such is 'the total depravity of material things,' as one of our witty writers once phrased it, that if there is one chance

in ten of things going wrong, that chance is sure to befall.

"To cook a potato exactly right, so that it will be just done, and no more, be mealy, white, perfect, requires an exercise of talent little short of genius, so one would think who eats that vegetable at ordinary tables. The same is true of onions, that odorous bulb, which is almost always served underdone; of beans, which are either burned in the baking or dried to a choking consistency. Now a hungry epicure even can make a good meal off three or four things—nicely cooked meat, perfectly prepared potato, a dish of ripe fruit, and exemplary bread and butter. It is not variety or quantity that is so im-

portant as quality, and if those who cook could only realize this and precipitate all their powers upon the perfect preparation of only two dishes at each meal, those who feed at their hands would certainly be the gainers. It is a great deal easier, when one has really made up her mind to it, to have everything just right than it is to let things drift, for one right thing fits into another right thing, and then the whole is right. Badly cooked food is not only sheer waste in nerve, muscle, soul power; the hungry body vainly attempts recuperation in trying to digest and assimilate food not 'convenient' for it, so that what might have been accomplished had the food been right remains undone."

NOTES IN SCIENCE AND AGRICULTURE.

Poisonous Principles in Tobacco.—A scientific writer says in the *London Times*:

"In further research on this subject Dr. LeBon finds that collidine, the new alkaloid existing in tobacco smoke (with other aromatic principles, and prussic acid, as well as nicotine), is a liquid of agreeable and very penetrating odor, and as poisonous as nicotine, the twentieth part of one drop sufficing to paralyze and kill a frog. It is the prussic acid and various aromatic principles that cause headache, giddiness, and nausea in smoking certain tobaccos that contain little nicotine. Other tobaccos, rich in nicotine, have no such effects. The tobaccos containing most prussic acid and collidine are those of Havana and the Levant. The dark semi-liquid matter which condenses in pipes and cigar-holders contains all the substances just named, as well as carbonate of ammonia, tarry and coloring matter, etc. It is very poisonous; two or three drops of it will kill a small animal.

"The combustion of tobacco destroys but a small portion of the nicotine, and most of this appears in the smoke. The proportion absorbed by smokers varies according to circumstances, but hardly ever falls below fifty centigrammes per one hundred grammes of tobacco burnt. About the same quantity of ammonia is absorbed at the same time. Naturally, more of the poisonous principles are absorbed where the smoke is breathed (as in a room); less in the open air. A frog placed in a receiver containing a solution of nicotine, with about one drop of that substance to a little of water, succumbs in a few hours. Tobacco smoke contains about eight millilitres of carbonic oxide per one hundred grammes of tobacco burnt. The poisonous properties of tobacco smoke are not due to

this gas, as has been maintained in Germany."

Recognition of an Acid although ALMOST INFINITELY DIFFUSED.—In December the people of Newark, N. J., were annoyed by a taste of carbolic acid in the city water, supplied from the Passaic River. The matter was investigated, and the contamination was traced to a paper-mill ten or twelve miles up the river, where an incredibly small amount of carbolic acid had been allowed to get into the water. Mr. Page says, in a letter to the *Tribune*:

"The paper-mill of the Messrs. Kingsland is located on the Third River, a stream of considerable magnitude, two miles from where it empties into the Passaic. From the latter point to the pumping station of Newark Water-Works is also two miles. The volume of water in the Third River is not less than 2,000,000 gallons per day, and in the Passaic 150,000,000 gallons per day. The Messrs. Kingsland, among other specialties, carbolize paper by immersion in a bath of the best liquid carbolic acid of a quality such as is used in medicinal preparations. In the process of manufacture there is a small percentage of waste paper. No paper has been carbolized since last June, when not over a hundred pounds of waste or torn paper were placed in the loft of the mill, where it remained until the last of December. It is well known to chemists and many intelligent persons that carbolic acid (really an alcohol and not an acid) evaporates rapidly when exposed to the air. To the sense of smell there was no evidence of carbolic acid in this waste paper when the Messrs. Kingsland decided, in December, to work it up again. Dust having accumulated on it, washing in the mill-pond was necessary.

"A few days after this a perceptible taste of carbolic acid was noticed by the people of Newark, not only in the drinking water, but also in tea and coffee made with boiling water. As an absolute fact, not over ten pounds (a gallon) of carbolic acid had been used in this paper when treated. Certainly 30 per cent. had evaporated, leaving not over seven pounds to permeate 200,000,000 gallons of water, a portion of which was aerated by passing over rapids and dams, through four miles of river, seven miles of pipe, and countless taps. It would seem incredible had we not the evidence of chemists and medical men in Newark perfectly familiar with the peculiar taste of carbolic acid."

The Late Eclipse.—The total eclipse of the moon at midnight of June 12th had its very interesting features, which were described by a correspondent of the *Sun* in this pleasant manner:

"To the naked eye, and even with an opera-glass, the convex outline of the earth's shadow seemed pretty sharply defined as it swept across the moon's face. In a telescope of considerable power, the edge of the shadow was seen to fade off gradually until it required sharp inspection to distinguish the line between sunshine and shade. The absence of air on the moon makes all the shadows there sharp and black, so that the lunar scenery never appears in a twilight. But the gradually deepening edge of the shadow in the eclipse furnished a twilight effect under which some of the familiar features had a new and interesting appearance. This was well seen as the shadow was passing off. The telescope directed near the end of the total phase to the eastern edge of the moon had in its field the Ocean of Storms, part of the Sea of Showers and the Sea of Clouds, and the craters of Aristarchus, Kepler, and Copernicus. All these, and other plains and mountains, could be easily distinguished in the reddish light of the eclipse.

"Presently, along the eastern edge of the moon's globe, which stood out against the sky with stereoscopic roundness, the returning sunlight began to break in a bright, narrow line which rapidly lengthened and grew broader. In a few minutes it had shot northward until it illuminated the peaks around the Land of Hoar Frost, and southward to the furthest confines of the Ocean of Storms, beyond which it streamed across the Sea of Moisture to the borders of the great mountain district of which Tycho is the center. Then the brilliant mountain Aristarchus began to shine like a star in the advancing light, and a few minutes later the sunshine flooded the shores of the Bay of Rainbows. Here the gradual brightening of the light on the cliffs and the long headlands at either end of the waterless bay formed a striking contrast to the usual illumination of objects on the moon. The shadows of the hills were not extended across the levels as during the ordinary sunrise on the moon, for the illumination covered objects on all sides at once.

But the slow increase in brightness brought out one familiar feature after another, as a sunrise on the earth gradually reveals the details of a landscape.

"So the shadow crept slowly off, uncovering region after region, until the whole round face of the moon was shining again."

How to Color Pine Floors.—The *Art Interchange* instructs its readers how to color a pine floor which is to be partly covered with rugs—a fashion which prevails to a great extent just now. Obtain at any house-painter's store turpentine and linseed oil (not boiled). Ask the clerk to put a little Japanese drier in the turpentine. Buy either burnt sienna or Vandyke brown, or both, according to the color of the rugs and the tint on the walls. After the floor has been washed thoroughly clean and dry, begin by mixing in another receptacle the oil, turpentine, and paint. The mixture should be so thin that it will run with liquid readiness. Lay it on with a brush, stroking the brush the way of the grain of the wood. Protect your hands with old gloves, and go over the floor with a rag. In fact, you will need two rags, one pretty well charged with paint, to rub in every crevice, and another rag to rub off any superfluous paint. Do not stop in a straight line across the grain of the wood, but carry the brush irregularly down, taking a hint from nature's lines in the wood. By mixing the burnt sienna and Vandyke brown a rich color will be produced without using the paint thick. The mixture should be so thin that the grain of the wood will show through. If too much turpentine is used the paint will rub off. If too little, your room will need more days to dry. Use twice as much oil as turpentine. Do not economize the oil, and be as prodigal in rubbing as your strength will permit.

How to Make a Good Garden.—Mr. Harris writes to the *Evening Post*:

"The soil must be well drained, either naturally or artificially. It must be rich. And the manure should be thoroughly worked into the soil. Plow the land in the autumn, and plow it again as early as possible in the spring. If there is any rubbish, remove it or dig holes and bury it below the reach of the plow. Then plow again, or work the land with a cultivator. I take off some of the inside teeth of the cultivator, so that the horse can draw the cultivator as deep or nearly as deep as the land has been plowed. This work should be done when the soil is dry and the weather warm. You can not possibly stir the soil too much while the sun is shining. It lets in the sun's rays and warms and mellows the soil. On light, sandy soil, thoroughly and deeply plowed and manured the autumn previous, there are many crops which can be sown to advantage without again plowing in the spring. It often happens in this latitude that five or six inches of the surface soil in the spring is thawed out and dry enough to work, while underneath the ground

is frozen solid. If we wait till this frozen soil can be plowed, we frequently lose a good opportunity for putting in early crops of peas, potatoes, onions, cabbage, lettuce, radish, spinach, etc. And beside, the soil that we turn up with the plow and which comes to the surface and in which we sow the seed, is cold and damp, while the surface soil which we turn under is warm and dry. When it can be done, therefore, it is a good plan to cultivate the surface soil, or hoe or rake, especially during warm, dry, sunny weather, and sow the seeds without digging or plowing the land."

I AM a "merry farmer's girl,"
Just turned of sweet sixteen,
As full of mirth and joyous glee
As any you have seen.

Let other girls who love it best
Enjoy the gloomy town,
'Mid dusky walls and dirty streets,
To ramble up and down.

Sweet flow'ry fields, and shady woods,
And sunny skies for me.
If e'er I marry in my life,
A "farmer's wife" I'll be.

"MERRY FARMER'S GIRL."

Growth of Walnut Timber.— "Near Oneida, Missouri," says the *North-western Lumberman*, "are a number of thrifty walnut groves. The trees were obtained from the seed, the groves range from ten to fifteen years old, and the trees are from twenty to forty feet high, and from four to eight inches in diameter. In some parts of Kansas walnut-trees have grown fifteen feet high from the seed in six years. In Wisconsin, a gentleman who had a piece of land unfit for ordinary cultivation, planted it in walnut, and in twenty-three years the trees were from sixteen to twenty inches in diameter. Many a farmer might make his land profitable by setting it out in walnut-trees, which will never eat their heads off, and will yearly increase in value."

New Asbestos Deposits.—Among the new discoveries made within the past few months is a large body of asbestos. This was discovered by Mr. T. B. Leavenworth, about six miles from Deadwood City. The cropings can be traced for nearly three hundred feet, while a large body of it has already been unearthed. Tests have been made which prove that this body of asbestos is equal to any yet discovered in America. It may be that this mineral will not come into immediate use, but the day is not far distant when it will become an article of export from the Hills.

From the late Report of the ASTOR LIBRARY.—The report of this institution for 1880, shows that there has been expended during the past year for books, binding, catalogues, shelves, and equipment, the sum of \$10,508.49. The fund for the maintenance of the library is now \$421,500 and the endowment amounts to \$1,125,137.20. The

income of the library during the past year was \$26,739.11. The insurance on the books is \$220,000 and on the building \$100,000. The additions to the library by purchase and donation amounted to 3,433 volumes, exclusive of pamphlets. The whole number of volumes in the library on December 31, 1880, was 192,547. In 1871 the general readers numbered 25,529; in 1880 they numbered 45,670. Readers making special researches and admitted to the alcoves have increased, numbering 5,380 for 1871 and 7,961 in 1880. The number of readers in the halls in 1871 and the number of books read were 25,529 and 92,023 books, and in 1880, 45,670 readers and 146,136 books.

An Improved Electric Motor.—A new form of dynamo-machine has recently been devised by Mr. C. F. Heinrich, which the *Telegraphic Journal* pronounces an important advance upon previous constructions. The main improvement is in the form of the armature, which the inventor has been led to adopt by a careful study of the Gramme ring and the way in which currents are induced in it. He finds that the inner side of the ring (that farthest from the field magnet) produces on the coil a current opposed to the one induced on the part of the coil immediately in front of the poles of this magnet, and to this extent weakens the current and causes heat in the coil. When the field magnet is powerful and the ring thin, this effect is reduced, but the inductive action of the farther side of the ring is not wholly eliminated. He therefore makes the ring channeled, or of horseshoe cross-section, the coils of wire being wound on the outside only. This removes the metal from the inner portion, and at the same time allows such a free circulation of air around the wires of the coil where they cross the base of the horseshoe that heating is effectually prevented. The ring is mounted and revolved between the poles of the field magnet in the same way as on the Gramme machine.

Prohibitory Land Titles.—The United States Supreme Court recently decided that conditions in a title deed of land prohibiting the manufacture or sale of liquor on the ground conveyed by it are valid and binding even upon subsequent purchasers from the first grantee. *The conditions are attached to the land.* The benefit of this adjudication is now to be turned to use in the founding of new colonies in which the prohibitory clauses may be inserted in the titles to the land.

Carbolic Acid for Weeds.—Some of our exchanges recommend carbolic acid as a destroyer of perennial weeds in lawns. The acid of the shops is diluted and poured from a bottle into a hole in the crown of the plant, made by a pointed iron. We have found a drop or two of strong sulphuric acid sufficient to kill instantly such intruders in lawns as plantains, dandelions, etc. The carbolic acid, largely diluted with water, is recommended for garden walks, applied with a brush or watering-pot.—*Country Gentleman.*



FOWLER & WELLS, *Proprietors.*

H. S. DRAYTON, A.M., *Editor.* N. SIZER, *Associate.*

NEW YORK,
AUGUST, 1881.

OUR ARTISTS AND POETS.

THERE are many artists among us whose works are not seen among the paintings or sculptures of the galleries or halls, many artists who contribute to the comfort and happiness of society in ways which are regarded as commonplace and every-day. So also there are many poets among us whose rhythmical verses are not seen in magazine or book; nor are they committed to manuscript, yet they are none the less poets, within whose souls there vibrates a living epic. Visit yon great building upon whose massive walls a score of masons ply their busy trowels. Pass along the line and note one whose high and nobly-arched brow and clear eyes betoken superior intelligence. Observe how he handles the glistening tool, how he spreads the cement and fits the stone. There is a fascination in his movements, and you can not but linger and gaze upon them. He picks up a rough and jagged block; surely that is unfit for the place he has to fill in the line of smooth wall! A stroke of the hammer, a touch of the trowel, and see! the stone has become part of the masonry and appears as if it

had somehow grown into it—and there it is adding to the symmetry, evenness, and compactness of the structure. How easily it was done! Other men in that long row of artisans would have rejected that rough stone as unfit for use; other men would have hammered and chipped indefinitely to make it fit, and finally have accomplished but a sorry result; but our artist workman moulded the stone into proper shape at once. No sooner had his eye lighted upon it than he detected its appropriateness for his purpose, and knew just what treatment was required to make it fill the niche.

Go with me into a large machine-shop and walk among the hundred workers at the bench. Observe that one who is shaping a piece of steel for the cylinder of a steam-engine. See how rapidly and easily, almost carelessly, he swings the light hammer, yet with what precision it strikes the chisel head! Note the rapidity with which the steel plate assumes shape, becomes even and smooth, and adapted to the fine joint which it must make. He tries it upon the cylinder, a moment's inspection, then a few more touches of the chisel—we can even with our uneducated eyes catch the graduated clink of the hammer, as those practiced muscles measure out the force of each blow upon the chisel—and the plate is a perfect fit. How indifferently the craftsman appears to try it now! There is an air in his bearing which implies perfect confidence in his work, thorough conviction that it is complete. He needs no gauges or calipers, his eye and hand are sufficient tests of accuracy, and the rhythm of his every movement implies a consciousness of exactitude. Is he not a true artist? As we contemplate such a workman we are forced to credit him

with genius, and it becomes no longer a matter of wonder that so many elements of beauty are wrought into the mechanical aids of our every-day, industrial life.

So amid the routine of commonplace occupations we find men and women whose skill and grace impress us with a charm akin to that we feel when reading the lines of a fine poem. They have never written a couplet, but in their bearing, in their expression, in their manner of using a tool or an implement of house-keeping, and in the character of their performances, there is harmony, coherence, beauty.

With what easy grace some women will handle the needle! How delightfully some arrange a table! not only exhibiting neatness and order in the arrangement of china, glass, cutlery, and napery, but investing every article with an indescribable grace, a poetical concord which wins the attention at first view, and makes the appreciative guest hesitate to disturb their delightful harmony. Oh these artists and poets in our practical, every-day life, how little we appreciate them! yet how much more do we really owe them than even to the men and women who sit in the secluded places of what is called "high art," and to whom people offer willing homage!

ELECTRICITY BY MEASURE.

THE late notable development in electricity—we refer to that of M. Faure's secondary battery—must excite great interest among scientists. The fact that galvanic force can be stored up, however fabulous such a proposition may have appeared heretofore, has been demonstrated and the apparatus has already assumed a form convenient for

many purposes in science, medicine, and every-day industry. Sir William Thomson relates that one of his associates in Glasgow University, Prof. Buchanan, made use of a charged cell weighing 18 pounds, in removing a tumor from a child's tongue by an incandescent platinum wire. To have accomplished the same effect by the ordinary electrical means would have required the setting up of several voltaic cells, and involved much inconvenience. Prof. Thomson says in relation to electricity:

"The largest useful application is waiting just now for the Faure battery, and I hope that a very minimum time will be allowed to pass until the battery supplied for this application is to do for electric light what a water cistern in a house does for an inconstant water supply. A little battery of seven boxes suffices to give the incandescence in the Swan or Edison lights to the extent of one hundred candles for six hours without any perceptible diminution of brilliancy. Thus, instead of needing a gas-engine or steam-engine to be kept at work as long as the light is wanted, with the liability of the light failing at any moment through the slipping of the belt or any other breakdown or stoppage of the machinery, and instead of the wasteful inactivity during the hours of the day or night when the light is not needed, the engine may be kept going all day and stopped at night, or it may be kept going day and night, which undoubtedly will be the most economical plan when the electric light comes into general enough use."

It is by such a method only that electricity can be made thoroughly practicable for the uses of a household. It must rival oil, and almost water in convenience of manipulation, ere the average house-keeper will be convinced of its value, and that the time is near when this attainment of science will be secured we have little doubt. To have proceeded so far

that the most subtle of forces known to man can be rendered a docile servant and trained to the performance of many commonplace duties is to add a final proof, as it were, to the great principle announced by prophetic tongue in ages past, that *to man is committed dominion over nature.*

JUNKETING EDITORS.

IT was our privilege to join with the New York Press Association in the proceedings of its late Convention at Utica. There were upward of a hundred and sixty gentlemen and ladies, representing newspapers and publications in all parts of the State, to whom the citizens of the chief city of Oneida County gave a warm welcome, and treated most generously. We but repeat the remark which has been frequently made by other editors, that a more liberal hospitality and a more appreciative consideration could not be desired than were accorded the Association. The municipality through its Mayor offered the freedom of the city, halls were thrown open for the use of the delegates, railway corporations tendered them free conveyance from and to their homes, and a special excursion of a most delightful character, and private citizens tendered their carriages, threw open their houses and grounds and feasted their visitors with choice collations. The proceedings of the first day, June 8th, closed with a crowded assembly in the Opera House, when a poem by Mrs. Clemmer was read, and an oration by Mr. George W. Curtis was delivered. The poem was a fine tribute to the men of the pen, and the oration was a noble effort, pronounced in Mr. Curtis' best style, and at once grandly eloquent and replete with

valuable suggestions of a practical character. The elegant Opera House was crowded from parquet to gallery, upward of 2,500 persons being assembled. One or two paragraphs from the address we venture to insert here because their spirit, and indeed the spirit of the whole oration, is in accord with sentiments which have been expressed in these columns :

"The servility to party spirit is the abdication of that moral leadership of opinion which is the great function of the political press. It is a subserviency which destroys the independence of the paper, but it does not save the party. There is not a party in the history of this country which has been utterly overthrown, not the Federal, nor the Whig, nor the Democratic party, that might not have survived long and victoriously if its press had been courageously independent. The press submits to be led by party leaders, while its duty is to lead leaders. They dare to disgrace their party, to expose it to humiliation and defeat because they count upon the slavery of the party press. The leaders dare to praise rascals, and to justify wrong because they confidently expect their party press to prolong their words in one vast sustained echo of approval from Katahdin to Santa Barbara.

"The press is never a more beneficent power than when it disappoints this malign expectation and shows the country that while loyal to a party and its policy it is more loyal to honor and patriotism. It is the palladium of liberty because it is the only power in a free country which can alone withstand and overthrow the crafty conspiracy of political demagogues. If it does not lead it is because it chooses to follow; it is because it does not know that no office is so great as that of molding the opinion that makes parties and Presidents; that no patronage is so powerful as the just fear of an unquailing criticism brought home to every word and every act of every public man; and commending its judgment to the intelli-

gence and the conscience of every citizen. The political press of this country does not fulfill its true function until party chiefs in caucuses and conventions and Congress learn that there is a power mightier than all of them combined, which will not come merely at their call, which will not be content merely with the party trade-mark, but which for the sake of the cause of its party, and despite congress and conventions, will advocate only worthy measures, and support only fitting candidates. Thus, and thus alone, can the press of any color save its own party from decay, by forcing leaders to depend for support, not upon discipline, not upon party spirit and party patronage, but upon the essential excellence of the party policy and the character of the party candidates. When leaders know that their own party press, which goes into every house and reasons with every voter, will ask first of all whether the candidate nominated ought to have been nominated, and whether the policy proposed is a sound policy, and whether those who propose to lead are worthy and honorable and faithful leaders, the first care of those leaders will be to provide a body of sound doctrine, and to present candidates like the old chevalier of France, without fear and without reproach."

After the business session of the second day, a visit was made to the beautiful cemetery of Forest Hill, then to the celebrated New York Mills, whose muslin is familiar to every thrifty house-wife in the land. Here the whole company were entertained in the mansion and grounds of Hon. Samuel Campbell, one of the proprietors of the Mills, and passed two most delightful hours.

Next our carriages were driven to the Asylum for the Insane, where we were received by Dr. John P. Gray, the long time and eminent superintendent, and permitted to make a very thorough inspection of the buildings and equipment

of the Asylum. Dr. Gray, the Chaplain Rev. Mr. Gibson, and other officers of the Institution accorded the fullest information possible with reference to the principles and methods adopted in the treatment of the six hundred or more patients in the Asylum. As students of mind and observers of its phenomena, both normal and abnormal, we were deeply interested in the statements made by Dr. Gray with reference to his experience of the happy results obtained through moral methods; the substitution of cheerful surroundings, good food, physical freedom and companionship for the chain and the solitary cell having a subduing effect upon the most disturbed, and in a large number of cases restoring sanity to those who had been deemed irrecoverable. We regard Dr. Gray as one of our most skillful and successful of physicians for the insane, and the State of New York is fortunate in having him at the head of the Utica Institution.

At about seven o'clock an exhibition of the efficient working of the Fire Department was made in the square fronting our hotel. A heap of very combustible material was set on fire, and when all aflame the alarm was sounded. In forty seconds a chemical engine was on the ground and at work, while a steamer which had to make a run of one mile arrived in less than three minutes. It was a very pleasing spectacle even to old New Yorkers to see how rapidly the engines, carriages, and hook and ladder trucks poured into the square, and how deftly and nimbly the men sprang to their duty. It seemed but a minute, and was but a trifle more in fact, after the alarm when nothing but a smoking heap of blackened barrels and boxes remained of the bright, fierce fire.

The same evening Mr. E. H. Roberts,

President of the Press Association, tendered a reception to the members and their wives at his residence on Genesee Street. This was of course largely attended, and proved an exceptionally pleasant affair. Mr. Roberts showed himself as courteous a host as he is graceful and accomplished as a director of parliamentary exercises.

By favor of the Utica and Black River Railroad the Association was offered a special excursion to the St. Lawrence and Alexandria Bay, and on the morning of the 10th of June, the train placed at our disposal left Utica for the romantic journey. Arriving at Clayton we found a small steamer, the *Island Wanderer*, awaiting us, and immediately after all had taken places on board, the wheels moved and we were in motion for a sail among the famous island scenery of that region and two or three visits to certain important centers of summer resort. Our first landing was at the dock of the Thousand Island Park Association, where a splendid reception was accorded us by the Rev. Dr. Bingham, President of the Association. In the large dining hall a bountiful repast was spread and immediate attention was given it by the large company. The attendants of the tables consisted chiefly of the wives, daughters, and lady friends of members of the Association, and their cordial readiness in responding to appetites which had been well sharpened by the long journey, will be gratefully remembered. President Bingham gave us a description of the object of the Association, which, in brief, is to establish a summer abode where scenic beauty, healthful recreation, refined and high moral association shall be concomitants. The Park covers 1,000 acres, and a considerable number of neat

cottages have been erected by members of the organization. A system of entertainments in the way of lectures, concerts, etc., is a noteworthy feature of the management, and a Sunday-school parliament is one of its annual institutions.

Leaving this point we proceeded in our little steamer on a further ramble amid the foliage-clad isles, the course made being through Lost Channel and Fiddler's Elbow, which afforded glimpses of many beautiful cottages and well-kept islet, lawns, and groves.

At about five P.M. the *Island Wanderer* drew up to the dock of Westminster Park, where another delightful welcome awaited us and a toothsome supper. Westminster Park, like Thousand Island Park, is the result of an organized effort to provide a summer rest which shall be free from the contamination of the average summer resort. It is under Presbyterian control, while Thousand Island Park is under Methodist management. The President, Mr. McKinney, read an address in which he alluded in happy terms to the magnificent scenery of the locality, to the character of the American Press, and to the purposes for which Westminster Park had been secured and improved.

President Roberts responded with enthusiasm to the address, and voiced the sentiment of every visitor present when he said, that they would remember with delight the magnificent sail through that grand river and the islands, and the entertainment which had been so freely and richly given them. A stroll upon the broad piazzas and terraces which surround the hotel followed supper, and then we sailed down the river to Alexandria Bay, where the night was passed. The following morning witnessed the

breaking up of the excursion party and departures for home, thus terminating the most pleasant, and perhaps the most instructive, convention of the Press Association during the twenty-five years of its existence. June 8th, 9th, and 10th, 1881, will doubtless be treasured in the memory of all who participated in the experiences which we have rapidly sketched, as three of the brightest among their red-letter days.

OUR WOUNDED PRESIDENT.—The demoniac attempt upon the life of President Garfield struck the heart of the American people with horror and grief. Only the murder of President Lincoln can be mentioned as comparable with it in melancholy effect upon the nation at large. No section was wanting in demonstrations of sorrow, and in the frequent expression of earnest hope for our Chief Magistrate's recovery. At this writing the symptoms of the terribly wounded man are encouraging, and the

few, very few chances in a thousand of his survival appear to be Mr. Garfield's. A brave, cheerful spirit, devoted attendants, skillful physicians, and the fervent prayers of a sympathizing people—what can they not accomplish?

THE INSTITUTE.—The American Institute of Phrenology was organized for the express purpose of teaching human science according to its fullest developments, and furnishing the best knowledge that is possessed on the subject. Its session for 1881 will open on the first day of October, and continue for about six weeks. It is desirable that students who expect to enter should be present on or before the day of opening, since no lecture is unimportant. We notice in the progress of a course of instruction, that if a student from any cause is absent, he seems to have "dropped a stitch," and it shows all through the course; there is a blank spot in his knowledge.

Those who wish to know more about this matter have only to write to the PHRENOLOGICAL JOURNAL office for the Institute circular.



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.

TO OUR CONTRIBUTORS.—It will greatly aid the editor, and facilitate the work of the printer, if our contributors generally should observe the following rules when writing articles or communications intended for publication:

1. Write on one side of the sheet only. It is often necessary to cut the page into "takes" for compositors, and this can not be done when both sides are written upon.
2. Write clearly and distinctly, bring particularly careful in the matter of proper names and quotations.

3. Don't write in a microscopic hand, as the compositor has to read it across his case, a distance of nearly two feet, and the editor often wants to make changes and additions.

4. Never roll your manuscript or paste the sheets together.

5. Be brief. People don't like to read long stories. A half-column article is read by four times as many people as one of double that length.

6. Always write your full name and address plainly at the end of your letter. If you use a pseudonym or initials, write your full name and address below it.

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.

BLUSHING.—Mrs. D. C.—We have frequently had occasion to discuss this topic in this place of brief mention. The disposition to sudden redness of the skin is traceable first to

mental, then to physiological causes. A sensitive, diffident, highly conscientious person blushes easily, while a calm, self-reliant, bold individual will rarely blush. You have a very sensitive, emotional nature, with probably a large development of Cautiousness, which conduces to the embarrassment you feel in the presence of strangers. Strive to look at matters from the intellectual or practical point of view. Remember that others are human like yourself, and that you are as much entitled to their respect as they to yours. Study self-reliance and independence, and let experience be a guide for your conduct.

A FOWL QUESTION.—At what time in the spring must Plymouth Rock hens be kept to themselves to obtain pure stock?

Answer: If you wish pure stock you must keep the fowls of a certain strain entirely by themselves at all times, as the influence of a temporary mixture with other strains will be quite sure to indicate itself in some way in a modification of the markings, and even of the form of choice poultry.

DIET AND FACULTY.—*Question:* Could a person develop or invigorate a certain faculty of the mind by a certain special diet? P. W.

Answer: We have not reached that degree of refinement in our scientific studies which will enable us to prescribe in such a case. A healthy body is the mind's best invigorator. So whatever promotes health will help to invigorate the faculties, and the special exercise of a faculty will then conduce to its increased activity and power.

PHRENOLOGICAL TREATISE.—*Question:* Will you please tell me through "Answers to Correspondents" in JOURNAL, in what I can find a full explanation of organs of the head; their meaning, and how the varied sizes affect a person's capability? MISS L. W.

Answer: Any good text-book of Phrenology will meet your want. "How to Read Character," "Brain and Mind," "The Self-Instructor," "Combe's System," are among the best. See our catalogue or notices in other parts of this magazine.

PHYSIOLOGICAL TREATISES.—*Question:* Would you please tell me which is the best and most complete work on physiology, also a work on histology? G. A. W.

Answer: Dalton, Carpenter, Foster, are standard authors on Physiology, their works being very complete to date of publication. On Histology we can mention Froy's Compendium, Quekett, and Stricker; the price of Frey being \$3.25, while the others are more expensive.

ZERO.—*Question:* What does this term

mean, and how was it connected with the thermometer?

Answer: The meaning of the word, which is in the Spanish and Italian languages, is naught or cipher, and owes its place on the thermometric scale to Gabriel Fahrenheit, a Prussian merchant. On a very cold day, about one hundred and eighty years ago, he experimented with snow and salt to produce a greater degree of cold. He supposed after a while that he had found the very lowest point of cold, and constructed a rude thermometer, arranging his scale with "Zero" at the lowest point, and the boiling point of water taken as the highest point. Then he measured off the space between into 212 divisions or degrees, thus fixing the freezing point at 32. He supposed that quicksilver contracted the thirty-second part of its bulk in sinking from the freezing point to Zero, and expanded the one hundred and eightieth part in being heated from the freezing to the boiling point. This was entirely arbitrary, and as soon as it became apparent other scales were devised upon scientific principles.

HAND MILL.—*Editor of the Phrenological Journal:* Would you be so kind as to inform me through the JOURNAL where I can procure a hand grist-mill for grinding graham flour?

Answer: Such a mill can be obtained in this city for \$2.50. Send your order to us and we will supply it.

TEMPERAMENT AND MARRIAGE.—*Question:* What Temperament should a person marry having himself the Motive-Vital, together with small Destructiveness, Hope, Secretiveness, Veneration, and large Conscientiousness, Benevolence, Combativeness, and Approbateness?

Answer: The Vital-Mental, with a brain organism well developed in the side-head and top-head. See work on "The Temperaments," and also "Wedlock," for useful advice.



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

ENERGY.—We often hear men spoken of as being "men of great learning," "men of genius," "profound men," etc., and yet, with all their study, their natural gifts, their profound knowledge, etc., it is but as snow upon the river, if not combined with the one great motor—energy. The story of the thirsty traveler in the desert, who came to a well with an abundance of water, but lo! there is no bucket; no means wherewith to procure the boon for which he is

almost perishing, is an apt and forcible illustration of the man or woman possessed of many talents, much common-sense and mental ability, yet lacking within the energy or executive ability to reduce to practice the superior talents bestowed upon them. We may all for a time flit about in heedless butterfly fashion, forgetting all else save the pleasures of the passing hour; but sooner or later it will be apparent to the most thoughtless of our race, that

"Life is real, life is earnest,
And the grave is not the goal;
Dust thou art, to dust returnest,
Was not written of the soul."

And the earlier in life that this knowledge of our being of some use in the world dawns upon us, the better. Energy and determination will accomplish more toward a man's success—even though he be possessed of one idea—than a thousand ideas and wonderful theories, if not sustained by those cardinal virtues. Of what benefit to the community is the rich miser who hoards up treasures of wealth, but who, in the narrow stinginess of his soul, will not take the trouble to invest or circulate his money, even though he knows it would open his heart to kind and generous impulses, giving pleasure to himself, and doing good to those around him? Or the man who spends a life-time in gleaning knowledge; buries himself in ancient lore, and becomes a perfect encyclopædia within himself, yet who has not sufficient energy to arouse from his dreamy, selfish life and diffuse his knowledge, until it is too late, and he wakes up at last to find that all his years of research amount to nothing. We frequently meet with such characters in a life-time. There is no spectacle more sad than to see a man of learning and knowledge awake to the fact, when it is too late, that he only lacked the energy and determination, to have been a shining light in the world. Better, far better then, when life is drawing to a close, feel that we have been a *successful* chimney-sweep, rather than a dreamy nonentity of a monarch.

TATTIE KENNISH.

A REMARKABLE CHILD.—(The following communication is from a subscriber residing in Michigan, and may be received as a careful statement of fact. The case is probably one of hydrocephalus). On the 5th of March last I visited Ettie, the daughter of Mr. Youngs Gregory, of Monroeville, Ohio, whose age is 11 years, and whose height is twenty-one inches; of this her head alone measures eight and three-quarter inches. At birth she weighed but two and a half pounds, and at present weighs but twenty-five pounds; of this her head weighs about fourteen pounds.

She increased in weight until eight months old, at which period her body ceased to grow

apparently, both in weight and length; but her head continued increasing in size until she was six years old, since which time it has apparently remained the same. Until she was eight months old she was very symmetrical in her proportions.

The circumference of her wrist is only three inches, while that of her neck is eleven and a half inches. The only limb which she is at all capable of calling into exercise is her left arm. The rest of her body is inactive, on account of not having been exercised. The fact that she is capable of using her left arm leads one to suppose that it is only the lack of exercise which prevents her from using her right arm, for it is the same size as the other. She can turn her head from one side to the other, which may seem remarkable on account of the great disproportion between the head and the body.

Her first teeth made their appearance very early, and by the time she was three years old the first set were entirely shed, and the second, or permanent set, had made their appearance. These are somewhat decayed already.

Her eyes are blue, and of normal size; her complexion is good for one being almost continuously under shelter, the skin being fine and rosy. She has also a very heavy growth of light brown hair, more luxuriant than the average girl of eleven summers.

Her nervous system does not appear to be developed in point of size beyond that of a girl of four or five years of age, yet her mental qualities are really wonderful. Of these I shall speak further on. She never complains of pain in her head, and I was careful to press my hand on different parts of the cranium, and found that it was perfectly natural, and she did not appear to feel any inconvenience from my manipulation. The only place at which she showed sensitiveness was around the eyes.

Her digestive organs are in such condition that she is capable of eating a variety of solid and nutritious food, being especially fond of soups, oysters, and eggs.

In respect to the development of her head, the following facts were carefully noted:

The distance from the tip of her chin, to a line drawn horizontally with the top of her head, is 8½ inches, which is more than one-third the length of the entire body. From the tip of the chin to the nose is 2½ inches; from the end of the nose to its base or to Form is 1½ inches, while the perpendicular height from Form to a line drawn horizontally with the top of the head, is 4½ inches. The circumference of the base of the brain is 18½ inches; of this the distance from the orifice of one ear to the orifice of the other ear, around the head, immediately over Amativeness, is 11½ inches.

Beginning in the center of Eventuality, and

drawing a line around her head over Adhesiveness, I found it to measure 26½ inches, while placing the line about an inch and a quarter above the center of Eventuality, so that it passed over Caution or the center of the parietal bones, it measured 32½ inches. Again, I drew a line from the orifice of one ear over the top of her head or across the center of Hope to the orifice of the other ear, and found it to be 19 inches. The cerebellar region is considerably larger than the neighboring regions. Vitativeness is also comparatively very large, while Combativeness and Destructiveness are very small. The girl is of a very mild disposition, seldom complaining.

She has had the measles, whooping-cough, scarlet fever, an attack of inflammation of the lungs, and a few weeks ago influenza. She has at present good vocal organs, and the senses are acute. She learns rapidly, and is interested in everything around her.

Owing to the great weight of her head and the smallness of her body, she is unable to move herself, consequently what knowledge she has acquired has been from observation and from what has been told her. She is very observing, and has a remarkable memory, especially of names and faces; she learns the names and forms of objects, the meaning of words, and the employment of the objects in common use. She has not been taught to read, but can repeat the alphabet.

She has Form extraordinarily developed, the distance from the inner corner of one eye to the inner corner of the other eye being 1½ times greater than the distance from the outer corner to the inner corner of either eye, her eyes being natural size, as was before stated.

She is able to repeat poetry and music; is also capable of recognizing almost every one who lives for miles around with whom she has come in contact; can also recognize individuals from their walk in passing the house. She is able in the dark to tell who is passing, so the only way in which this knowledge can be accounted for, is that she is able to distinguish the gait of one person from that of another.

Owing to the excessive development or activity of Approbativeness, she is very much delighted when addressed and taken notice of, in fact she appears restless and uncomfortable unless she is noticed. For several years past she has been very much interested in school life, and whenever the children in the neighborhood speak of going to school, she expresses her desire to do likewise.

A few weeks ago she thought she would like to have a party, as there were several given by different families in the community, and although she couldn't move at all, except her left arm and head a little to one side, yet she enjoyed herself immensely.

Hilledale, Mich.

GEORGE ZIMMERMAN.

DISAPPOINTMENTS.—If we allow ourselves, we can indulge our thoughts on the small and petty disappointments that beset us day by day, until we shall feel that our whole life is a disappointment, not only to ourselves, but to all around us. It is only he who looks ahead, above the cloud of petty annoyances that surrounds us all, who will find true happiness. We pass from childhood to youth, from youth to middle age, from middle age to old age, and then to death, and as each change is made we feel that we have lost something that is never to be made up to us in the future, however bright that future should be. No matter how dark the present, how dead our once bright hopes, it is useless to grieve over them—it is also wicked. If we can look ahead and build a new future, set up new objects, and bury the old ones deep out of sight, we do indeed belong to the sensible people of the world. What is the use of saying we have nothing to live for, because our highest aims and brightest hopes have been dashed to the ground and trampled on by those whom we held dearest and best? If we could see the foolishness and absurdity of longing for what we can not attain, of weeping over our fallen hopes and inspirations, we perhaps could forget, with a few less tears and sighs and more smiles, what we once hoped for and expected.

We can not go through life without disappointments, and if we steel ourselves so that they pass off without leaving a deeper wound, we are infinitely superior to those who give away to gloomy and morbid feelings; who doubt the truth of all goodness in this world; who hope for nothing because they foolishly make themselves believe there is nothing to be hoped for.

In youth we have everything to hope for, and if disappointment after disappointment comes upon us, then in age we have heaven to work for and win. We have read somewhere that God never made a heart without one tender spot, and we know God never gave a life without something to live and hope for.

JANIE RENAU.

PERSONAL.

EX-PRESIDENT HAYES; Walt Whitman, the sesquipedal poet; and Mr. Emerson, will, it is said, go abroad in the autumn; in return, Père Hyacinthe, Mr. Huxley, and other notables are to pay us a visit.

JOSIAH MASON, the eminent English manufacturer and philanthropist, died in June last, shortly after the account published of his eventful life in the PHRENOLOGICAL JOURNAL for that month was given to the public.

A GRANDDAUGHTER of the famous beauty, the Marquise de Minute, of whom Louis XV. once

said, "*Cette Minute est sans seconde*"—this Minute has no second—has just died.

MISS KATE SMITH, an inmate of the Union Home for Old Ladies in Philadelphia, after three years' labor has completed a quilt containing 55,552 pieces. She has been blind from infancy, but threaded every needle herself, and used 100 spools of thread in the work.

JOSEPH LUDLOW, aged 104, lives in the village of Bergen. He was born in Baden, Germany, and has been twice married. He milks, saws, and chops wood, and is as active as a healthy man of 60. His children live in the surrounding counties, the eldest being 83.

MISS BETTY GREEN, of Forsyth County, Georgia, has two silk dresses of which she may reasonably be proud, she having raised the silk worms, spun the silk, and woven and colored it with her own skillful hands.

MISS LUCIA ZARATE, a dwarf exhibiting in London, commands a larger salary than any other woman in England. How curiosity pays.

WISDOM.

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

BUYERS want a hundred eyes, sellers none.

BETTER one word in time than two afterward.

NOTHING is ever done beautifully which is done in rivalry, nor nobly which is done in pride.—RUSKIN.

HOPE is like the sun, which, as we journey toward it, casts the shadow of our burden behind us.—SAMUEL SMILES.

If it is a small sacrifice to discontinue the use of wine, do it for the sake of others; if it is a great sacrifice, do it for your own sake.

'Tis not the wide phylactery,
Nor stubborn fast, or staid prayers,
That makes us saints; we judge the tree
By what it bears.—WHITTIER.

POLITENESS is like an air-cushion; there may be nothing solid in it, but it eases the jolts of the world wonderfully.

In the voyage of life we should imitate the ancient mariners, who, without losing sight of the earth, trusted to the heavenly signs for their guidance.

OUR greatness will appear
Then most conspicuous when great things of
small,
Useful of hurtful, prosperous of adverse
We can create; and, in what place so'er,
Thrive under evil, and work ease out of pain
Through labor and endurance. —MILTON.

MIRTH.

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

He came in, and taking a seat at the desk, asked, "Well, what shall I write about?" The editor told him he had better right-about face.

JOHN BILLINGS says that "a good doctor is a gentleman to whom we may pay three dollars a visit for advising us to eat less and exercise more."

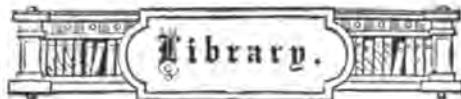
A GENTLEMAN once remarked to a witty lady of his acquaintance that he must have been born with a silver spoon in his mouth. She looked at him carefully, and noticing the size of his mouth, replied, "I don't doubt it; but it must have been a soup-ladle."

A "THREE-YEAR-OLD" discovered the neighbor's hens in her yard scratching. In a most indignant tone she reported to her mother that Mr. Smith's hens were "wiping their feet on our grass."

In a hairdresser's shop at the East End of London, a bill was exhibited in the window recommending a certain patent medicine, with the very dubious heading: "Try one box—no other medicine will ever be taken."

A LITTLE three-year-old girl, while her mother was trying to get her to sleep, became interested in some outside noise. She was told that it was caused by a cricket, when she sagely observed: "Mamma, I think he ought to be oiled."

"YOUR husband requires rest," said the doctor, as he came from the sick-chamber. "He will soon be well—he has a bad attack of tickerosi." "Tickerosi, doctor; why, that's a new disease, isn't it?" "Yes, quite new—it is caused by watching the tickers in the broker's offices. It affects the optic nerve and the spinal column."—*Boston Journal*.



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 HOME HAND-BOOK OF DOMESTIC HYGIENE AND RATIONAL MEDICINE. By J. H. Kellogg, M.D., Member of the American Association for the Advancement of Science, the American Public Association, etc., etc., author

of "Plain Facts for Young and Old," etc. Octavo, pp. 1,568, sheep. Price, \$7. Battle Creek, Mich.: Good Health Publishing Co.

Whether or not the author of this bulky volume has vied with the numerous compilers of the much-circulated "Family Physician," he has certainly outdone the most of them in comprehensiveness, as his book touches upon nearly every topic in anatomy, physiology, and hygiene. His purpose is, indeed, to furnish in a popular form the latest information on those important subjects. He devotes a large proportion of his book to the structure and functions of the bodily organs in the start, and proceeds to consider the causes of disease, the rationale of prevention, and methods of cure. He dwells much upon what we may term preventive medicine, or rather the hygienic *modi* which, if society should adopt them generally, would rid us of most of our ailments, certainly the more virulent and dangerous. Being an avowed advocate of the hygienic régime, or as he intimates himself, not approving "the custom of making an apothecary-shop of the stomach by dosing for every trifling ailment of any part of the body," his discussion of both preventive and curative medicine, is generally without the drug bias of the "old school," although he accepts the view that in serious disorders a physician may be warranted in seeking the aid of the apothecary.

In the course of a review of the functions of the nervous system, particularly the brain, in which the opinions of several popular experimenters appear to have been accepted without question, he refers to phrenology, as it were incidentally, but chiefly with the object of warning his reader against the pretenders and cheats who have cast a dark stigma upon the science, and greatly hindered the efforts of the earnest and true advocates of a philanthropical system.

The work is specially valuable in the part devoted to food elements, and we have glanced through the pages in which the author sets forth the claims of a vegetable diet as proper to man with much pleasure. He is no friend to alcohol, and treats tobacco with the severity it deserves. Tea and coffee are not passed over without a challenge; Dr. Kellogg fully confirming our own opinion that the use of these beverages is a cause of intemperance by no means insignificant. The work covers a vast field of medical inquiry, is the result of several years' study and observation, and will prove exceedingly serviceable in the hands of intelligent laymen, and to all such we cordially commend it.

AN IMPORTANT MAGAZINE TRANSFER.—After a career of almost unparalleled success in the history of monthly publications, *Scribner's Magazine* has passed from the ownership of the book house which its title has represented, into that of a corporation to be known as the "Century Com-

pany." The editorial control and business management will remain in the same hands as hitherto, and we expect that there will be no diminution of the excellence of the magazine's literary and artistic features, but rather an improvement. Its name will be that of the new publishing company—*The Century*. The juvenile monthly, *St. Nicholas*, will also be under the same management.

LITTLE BLUE JACKET and Other Stories. By Miss M. A. Paull, author of "Tim's Troubles," "Sought and Saved," etc. 16mo, cloth. Price 75 cents. New York: National Temperance Society and Publication House.

A group of well-told stories for the young, of which the first is of a little sailor lad, who managed to do a quiet but effective work for temperance on shipboard. The others are varied in incident and method as well as natural. A story may have a high moral purpose, be didactic, and yet very attractive to young minds. This is clearly proven in this volume.

PUBLICATIONS RECEIVED.

AMERICAN NERVOUSNESS: ITS CAUSES AND CONSEQUENCES. A Supplement to Nervous Exhaustion (Neurasthenia). By George M. Beard, A.M., M.D. 12mo, 352 pp. G. P. Putnam's Sons, publishers, New York. See review in September PHRENOLOGICAL JOURNAL.

THE CINCINNATI MEDICAL NEWS, edited by Dr. J. A. Thacker, is received with prompt regularity, and is read with interest every monthly issue, being stored with a selection of recent observations in medical practice. The spirit of the learned editor is liberal and progressive. Price \$2 a year.

THE PERSIAN QUEEN, and Other Pictures of Truth. By Rev. Edward P. Thwing. A series of reflections based upon Bible incidents and precepts. Well written, impressive, instructive, and refining. Price in paper 10 cents. I. K. Funk & Co., New York.

THE NORTH-AMERICAN JOURNAL OF HOMOPATHY. The late Number of this prominent organ of a powerful and growing school of medicine is a bulky compilation of papers on topics of importance to physicians.

THE SALON OF MADAME NECKAR. Taken from Documents among the Archives of Coppet. Vol. III. Paper. Price 15 cents. I. K. Funk & Co., New York.

THE SECRET SORROW. By Mrs. May Agnes Fleming. No. 87 of *The People's Library*. Price 20 cents. J. S. Oglvie & Co., New York.

A SHADOW ON THE THRESHOLD. By Mary Cecil Hay. Price 10 cents. Same publishers.

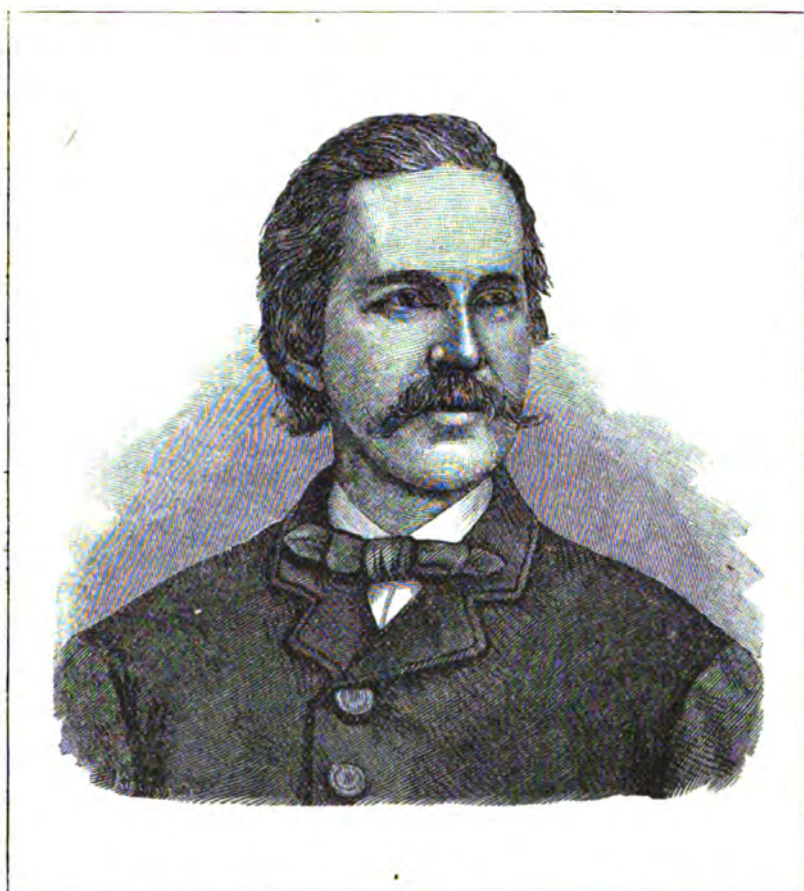
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[WHOLE No. 514]



PAUL H. HAYNE,

THE POET OF THE SOUTH.

FOR the past ten years Paul H. Hayne has been regarded the leading writer of verse in the South; and his merit being based upon unusual gifts of mind and practical industry, it bears favorable comparison with that of most of the popular writers of English verse living to-day. He, of course, has his peculiar style as a poet, the characteristics of which are a tender, highly imaginative,

and delicate sentiment, in which a strong love of nature is conspicuous, a polished and graceful rhythm of the lyrical type. He is also a writer of prose; but there is so much animation and picturesqueness in his composition that the poetical vein is too pronounced for the maintenance of that gravity which is essential in good prose composition.

He was born in Charleston, South Carolina, on New Year's Day, 1831. His father was Lieutenant Paul H. Hayne, of the United States Navy, who was a younger brother of Robert Y. Hayne, whose debate with Webster on "Foote's Resolutions" is so famous in Congressional history. After graduating at the College of Charleston in 1850, young Hayne studied law, and was admitted to the bar; but his tastes inclined him too strongly to literature to pursue the law, and being at that time independent as to means, he was enabled to gratify them. He edited in succession a number of Southern periodicals, of which the best known was *Russell's Magazine*; and in 1855 his first volume of poems appeared from the press of Ticknor & Fields, Boston. It attracted considerable attention from a cultivated circle, and was pronounced by Mr. Edwin P. Whipple, the brilliant Boston critic, "a work of great promise as well as fine performance." A second volume followed in 1857, which he published in Charleston. This consisted chiefly of sonnets, introduced by an exquisitely graceful "Ode to Sleep." In 1860 his third volume ("Avolio, and Other Poems") appeared from the press of Ticknor & Fields, and was favorably received by the critics and public.

When the civil war broke out between the North and the South, Hayne, as might have been expected, and like the cultured young men of his section generally, espoused the Southern cause, led by conviction, by personal friendship and local attachment, and by all the inherited political tendencies of his social circle. His health was not rugged, but he was assigned, early in 1861, to a position on the staff of Governor Pickens, of South Carolina.

Illness compelled him to give up his military ambition; but his muse was not idle in retirement, as for the next few years he wrote almost constantly in support of what was so soon to become the "Lost Cause." His numerous war lyrics bore such titles as these: "The Kentucky Partisan"; "My Motherland", "The Substitute"; "The Battle of Charleston Harbor"; "Stonewall Jackson"; "The Little White Glove"; "Our Martyr"; and "Beyond the Potomac." The last-named was commented on in terms of praise by Dr. Oliver Wendell Holmes, in a lecture on the poetry of the war.

As was the case with many other Southrons, the close of the conflict found him ruined in fortune. His house in Charleston having been destroyed by fire, he removed with his mother, wife, and boy to a retired place near Augusta, Georgia. For a while he assisted in the editorship of the *Augusta Constitutionalist*; and afterward in 1866, settled down in his present residence, near the Georgia Railroad.

"Copse Hill" is the name of the home which the poet has made for himself, and in which he has resided for thirteen or fourteen years. His cottage, made of unseasoned lumber, and neatly white-washed, stands on the crest of a hill in the midst of eighteen acres of pine lands, which are uncultivated, and afford the solemnity and seclusion which nature alone can give. Yet the house is far from uninviting; indeed, its interior is cheery; for it has been patiently decorated in a fashion at once artistic and homelike by the hand of Mrs. Hayne, the walls being papered with engravings, carefully selected from the current periodicals of the day.

Mr. Hayne's library consists of some two thousand volumes, partly saved from his original valuable collection of books, and for the most part accumulated by his labors as a book-reviewer. His desk, at which he always stands while writing, is made out of two ends of the work-bench used in building the cottage. Mrs. Hayne has contrived to transform it into

a unique bit of furniture. The little book-cases near by are made of boxes, partly covered with pictures like the walls of the room.

In person, Mr. Hayne is of slight figure and medium height, having piercing eyes, full lips, and a dark complexion. His head intimates the man of studious inclinations, with much of the idealist and dreamer. He has lofty aims, is sensitive to extremes, and fastidious in his views of life. He should be known for a prompt sympathy and intuitive perception of worth. His impressions are very quick and clear on all subjects. He is not remarkable as a talker; can best express himself in writing, but then naturally aims to communicate his meaning by the use of brief and definite terms rather than in a copious, extended manner. His large Ideality gives him power to picture forth his ideas; and well-developed Tune contributes a melodic bias to his word-forms. In general, the caste of his mind is strongly artistic, with enough of energy and practical judgment to make him industrious and thorough-going.

In 1852 Mr. Hayne was married to Miss Mary Michel, of Charleston, the only daughter of Dr. William Michel. Her descent is worthy of notice, her father having been, when but eighteen years of age, a surgeon in the army of the first Napoleon.

A late poem published in *Harper's Magazine* illustrates Mr. Hayne's tender method and lyric peculiarity. It is entitled "The Dead Child and the Mocking-Bird," and the author says that the strange pathetic incident it commemorates actually occurred not long ago in the neighborhood of Jacksonville, Florida:

"Once, in a land of balm and flowers,
Of rich fruit-laden trees,
Where the wild wreaths from jasmine bowers
Trail o'er Floridian seas,

"We marked our Jeannie's footsteps run
Athwart the twinkling glade;
She seemed a Hebe in the sun,
A Dryad in the shade.

"And all day long her winsome song,
Her trebles and soft trills,

Would wave-like flow, or silvery low
Die down the whispering rills.

"One morn midmost the foliage dim
A dark gray pinion stirs;
And hark! along the vine-clad limb
What strange voice blends with hers?

"It blends with hers, which soon is stilled—
Braver the mock-bird's note
Than all the strains that ever filled
The queenliest human throat!

"As Jeannie heard, she loved the bird,
And sought thenceforth to share
With her new favorite, dawn by dawn,
Her daintiest morning cheer.

"But ah! a blight beyond our ken,
From some far feverous wild,
Brought that dark Shadow feared of men
Across the fated child.

"It chilled her drooping curls of brown,
It dimmed her violet eyes,
And like an awful cloud crept down
From vague, mysterious skies.

"At last one day our Jeannie lay
All pulseless, pale, forlorn;
The sole sweet breath on lips of death
The fluttering breath of moru;

"When just beyond the o'er-curtained room
(How tender, yet how strong!)
Rose through the misty morning gloom
The mock-bird's sudden song.

"Dear Christ! those notes of golden peal
Seem caught from heavenly spheres.
Yet through their marvelous cadence steal
Tones soft as chastened tears.

"Is it an angel's voice that throbs
Within the brown bird's breast,
Whose rhythmic magic soars or sobs
Above our darling's rest?

"The fancy passed—but came once more
When, stolen from Jeannie's bed,
That eve, along the porchway floor
I found our minstrel—dead!

"The fire of that transcendent strain
His life-chords burned apart,
And, merged in sorrow's earthlier pain,
It broke the o'erladen heart.

"Maiden and bird!—the self-same grave
Their wedded dust shall keep,
While the long, low Floridian wave
Moans round their place of sleep."

INDEPENDENT ACTION.—How useless it is to rely for happiness upon "the world!" If you would pass through life in the easiest possible manner, shrink from nothing in itself virtuous and ra-

tional. Venerate only that which is inherently and changelessly right. Whenever unselfish love is the mainspring of men's actions; whenever happiness is placed not on what we can give for ourselves, but on what we can impart to

others; whenever we place our satisfaction in gratifying our fathers and mothers, our brothers and sisters, our wives and children, our neighbors and friends—we are sure to attain all the happiness the world can bestow.

IMAGINATION AS CONNECTED WITH SCIENCE.

IMAGINATION is not fancy. A closely-drawn definition makes a distinction. Fancy paints impossible pictures, builds air-castles, is the "habit of association which presents to our choice all the different materials which are subject to imagination." "Paradise Lost" is a work of the imagination; the finish of certain parts of it is the work of fancy. Imagination is a faculty of the mind, and almost synonymous with invention; it produces new thoughts or new combinations of ideas. But to speak of imagination's connection with science, to most ears may sound odd, for the very word *science* has a peculiar significance. It suggests dryness; musty books; wearisome, logical men; technicalities; coldness and formality. Such things do not attract the mind of the masses. The business man has no time for them. Silly chit-chat is shocked at them. Laboring men do not care for them. So that, when the general signification of the word *science* is coupled with the freshness and vigor suggested by the word *imagination*, it might well be thought that they have little in common. But this is an erroneous opinion, and ought in justice to science to be removed.

Science is something different from what it is held to be by common belief. It is admitted to be the foundation of all art—both the fine-arts and the useful arts. No man can tell how many of life's comforts are its products. It has to do with trades and professions. It comprises among its divisions all mathematics, chemistry, physiology, and all sociology. A knowledge of these

branches requires a study of them. Perhaps mathematics is considered the most abstruse of any, and its study would seem to make the least use of the faculty of imagination. If the faculty have an important part to play in mastering this—the most exact and unbending of all subjects—then we need not wonder if the same faculty do a necessary work in the study of other subjects.

The preliminary process of learning to read being over, the boy familiarizes himself with the principle of arithmetic. So far the labor is mostly rote work—mere "pounding in," perhaps. Passing to geometry a change takes place and continues throughout the branches of the "higher" mathematics, either in the way of holding up figures before the mind or of forming theories. In geometry—by means of lines, curves, and angles—the principle under consideration may be illustrated and thus presented to the perceptive faculties, and through them to the reason. But a real figure can not always be before the mind, yet some resemblance of it must always be present. So, what then? The faculty of imagination calls on memory for the lines and angles and curves, and the figure is held up before the perceptive faculties like a picture, as fresh as the real figure, as useful, except for presenting the principle to others, always at hand to the strong imagination, and giving self-reliance, in that it does away with our leaning on something outside of ourselves for support in this work. If imagination pictures an incorrect figure, reason, through the principles drawn from the memory, recognizes the fact

and the work is to be gone over again. We know of a student, who, while his class was going over four books of elementary geometry, finished the whole subject, committing the propositions to memory. True, his intellect was good; but then he had a powerful imagination. He would study a figure till he could reproduce it, and then he would walk back and forth across his room, going through the demonstration until he had thoroughly mastered the principle. And, other things being equal, the student who has the strongest imagination, will make the most rapid progress in this study. Here is one branch of a most difficult subject, in the mastery of which this faculty plays a most important part.

Teachers tell us that one of the main difficulties to be overcome in the study of spherical trigonometry is, to get the student to let out or send out his imagination, so that he may see the figure representing the principle under consideration held up before him. And this is especially the case in the practical parts of the subject used in the solution of astronomical problems, such as finding time of day or time of sunrise or sunset.

But, when we enter the department of mixed mathematics, the use of the faculty seems to grow with the field. Every one who knows anything of mechanics will recall the fact that the apparently difficult problems—say of levers or of pulleys, simple or complex, or of a complication of pulleys and levers—may be made very simple by a few well-regulated strokes of the pencil; or, what is just the same, if he can only imagine how the problem in practice would look, then the whole matter referred to reason becomes most easy of solution.

What shall we say of astronomy? What a subject! Its text-book is unbounded space. There are the millions of floating worlds for contemplation, all far removed from us—the nearest hundreds of thousands of miles away, the farthest beyond the most extended stretch of calculation. If a field is wanted in which imagination can go out

over its widest range, and yet not traverse but little of the boundless space, here we have it. There, too, is the department of natural science; with its principles, classifications, and divisions recorded only through ages of speculation and dispute.

But the above thoughts are applied mainly to the use of the faculty of imagination in the study of these sciences—when men are led, *following* in the well-beaten or in the pioneer paths. And if the faculty is necessary to follow, how much more will it be necessary when it comes to lead—if it must be in the future as in the past that truth is to be discovered by means of speculation and theorizing and tested by facts and experience.

True, great discoveries, rather their elementary principles, have been laid before the world through accident. It is more than likely that observing the ebullition of steam from a vessel was the occasion through which the power of steam has finally come to the aid of bone and muscle; but it took able minds to turn the knowledge of the principle to account. Galvani, by a simple incident, was put on the track of a discovery—one result of which is that people separated by rivers and mountains and seas may talk with each other almost as if face to face. So of anæsthetics, for the existence of which many a poor sufferer has had reason to thank God. Yet, the first knowledge of an anæsthetic principle came to us by accident. And so of the discovery of many other elementary principles.

But discovery of principles was not enough. These were to be investigated, the whys and wherefores known, and practical application was to be made before great advantages could result. Bear in mind that the investigator can not depend upon some happy incident to direct the mind in his investigations just as the traveler depends on the guide-post. He must find the way in the light of his existing stock of knowledge. His is a work of comparison. He must speculate and theorize; and for both specula-

tion and theory, he is dependent upon his imagination.

Great freedom and power in theorizing and speculation are indispensable to the natural philosopher and to all scientific research. There are some kinds of knowledge which we get by intuition, but intuition does not make many discoveries in science. So the natural philosopher needs something in addition to this knowledge. He needs that power of mind which can go out before him, and, in the light of facts, picture possible phenomena. In speaking on this subject, Jevons, in his "Principles of Science," says: "It would be a complete error to suppose that the great discoverer is one who seizes at once unerringly upon the truth or has any special method of divining it. In all probability the errors of a great mind far exceed in number those of a less vigorous one. Fertility of imagination and an abundance of guesses at the truth are among the first requisites of the discoverer; but the erroneous guesses must almost of necessity be many times as numerous as those which prove well founded. The weakest and the most absurd theories apparently, the most whimsical notions, may pass through the teeming brain and no record remain of more than the hundredth part." We see from this that the theories of the natural philosopher need not be expected to be true or reasonable if they are to be so many. The same author says of Kepler in this regard: "Did we not know from his own writings the multitudes of errors into which he fell, we might have imagined that he had some special faculty of seizing on the truth. But it is well known that he was full of chimerical notions. His most favorite and long-entertained theory was founded on a fanciful analogy between the planetary orbits and the regular solids. His celebrated laws were the outcome of a life-time of speculation, for the most part vain and groundless." As an example of his much theorizing and speculation, it may be said in regard to his laws of the movement of the planets around the sun, that he made

nineteen hypotheses on the supposition that the orbit of the planetary movement was a circle, and proved every hypothesis false. The next supposition was that the orbit was an ellipse, with the sun in the center, and he proved this false. The next supposition was that the sun formed one of the foci in the ellipse, and this proved so correct as to be generally accepted as the true law. This involved an immense amount of labor, but not nearly so much as was required in his search for the rule that the squares of the periods are to each other as the cubes of the distances. The like never could have been accomplished by the unimaginative mind.

Faraday says in regard to any restraint being imposed on the imagination, "Let the imagination go—guarding it by judgment and principle, and holding it and directing it by experiment." So, we conclude that there must be great freedom and power in theorizing and speculation to every natural philosopher.

It has been said, and truly, that science is the foundation of all art. The productions of the artist and of the poet are those of imagination; and yet, is there not a science of expression on the canvas as well as on paper? In invention the faculty is placed by some above memory and other faculties. Bain does so. Need must call for every great invention, but the strong imaginative mind must produce it. It might exist in all its parts in the imagination of the inventor before it can exist as a real object. How think you that Stevenson built his first locomotive? By first constructing a boiler, and then blindly adding this part and that part, till at length it existed as a thing of motion? Hardly. Imagination, picturing all the parts to him, gave him the theory that such a model represents what would answer the purpose. Reason assented to the theory. Practical test of the theory proved that there is in steam, properly controlled, almost unlimited speed and power.

And so of all inventions. They have a wide field, and it seems to be extending

itself each day. We can only learn its bounds when we have learned the limits which may be placed upon this faculty. Were it possible to remove the power of this faculty from man, then we had reached the limit of invention; for we can no more think of progress in this way without the aid of the faculty under consideration, than we could think of a ship making progress on the land, or of a locomotive under the ocean. And if the limit of invention has been reached, it will generally be admitted that the limit of progress has been reached also.

It is not intended to intimate that a

knowledge of science and its progress depend upon the imagination alone more than it depends upon certain other faculties; but this one is a condition for the action of others, which in turn are aids for the first. There is a mutual dependence among them.

The conclusion seems to be, then, that science, art, invention, and progress alike demand that there be a more special cultivation of this faculty by any healthful, natural means—a matter for the consideration of mankind in general, and especially for the consideration of parents and teachers.

G. W. S.

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER IX.—(CONTINUED).

ALTERATIONS OF THE SKULL IN MAN—ARTIFICIAL AND OTHERWISE.

ANOTHER class of heads deserves some consideration, for although not strictly to be termed diseased, they are at least abnormal. We allude to those which are misshapen by artificial means. Many nations of the old world and of the new have practiced compressing the heads of infants, either laterally or frontally. In ancient times, in some of the Oriental and German peoples, such a custom was in vogue. Hippocrates, Vesalius, and other writers speak of them, and they, together with later writers, are inclined to ascribe the variations in the general form of the head among modern Europeans to the transmission by inheritance of peculiar shapes originally acquired by artificial means. Vesalius, for instance, says in *De Corporis Humani Fabrica* ("The Construction of the Human Body"), almost all nations have some peculiarity in the form of their heads. The skulls of the Genoese, and more particularly those of the Greeks and Turks, are completely spherical; and this shape, which they consider very elegant and adapted to the turbans which they wear, is produced by the midwives at the solicitation of mothers.

The flattened appearance of the occipital region, which is still observable in a large proportion of German heads, is attributed by the same writer to the custom of permitting the infant to lie constantly on the back.

Craniological science to-day recognizes the influence of hereditary in human organism, but can not go so far as to accept the opinions above stated.

The savages of North and South America that still practice the habit of flattening the heads of their children, appear to be actuated by the notion that a broad, flat forehead is a sign of noble birth and adds greatly to their appearance, and they regard a head of natural shape with contempt.

The method in vogue among the natives of Vancouver's Island and Indian tribes living on the borders of the Columbia River, all of whom are related by language and general customs, is to place the infant, when but a few days old, in a log cradle lined with moss or tow, the head resting upon a piece of board on which is also spread moss or tow, so that it shall be "comfortable" for the little creature. Another piece of flat wood, or even a flat stone, is then laid upon its

forehead, which has been swaddled for the purpose and bound firmly to the cradle. The child is rarely taken from

As this custom is mainly confined to males, the deviation from the natural which it occasions is easily observed. The heads of Indian girls are rounded, the foreheads slightly depressed, the cheek-bones prominent, the orbits turned a little outward, and the nose well developed.

What effect such compression produces upon the intellectual and affective faculties can not be described with exactness. As a rule flat-heads are not inferior in intellectual capacity to other Indian tribes that do not bandage the head.

The Chinooks, Nootkas, and other tribes of the Columbia River show skill in hunting and fishing and are brave in war, but there are notable differences among them in personal habits, industry, and prudence; some having a little pretension to neatness and a regard to the future, while others are filthy, indolent, and improvident.*

The compression of the head tends to displace the cerebral parts subjected to it, but as it is applied in the earliest in-



Fig. 236.—CHINOOK WOMAN AND CHILD.

the cradle, and the compression is continued until it is old enough to walk. At three years of age, the child so treated presents an almost hideous appearance—the natural proportions of the head being entirely altered, so that it has the form of a wedge. As the frontal region is flattened and spread outward, the eyes are rendered very prominent, and the upward direction of the orbits adds to the ugliness of the malformation.

Nature seeks to repair the damage wrought by barbarous caprices, so that in the adult Indian the flattening of the head is much less marked than in children. The drawings in the volumes of travelers which represent the skull of a flat-head show the departure from normal symmetry occasioned by the artificial means; the parietal bones being made to bend or bulge outward, and making the head an inch or more wider than the normal measure.



Fig. 237.—SKULL OF FORTUS SHOWING EFFECT OF RICKETS.

fancy, the displacement is gradual and accommodated to the growth of the

* Bancroft, "Native Races of the Pacific Coast."

brain. Hence the brain is not prevented probably from attaining its fullest dimensional growth. This is supported by the conclusion derived from observation, that the internal capacity of the flat-head cranium differs little, if any, from the capacity of the crania of North-west Indians who do not follow the strange custom of bandaging the head.

RACHITIS, OR RICKETS.

To the number of causes which produce abnormal changes in the form of the skull should be added the important one of Rachitis, or as it is commonly called, Rickets. This disease consists in a softening, general or partial, of the cranial bones. It is of more frequent occurrence in early childhood than at any other period of life. The head of a new-born infant is sometimes found to be more or less deformed by this disease. Figs. 237, 238, are views on a reduced scale of the skulls of two still-born infants, the rachitis having so far advanced as to destroy parts of the bones and arrest their full development.

This affection is exhibited also by irregularities of skull-growth, one portion being larger and thicker than another and throwing the whole mass out of balance and proportion. Excessive deposits of bone have been found in one or another region of the head; accidental or Wormian bones have been found in the articulations, especially of the parietals with the occipital, imparting to the surface an extraordinary roughness.

The bones of the skull may vary much in thickness and density, without altering appreciably their external shape. This condition is simply natural or the result of certain affections having an in-

fluence upon the nutrition of the whole osseous organism, or it may be the consequence of disease of the brain, especially that affecting the intellectual faculties. Alterations in the thickness of the skull may also accompany old age, as we have noted on a previous page.

Malformations of the skull are not very common in the lower animals. Of the quadrupeds, the family of cats perhaps oftenest presents them; while among birds, pigeons and hens appear to be the most liable to them. The illustrations, Figs.

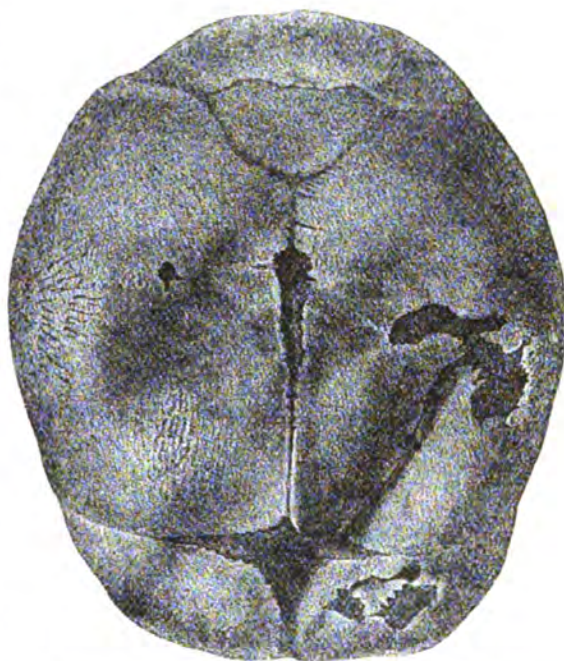


Fig. 238.—SKULL OF CHILD AT BIRTH SHOWING RICKETS.

239, 240, 241, show a form of disease which is familiar to poultry-keepers, and consists in an enlargement of the frontal part of the cranium, accompanied with defects of ossification. The middle and superior parts of the bony envelope remain too long in the membranous condition, while the development of other parts proceeds normally. In Fig. 239 we have a representation of the early stages of this abnormality, the membranous opening being large. Fig. 240 shows advancement toward closing the fissure, and

Fig. 241 presents it almost entirely ossified. This malformation appears to be hereditary, and associated with it is a very



Fig. 239.—CHICKEN'S SKULL, SHOWING DISEASE.

marked degree of stupidity on the part of the chicken. The bony elevation raises the short feathers on that part of the head, so that fowls thus affected have a peculiar tuft or plume which distinguishes them from their companions of the roost.

While unusual thickness of the bones or wide separation of the tables of the skull is commonly due to disease, organization or temperament lies at the source of the ordinary variations we notice among men who indicate no pathological affection. Men with large bony frames and powerful muscles usually have heads of considerable volume, whose osseous and membranous integuments are much thicker than the average. This is the case particularly with athletes and those who are notorious in the sporting arena. Hence it is essential that regard be had to the physical organization in estimating the volume of brain possessed by a living person. In cases of extraordinary osseous development, the thickness of the cranial bones may be three-eighths of an inch, or about double the average.

Age, as we have already said, brings changes in the bones of the skull as it does in all parts of the skeleton, owing

to the reduction in the amount of fluid or soft matter in their tissue. After fifty years the walls of the cranium increase usually in thickness and density, alterations in the nutrition of the brain are apparent, and the organs are affected by them. Some begin to lose in activity and power, and there is either a tendency to shrinkage of volume or a change in the character of the nervous structure takes place. As these alterations occur very gradually, a considerable lapse of time is required before the persons them-

selves may be aware of the loss of functional energy. As climate, constitution, and particularly methods of living and mental exercise have a most important influence upon the cerebral conditions, no exact data can be given with regard to the periods and extent of these alterations.

Bichat is of opinion that the skull in very aged persons becomes thicker and denser.* Gall thinks that it becomes thicker and lighter, or of a more spongy texture.†

Vimont, whose examinations were much more extended than either, is very guarded in his opinion, having found much variation in thickness and density



Fig. 240.—CHICKEN'S HEAD, SHOWING OPENING IN SKULL.

in the crania of the aged, and leaves a

* "Anatomie Generale," Vol. III.

† "Anatomie et Physiologie du Cerveau."

full determination of the matter to future researches.

The diseased states or affections which exert the most influence in changing the cranial tissues are chronic lesions of the brain and its membranes. From these arise that thickness and hardness of the walls which are frequently found in persons who have been the subjects of mental derangement for a long time.

D.

(To be continued.)

REVELATION AND SCIENCE. — The strongest scientific evidences of a future life and of the existence of divinity rest in Phrenology. No man can thoroughly investigate Phrenology and become convinced of the truthfulness of its claims without recognizing a divine hand and a future life. It teaches no formulated creed, however, and while men naturally and rightfully gravitate to this or that form of church worship, there is nothing in science that either authorizes or interferes. Science is the physical revelation of God and should harmonize with the spiritual. The preacher who attempts to antagonize the divine avenues of knowl-



Fig. 241.—CHICKEN'S SKULL MALFORMED.

edge neutralizes his power for good, and creates a lurking suspicion that if he can not reconcile the works of God, the fault lies in his interpretation of spiritual revelation, and not in the lack of harmony itself. In other words, a man's ideas of religion may be irreconcilable with a scientific truth because they were formulated from a pattern that existed when the world was supposed to be flat and the sun to move around it. Progression is the natural order of things, and all the handiwork of God is shaped to this end, that men may become wiser and better as the manifold beauties of nature are unfolded. The man who laughs to scorn the language of Nature, has not reached the alphabet of human experience.—*Crawford Co. Bulletin.*

DOES DEATH END ALL?

(Concluded.)

THE mind can no more take cognizance of all its own modifications at any one moment, than it can know, or feel, all that is passing in the world around it at once; but they are thrown up into the light of consciousness, as the surface waves of the ocean are whitened in the light of day. The experiences of persons when near being drowned are in evidence upon this point. They frequently say that the events of their whole lives pass in clear and distinct review before them. In cases of in-

sanity it is often observed that thoughts are recalled which, before and after the attack, were beyond all power of recollection. These returned thoughts also appear with a marvelous freshness, and in some instances are so profuse as seemingly to outmeasure the capacity of the mind in its normal state.

Coleridge narrates a case of an illiterate young woman, who, in a nervous fever, was heard to talk in Latin, Greek, and Hebrew. The matter excited great interest, and, upon investigation, it was

found that in childhood she had been taken in charity into the house of a learned clergyman, who was accustomed to walk up and down a passage in his house into which the kitchen door opened, and to read aloud from his favorite books in these languages. Sheets of her utterances were taken down from her lips. They had no connection with each other, yet each sentence was complete and coherent with itself. It was thus discovered that these recitations from languages even unknown to her had been caught and retained in the consciousness so perfectly, that even after the lapse of years, her mind was able to render or evolve them distinctly and perfectly. If the above be true, this telephone of consciousness should be somewhat guarded in our life relations.

Again, the spirit may be dimmed in either receiving or evolving impressions and experiences while in the body, and by means of it, for want, through disease or defective organism, of a perfect report between the outer and inner life.

Again, in old age an increasing dimness of the senses creeps upon life gradually, interrupting its free expression by means of the worn-out and defective organism, but without loss of individuality, as is most powerfully evinced by the fact, that now the mental gravitation shifting turns the other way, and the aged man again lives in his boyhood, early manhood, and down to present consciousness in a decreasing ratio, the latest received impressions being with greatest difficulty recalled, while the rosy skies of youth come out as the most distinctive things in consciousness, and are the delight of declining years.

The attributes of mind are necessarily and essentially different from the attributes of matter. The terms mind, soul, and spirit, with my understanding, are all used to denote that in man which thinks, feels, and wills.

The word mind points rather to the active or thinking faculty, the soul to the passive or feeling capacity, while spirit rather regards the higher rational

nature, that wills, directs, and controls its own acts. In this trinity I think the human spirit is in the image of its Author. It is true that we know nothing of this mysterious co-ordinating power, apart from its attributes, which we see manifested through form. Neither, on the other hand, do we know anything of matter as a substance, apart from its attributes. All positive knowledge of either ends in a knowledge of attributes. The fact is that delegated power is all we possess. The attributes of matter are these—size, weight, form, color; it is hard, soft, round, square, opaque, transparent, nebulous or formless, etc.

I know of spirit what I know of matter. I know something of the attributes of each. I can have no knowledge of the latter, however, except as I am first conscious in the former, and which is therefore prior in time in all knowledge. Of the spirit I know, if I know anything, that it has the attributes of self-consciousness, of activity, sensation, perception, thought, memory, pleasure, pain, emotions, affections, sentiments, passions, faith, charity, hope, love, conscience, will, etc. I know and feel in my own consciousness that it is not matter, in the common acceptance of that term;—that it has retentiveness of impressions made upon it;—that it is not the physical mechanism of my body which does the bidding of my will;—that it loves, hopes, fears, takes pleasure in giving form to thought by means of language, even as I do now for the gratification of any who may feel sufficient interest in the subject under discussion to read them. I feel that these thoughts that I am now penning do not come out of matter, or in any way out of the physical mechanism of my hand or body, which my spirit moves. All thought comes from the immaterial, and goes into the immaterial, through language, in which it takes form.

Language is thought clothed or materialized, as is also the human spirit, which comes forth out of the spirit of

the invisible, is materialized, or takes form, remains in transitu for a brief period to receive the physical universe and its conditions, and again seeks its primitive home in the unseen.

It will therefore be seen that with my understanding spirit is the primary and real entity in existence, drawing matter after, or attaching itself to matter, as an incident. While materialism claims mind or spirit to be an effect of organization, I claim it to be the cause, and will now proceed by inquiring, what is the first thing that appears in the formation of an organization. A mass of germinal matter that has movement and life merely, is it not? Spirit and life then exist before organism, and are its cause.

In reference to the germinal mass, let me say, that as there can in life be no expression without language (of some kind), so there can be no language without form, and equally true is it that spirit can not attach itself to this plane of existence, by means of which it finds expression here, without the clothing of matter and form, nor could form's conditions be communicated to it without such contact. This union takes place, when the spirit is cast, in the mysterious, creative, and prenatal period, in which evolution, union with matter is effected, after which spirit co-ordinates organization, each spirit and species after its own kind. If the spirit may exist prior to organization, may it not after it embrace the whole question under discussion? The life force is a co-ordinating power, possessing separate and distinct identity and individuality. The spirit of a man will co-ordinate nothing but a man, an animal an animal, a plant a plant. It is said by the most approved authorities that the microscope can discover no difference between the germinal cells that produce man, the lower animals, and plants. How, then, is it that the result is different, only that the spirit of each has its own individuality and weaves its own? All animated nature is built up by cells. The first thing which comes from the supposed germ is

a cell, which builds up the whole structure, whatever it may be. It is by these cells that all plants and animals are constructed. A globular mass containing a large number of cells is formed before any diversity of parts show themselves, and it is by the subsequent development from this mass of different sets of cells, of which some are changed into cartilage, others into nerves, others into muscles, others into bones, etc., that the several parts of the organism are ultimately formed. Everywhere, however, there is unity in the plan of every organism that has life. The spirit makes no mistakes, and never abandons a plan of life once commenced, to weave differently. All of the kingdoms of nature are woven each after its own kind.

When the egg begins to quicken, life is the chief thing in it, and that life assumes a certain ethereal form, which, gradually, both within and without, by the appropriation of the material around it, ripens into fixity of organs, nerves, muscles, and tendons, preparatory to its full exit into the world's field.

The vitality of atoms or of cells differs, however, from the whole organism. They may die, and the organism to which they belong not be affected. Important distinctions exist between vitality, life, and soul. A single cell may have vitality, the individual organism to which it belongs have life, and that organism, if possessed of self-consciousness, has soul.

Spencer says, "Identical sensation is not in any instance or degree capable of being transferred from a living identity to any material." There is and must be a separate entity or individuality, which co-ordinates and appropriates sentient atoms and cells, and whose individuality can not be divided so as to transfer any portion of it to any other material.

Let us now proceed to an examination of the question as to whether, by the same process of reasoning, the lower animals would necessarily with man be sharers in a future state.

It may be, and indeed is, the opinion of many, that both animal and plant life

continues into the future. This, however, is not my view of the question, for reasons which I shall now proceed to set forth. I have already said that life and spirit exist before organization, and are its cause; and this is true, whether it be plant-life, the life of the lower animals or of man. The life and the life-attributes, however, are different in each. I claim immortality for man on the ground of his mental and spiritual attributes. It is in these that he is the keystone in creation's arch.

It is my view that plants and animals have no future, for the reason that neither of them have understanding or thought, in the human sense of that term, and have nothing to retain; all experiences passing over their lives without entering or being retained by them, so as to give them individuality, for reasons that will appear hereafter.

But I imagine the reader longing to propound a question something like this: "If this something, this power, this life-force is withdrawn at death from all mankind, is it not withdrawn in the same way from all animals? And if there must be something superadded to matter in the human form to move it, must not the same something be superadded to the animal form to move it, and if not, why not?"

Such a question would be a fair one, and I will endeavor to answer it with fairness.

To the first half of the inquiry I shall answer in the affirmative, so far as animal life and vitality are concerned. In answer to the last half of the inquiry, I say, that so far as the life and functions of each are concerned, those functions are similar, if not identical, both in man and animals.

The organs of plant life, however, are not life. The organs of life in the lower animals are not life. The organs of the human life are not life. The vivifying of these forms of life is different, and by different mental and spiritual attributes.

Plants have organic functions by which alone their lives are sustained; and their

vitality, with my understanding of it, exists after their organization as before, as a principle, but without individuality, as they have no understanding—the plant having no thought by which to individualize the spirit of its life. The organic functions of the animal, and by which alone it lives, are the same as in the plant, with this difference only—the plant lives and grows by the process of absorption in the root of the plant, while the roots of nutrition in the animal are in the digestive organs instead of in the soil. The animal has superadded, however, to organic life a nervous system, which renders it different from the plant in this—that the animal can move about to obtain its food, while the plant is fixed to one locality.

The addition of this nervous system for the purpose of locomotion, gives no more claim to a future than is possessed by the plant, for the reason, as I shall claim in this article, that it gives no self-consciousness or understanding, but gives instinct alone as its product, which is but the expression of a perfect law of Deity, with no self-consciousness of individuality in the animal any more than is possessed by the mysterious and seemingly intelligent absorbents engaged in the nutritive process of either plants or animals. Instinct works in obedience to a perfect law, of which the animal knows nothing. What are the ends and aims of this instinct? Nutrition and propagation, is it not, and with no power of deducing general truths or laws from collections of individual facts, nor retentiveness of them by which they may be reproduced, and hence no future. It knows nothing of the rationale of mechanism or of principles, and has no thought or search after knowledge for its own sake. Had instinct self-consciousness, it could make itself known and felt on a subsequent age. On the other hand, unless man had the faculty of elevating the understanding above the will, that he might see it and its purpose, and hence to direct it, he would have no capacity of thinking or speaking from thoughts, but would utter a sound ex-

pressive of the desires of instinct. In man instinct is broken up, and in its stead he has the power of abstract reason, self-consciousness, love of wisdom, retentiveness of all impressions, and all the mental and spiritual attributes hereinbefore set forth. Man at the outset is the most helpless of any of the animal kingdom, commencing at nothing save capabilities (as instinct is broken up), but radiates in all directions toward the Infinite, while the animal is born into its condition, which, however, it knows not, and which it can never improve.

The bird builds its first nest as well as it can ever build it, and each after its own kind, and there is no change in the fashion of its architecture from age to age; and so with the bee that builds its comb after a most perfect mechanism; and so with all of the other expressions of instinct. The young bird that flies to a warmer clime during its first winter, knows not of the promptings which cause it to fly. While the helpless babe is for months and years under the nurse's care, the cunning and saucy little chicken has scarcely escaped from its prison-house ere it struts about and gathers its food with an air that seems a marvel.

I have already stated that it would be impossible for the human spirit, prior to any knowledge of its surroundings, to have any impressions, either during sleep or wakefulness. Now, let us see as to this perfect law of instinct. If a kitten before any of its surroundings were impressed upon it, and as soon as born, and before it has its eyes open, be thrown into water, it will swim at once, and as perfectly as it can ever swim. Here we have absolute proof of the perfection of this law into which the animal is born. The above holds true as to all animals. If, on the other hand, a babe were thrown into the water it would at once drown, and can swim in later years only as it is taught, and then only by degrees.

But it will be said that there are certain of the animal kingdom that appear to have a little glimmering of something which seems to be akin to reason, as that there is a sort of association of ideas ex-

hibiting a deviation from the usual routine of instinct. For instance, the dog that wants to jump a high fence will seek the lowest part for the purpose, and some of these animals may be trained or taught certain things. It is claimed by some scientists that this is evidence of thought, and that the difference between instinct in animals and reason in man is one of degree only, and not one in kind, and that man is a product or development from the instinct species. Science, however, has never as yet bridged the physical chasm between man and the lower animals, to say nothing of the wider one between their mental and spiritual attributes.

Will those claiming thoughts for the animal, based upon this seemingly varying condition of instinct, claim it also for the formative vessels in the body which select from the blood whatever they need for the purpose of building up the various parts of the structure? All the parts of the system are formed from the blood, and these formative vessels, as workmen, are as unerring in their selection from the common material as if they were intelligent beings. Indeed, no ordinary intelligence could accomplish such a selection. Again, they will work outside of their usual routine. For instance, if a bone be broken, these vessels at once set themselves to work to repair the injury, by forming new bone between and around the broken ends of the bone, thus stepping outside of their usual routine, and with as much intelligence as the dog shows that jumps the fence at its lowest point.

Again, the process of digestion is presided over by the pylorus or guard-valve of the stomach, as though it were an intelligent being, and will permit only digested food to pass; and, in fact, the whole structure is alive with the cunning of instinct, and which expresses itself with as much variety and intelligence as is exhibited in any of the animal kingdom. The bee, even, where any obstruction is met with in weaving its comb, will deviate and weave around it.

In conclusion, I would say that the

sum of the senses—the body—is the organ of life, and not life. Life can not be created. Love can not be created. Wisdom can not be created. Thinking, feeling, and willing can not be created even

by the Infinite himself, for they are of Himself or His own attributes. Evolution and co-ordination are the only creation.

Rochester, N. Y.

J. E. ROE.

TIME WAS BORN.

TIME was born of the dawn of Light.
He is not so old as Chaos and Night.
Although to us he is aged now,
With the signet of centuries on his brow.
With the marks of the empires born and gone,
Furrowed by races overthrown,
Unshaken by throes the globe has known,
Shrivelled and dry, he still moves on.

Shrunken and old, yet still he lives.
Out of his treasure, how little he gives!
Just a few moments or years at the most.
We pause to think, and the years are lost!
Watching, he notes the infant's cry—
Yearningly sees the robust die.

At ruin of all things bright and fair
Unswerving Chronos is always there!

On, on he comes with his hurrying feet,
Touching and shrivelling all things sweet.
And, if but a tiny flower decay,
Or traitor has sought his home to betray,
Or the light of a love is fading away,
Old Chronos is there, in his steady flight,
And less he is loved than Chaos or Night;
For they dwell in the darkness and mystery—
He works with the light for an agency
And touches us all with a certainty.
So each sees his hand in the tracery.

O Time! O Time! how long shall this be?
Hast thou almost completed thy destiny?

GRACE H. HOER.

THE POETRY OF RALPH WALDO EMERSON.

PART II.

PASSING by "The Problem," "The World's Soul," "The Soul's Prophecy," "To Eva," and "The Day's Ration," all of which have found ardent admirers in Bryant, Whittier, Dana, Kendrick, and other anthologists, let us remark concerning "The Sphinx," that it is one of our poet's conundrums. As the title premises, it revels in obscurity; one gains little information from its confused imagery and involved expression. We have the *dull* sphinx, *sweet* sphinx, and *merry* sphinx. Is there any good reason why waves should be "ashamed"? The idea is certainly novel, but hardly truthful. Several recondite words and word-compounds are introduced—such as *oaf*, *eterne*, *aye-rolling*. This mystic quatrain is not fittingly set within the poem:

"Have I a lover
Who is noble and free?
I would he were nobler
Than to love me."

In several stanzas the poet's Pegasus breaks the traces of rhythm and ambles about wildly. Is the author really facetious when he says, defiant of rhyme,

"Through a thousand voices
Spoke the universal dame:
'Who telleth one of my meanings
Is master of all I am.'"

But, after all, we are not left entirely to ourselves among the stony ruins of Memphis. There are unique and thoughtful lines that save this poem from being altogether a mistake.

"Each and All." Under this strange caption we discern much that is suggestive and some commonplace. The piece would have been more compact and perfect if the twelve lines at the beginning and the fifteen at the conclusion had been omitted. Among its best are these lovely poetic verses:

"I thought the sparrow's note from heaven,
Singing at dawn on the elder bough;

I brought him home in his nest at even ;
 He sings the song, but it cheers not now,
 For I did not bring home the river and sky :
 He sang to my ear—they sang to my eye.

" The delicate shells lay on the shore ;
 The bubbles of the latest wave
 Fresh pearls to their enamel gave ;
 And the bellowing of the savage sea
 Greeted their safe escape to me.

This is visioned with a poet's insight and probed by the intuitiveness of a philosopher.

" Mithridates." Why this remote, historical name? May another critical Pompey defy this rhythmic barbarian? How could you, Mr. Emerson, so try our devotion and practice on our credulity?



RALPH WALDO EMERSON AT SEVENTY.

I wiped away the weeds and foam
 And fetched my sea-born treasures home ;
 But the poor, unsightly, noisome things
 Had left their beauty on the shore,
 With the sun, and the sand, and the wild uproar.

" The lover watched his graceful maid,
 As 'mid the virgin train she strayed ;
 Nor knew her beauty's best attire
 Was woven still by the snow-white choir.
 At last she came to his hermitage,
 Like the bird from the woodland to the cage ;
 The gay enchantment was undone,
 A gentle wife, but fairy none."

The veritable Omar Khayyaw never raved so profoundly. Again, we say, who dares uphold these delirious verses :

" Give me agates for my meat ;
 Give me cantharides to eat ;
 Hemlock for my sherbet cull me,
 And the prussic juice to lull me ;
 Swing me in the Upas boughs,
 Vampyre-formed, when I carouse.
 Hither! take me, use me, fill me—
 Vein and artery—though ye kill me."

" Hamatreya." In subject not unlike "Thanatopsis"; but the treatment is

widely different, and, we think, equally effective. Its first half promulgates noble truths. The entire is (more or less) philosophic, practical, and instructive. We note rather over-much detail. These are wise sayings. Would that the many prose-readers and biblical students might take them to heart :

"Earth laughs in flowers to see her boastful boys
Earth-proud, proud of the earth which is not theirs ;
Who steer the plough, but can not steer their feet
Clear of the grave.
They added ridge to valley, brook to pond,
And sighed for all that bounded their domain ;
'Tis good when you have crossed the sea and back
To find the set-fast acres where you left them.
Ah! the hot owner sees not Death, who adds
Him to his land, a lump of mould the more."

The thoughts are noble ; the expression perfect.

"The Earth-Song," from its sequel, in lines run this wise :

"They called me theirs
Who so controlled me ;
Yet every one
Wished to stay, and is gone.
How am I theirs,
If they cannot hold me,
And I hold them ?
Old are the shores.
But where are old men ?
I who have seen much,
Such have I never seen."

"Good-Bye." Characterized by depth, purpose, and suggestiveness. The same thoughts have come to others, but were never before so ably stated. Although the burden of this song is that of passing away trustfully, in this instance Mr. Emerson's judgment of the affairs of life is not in keeping with his customary nature and humane tendencies. These verses are frequently quoted as household words :

"What are they all in their high conceit,
When man in the bush with God may meet ?"

"The Rhodora." Happy theme to have found so eloquent an exponent. Every line is weighty ; the sense clear ; each word in its proper place :

"If eyes were made for seeing,
Then beauty is its own excuse for being,"

compares well with the one famous line of Keats. We can safely promise the

reader he will discover others of equal merit.

"The Humble Bee." Fresh, unique, and treated with skill. The author holds closely to his subject. His wording is compact and strong. Parts are musical and suggestive. Let these extracts verify our judgment. The two bad rhymes are to be regretted :

"I will follow thee alone,
Thou animated torrid zone !
Zigzag steerer, desert cheerer,
Let me chase thy waving lines ;
Keep me nearer, me thy hearer,
Singing over shrubs and vines.

"Thou, in sunny solitudes,
Rover of the underwoods,
The green silence dost displace
With thy mellow, breezy base.
Wiser far than human seer,
Yellow-breeched philosopher !"

"The Snow-Storm" has remarkable strength and majesty. We need not particularize concerning a poem that of its kind is altogether unequaled in English literature. Herein occur such thought-laden and condensed expressions as "The trumpets of the sky" ; "Tumultuous privacy of storm" ; "The north-wind's masonry" ; etc.

"The Amulet" bears a general resemblance to some of Heine's brief and happy inspirations. It has only three short stanzas, but they are charged with thought.

"The Apology" has twenty rural lines that yield more substance than twenty stanzas of classical landscape poetry.

"Thine Eyes still Shined." Its title is strangely worded. Style and sentiment are not Emersonian ; they remind of Goethe's "I Think of Thee."

"May-Day." For a moment only at the beginning Gray's "Hymn to Adversity" must have rung in the author's memory. This version lends its name as a title to one of the poet's volumes of verse. Most of its substance is natural philosophy, lined and rhymed. The interest is not well sustained. Some thoughts are disjointed and incoherent, and on the whole, the piece lacks simplicity. Allusions to "the regiment's parade,"

"revel of the carnival," "Table-Round of King Arthur," etc., do not find their proper place in pastoral, May-day poetry. Here and there are scattered felicitous imaginings — as where is said, "The year's calendar is eternally defined by the return of birds and the birth of flowers." Innocent seekers after the May-pole and its accessories will be disappointed in reading this version. Among other strange things we are informed that "Spring is strong and virtuous." These recondite and new-fangled words occur in it: *southing, vauous, soothfast, lubber-friend, over-gods, and farmer's byre.*

"The Adirondacks: a Journal Dedicated to the Author's Fellow Travelers." Long, full of variety and incident, and studded with life-like descriptions. The wording is easy, frequently eloquent; but the treatment, in the main realistic, would have been equally effective in unlined and unrhymed prose. These are strong Emersonian expressions:

" — this realm
Bounded by dawn and sunset."

" The lightning has run masterless too long :
It must to school," etc.

Our poet is usually "solitudinarian," and makes little of human companionship. Here, however, he varies from mere observation and introspection and broadly opens into social conditions.

"Brahma" is as enigmatical as one could desire. Superficial readers pronounce it extravagantly obscure. We think otherwise. Here the Indian deity is supposed to be speaking to the Hindoo worshiper. The "red slayer" may stand for Vishnoo or any other gory life-taker. Scattered among its lines we distinguish much that is wise and characteristic, but we are unable to divine why the follower of the Deity should ultimately "turn his back on heaven."

In the humanitarian "Boston Hymn" the author is all too neglectful of form and metre. Its lines could be chanted, but never sung to musical measure. A number of stanzas might well be omitted. This one, from among the best, has a deep significance:

" Lo ! I uncover the land
Which I hid of old time in the West,
As the sculptor uncovers the statue
When he has wrought his best."

"The Rommany Girl." Why not, more familiarly, "The Gipsy Girl"? Characteristic of Gipsy life, thought, and manners, and well wrought. All is clear; every word in its proper place; the right word invariably chosen; and never one too much. This "Rommany Girl" is seldom alluded to. But where can one look to find an equally good poem on the same subject? We quote an average stanza, the last line of which is eminently characteristic:

" The wild air bloweth in our lungs,
The keen stars twinkle in our eyes,
The birds gave us our wily tongues,
The panther in our dances flies."

"The Titmouse." Intuitively, we think of a mouse; but this particular mouse proves a bird. There are some animated passages, and this bad one,

" The reason of all cowardice
Is, that men are overgrown,
And, to be valiant, must come down
To the titmouse *dimension*."

The expression, "tugs at the heart-strings," comes to us faintly reminiscent of William de Stratford. This closing strain is far-sought and strangely inappropriate:

" I think old Cæsar must have heard
In Northern Gaul my dauntless bird,
And, echoed in some frosty wold,
Borrowed thy battle-numbers bold.
And I will write our annals new,
And thank thee for a better clew,
I, who dreamed not when I came here
To find the antidote of fear,
Now hear thee say in Roman key,
Pæan ! Veni, vidi, vici !"

"The Sea Shore." It is common to hear that Byron, in his "Address to the Ocean," exhausted this subject; but Mr. Emerson shows that something more remained to be said by a true poet, and has told it in a manner both eloquent and profound. If his version has less majestic swing and tone-power than Byron's, we deem it equally exalted.

One more appropriate quotation ere we reverently close the poet's volume:

"See thou bring not to field or stone
The pansies found in books:
Leave author's eyes and fetch your own
To brave the landscape's looks.
Oblivion here thy wisdom is,
Thy thrift the sleep of cares;
For a proud idleness like this
Crowns all thy mean affairs."

Some time ago Mr. Emerson said, "The sign and credentials of a poet are that he announces that which no man foretold." Surely, then, himself lives by his own declaration. Let us add that the poet

not alone *speaks* the language of emotion, but verifies himself in every act. His sympathies flow unselfishly and in all directions. No maker of contrivances, no schemer for popularity, no seeker for monetary awards fulfills the mission of a poet. Verily, the temple of Apollo was never decked with nose-gays; no drachmas jingled on his altars; his priests played never on sackbut nor with cymbals.

WILLIAM WEIDEMEYER.

COURT AND SANCTUARY.

THE Court and Sanctuary!
Parts of that Temple Solomon upreared,
Whose Architect was God. Symbols were ye
Of man the microcosm; of dual man.
The temple of the Holy Ghost! Yea, types
Were ye of the vast Universe. What God
Together joins, let no man thrust in twain.

Yet now, the "Court and Sanctuary" stand
Jealous, divorced, opposed in war-array.
Religion frowns, and Science scorns, as if
The Universe betrayed God's written Word
And stamped a lie upon its truthful page—
Or Earth's deep mould outshone the blazing
heavens.

Oh, warriors blind! ye are not twain, but one;
For *twenty cubits* span the outer court.
But twenty cubit's is the Sanctuary,
Within the veil, where the two cherubim
Outstretch, with equal length, their unseen
wings;
Unfathomed yet by Science in the outer court;
Whose visual reach extends but to the veil.

O enter, Science, with thy measuring reed,
Pass through the veil Christ's death hath rent in
twain,
And measure there those cherubim revealed
Erst to untutored minds but *heavenly* seemed,
And scorned by thee as rhapsody and dream.
Lo! *twenty cubits* span their outspread wings!
Learn thus a higher truth emblazoned there—
That "things invisible are understood
By things created."

The mystic creatures that Ezekiel saw
In the great Temple of the Universe—
With eyes and wings and wheels and faces
four;
Ranged in their primal order—bird, beast, man;
The wheel within the wheel—distinct, yet one—

Shall yet adjust themselves to every grasp
Of Science's latest, still unconquered thought,
As to unfold the *unity of all*.

So with these symbols of a living Soul
Pervading all and lifting all to God:
"They mounted up from earth"—those living
wheels!

Such evolution—rising from the dust—
Upborne by Him who worketh all in all,
Expands all force, all science, and all soul. Till
The full stature of His Christ attained, behold
God's finished thought! That ladder Jacob saw
Whose steps of light ascend from chaos up to
God.

God's "theme" is *man*; His "fugue" the Uni-
verse.

Man Christ-exalted to its throne of Power.
Poor, purblind Science backward reads the
"score"

And comprehends naught but is seen by it!
Yet, ages since old Egypt reached the height
Of loftiest dream of this, our boasted age,
And left the record on her sands in stone.
Has modern science compassed vaster truth
Than sits enshrined in her great Pyramid?

Religion, dost thou well to start, alarmed
For truth, thy measuring reed hath proved di-
vine.

Remember Uzza's fear of stumbling kine,
Nor dare again to tremble for the Ark.
Pluck human dogma from thy cherished creeds
That draw again the veil Christ's death hath
rent.

Hear the deep utterance from the Presence
there—

"Between the cherubim I'll talk with thee."

Remove the veil; with Science enter in;
And, panoplied in Truth, come forth without:

There, in the outer court, together gaze
On the whole structure of the Universe.
So shall a full-orbed vision dawn on both ;
So shall the curve and angle meet and kiss ;
The circle of God's perfect law be squared.
Then—ancient prophecy at length fulfilled—
Ye'll know yourselves to be not *many*, but *ONE*.

"And lo ! the glory of the cherubim
Went forth and o'er the threshold stood, while
 sound
Of wings was heard through all the outer court."

Upsoaring world, seek light. The day draws
nigh

When earth shall thrill with such divinity,
That dull and most unwilling ears shall hear
The quick pulsations of Creation's heart.
When the glad cry shall rend the patient
 heavens—

"The kingdoms of this world are now become
The kingdoms of our God and of His Christ.
Behold, I quickly come !" O Earth, respond,
"Amen ! amen ! Even so, Lord Jesus, come !"

J. G. S. T. H.

THE EVOLUTION OF HOMES AND ARCHITECTURE.

EVOLUTION is the favorite watch-word of modern philosophers. We are told how man *descended* or *ascended* from the monkey, how learning, civilization, religion, everything has developed by this selfsame process. The light of the theory is thrown on every subject of human affairs ; it is the key that fits every lock, and the answer to every puzzle. By one class, evolution is condemned as the head and front of infidelity and every sort of radicalism, while others laud it as the first great truth the world has ever known. The common opinion appears to be—and the writer shares it—that evolution is a theory yet to be proved, with much to be said for, and some things against it, and great possibilities of being right in general, but wrong in some particulars. But, be this as it may, evolution offers a broad field for pleasant and profitable speculation. I have often amused myself this way, by tracing the process by which man evolved his present comfortable habitations and surroundings, from the possibilities of the natural world that environed him in his pre-historic infancy.

Fancy the primitive man, naked, houseless, homeless, fireless. He has within him "the power and potency" to acquire every form of comfort and luxury, but as yet he knows it not. After food—which the wild creatures and vegetation of the forest supply him—his first desire is for a home, or rather a shelter from the pitiless storm and the scorching sun. At first he imitates the wild beasts he hunts, and takes refuge in a cave, or under the

thick boughs of some umbrageous tree, or perchance even in its hollow trunk. These are the first habitations, and by degrees—as the rude hunters who own them, leave their wives and their children there, while absent on the chase or foray, and adorn them with their few implements and possessions—they become in some measure even homelike.

No doubt, as this pre-historic being roamed the woods, he often gazed and pondered in wondering horror, as the instant flash of the lightning lit up the dark aisles of the forest, or the dead oak tree blazed beneath the electric stroke. To his benighted intellect, fire was a god or a demon ; something to be worshiped and feared, but not used. But one day while fashioning some rude stone implements, the sparks that fly from the clashing flints ignite the dead leaves around, and he discovers with mingled joy and fear that the demon can be called up at will, to be his friend and his slave. But as yet he knows not its uses, and with breathless interest he experiments. He feeds the fire with grass, leaves, and sticks, clapping his hands with childish delight, as they crackle and burn and crumble to ashes ; while the blue smoke curls upward through the green leaves of the forest as though seeking its blue friend, the sky. It is a cool morning, and he enjoys the genial heat with chuckling delight, until a too near approach makes him withdraw his hand with a howl, and teaches him that the demon, though a slave, must be treated respectfully. Still

he feeds the flames, and still he experiments. He throws in stones, and wonders to see them change color and crack, but not turn to ashes like the wood. He tries a bone—it is calcined to powder, but does not act the same as either the stick or the stone. Thoroughly excited now, he snatches up the half-eaten leg of venison he breakfasted on that morning and thrusts it into the blaze. But the savory odor that soon salutes his nostrils is too much for his Alimentiveness, and plucking it from the fire, with true childlike instinct he applies it to his lips—the taste is delicious, and he eats his first meal of cooked food. The demon once enslaved is never again to be free—except in moments of rash rebellion—but shall always remain the chief joy and comfort of the human home.

But caves and hollow trees are scarce; and the boughs of trees are but poor shelter even in summer, still worse in winter. So as human beings increase on the earth, the necessity for artificial habitations becomes apparent. But where shall the man look for patterns and instruction; he knows nothing of geometry or architecture? Where, indeed, but to the homes of the instinct-inspired creatures around him, and to the rude natural shelters he formerly used. One of the first things that he perceives, is that most creatures are provided with a sort of *home* which they carry everywhere. Thus the oyster and the snail have their shells, the armadillo his coat of mail, and the ram his woolly fleece, which, to a greater or less degree, protects each one from enemies and inclement weather. The savage looks and thinks; it is his first idea of clothing, or a house in its most convenient and portable form. With the selfish instincts of his nature fully aroused, he strips the beast of its skin and the bird of its feathers. Feeling, too, the active germs of the love of beauty and praise, he begins to dress for ornament as well as use, and strings of teeth, and shells, and gaudy plumes, are added to his wardrobe. In his wanderings, he often finds it convenient to

make a shelter by stretching his skin-robe or mantle over trees or bushes and crawling underneath. This idea developing, and bearing fruit, becomes the tent or wigwam, which is nothing more than *a kind of outer garment*, to be worn on extra occasions like an overcoat or shawl.

But as individuals came to possess a property-right in portions of the earth's surface, a demand for more permanent homes arose. These were built of more durable materials, so that they might last longer, and be more capable of resisting hostile attacks; for, when a man lives always in one place, his enemies can easily find him out. Probably the first permanent home, artificially made, was a rough hollow barrow or cairn of turf and stones, after the model of the ancestral cave. Apparently the nests of birds suggested the erection of huts within the branches of trees, and finally the building of structures elevated on piles instead of trees. The building of these stilted structures over the shallow waters of some lake or pool afforded still greater protection from beasts and men, and was a favorite practice. Some savages still live in trees, and others dwell in pile-mounted huts. Thus we see that man brought the three kingdoms—animal, vegetable, and mineral—into subjection, and taxed them all to furnish building materials and provide him with habitations. But wood, stone, and earth were then, and have ever since remained, the favorite materials for constructing homes.

As men improved in the art of building, they combined these three classes of materials; thus stones were used for walls, various earths for cements to bind these stones together, and wood was used for rafters, beams, and floors. Then for the first time house-building proper began. Its final outcome was to be the grand series of palaces, temples, and public buildings that now adorn the world.

Man, as a builder, appears to have always had two natural models before his mental vision—the rocky cave and the

branching tree—thus copying after the first shelters of the race. It is curious to trace the imitation of nature in all the grand structures of the present. Look at that great gothic cathedral. What is it but a vast craggy hill of rock? Go into the mountains and you will see that the Divine Architect there erected the models long before the human architects were heard of. Arch and angle, buttress and battlement, wing, tower, and spire, all are there; and the ivy grows as greenly on the walls of this temple of nature as on the walls of the cathedral of man. But let us within. Are the pillars that we see really such, or are they the stalagmitic columns of a cavern? Is the sunshine tinted by stained glass, or by the gorgeous foliage of autumn-dyed trees, seen through the natural windows of a cave? Aisle and altar, chancel and chapel, niche and nave, sculptured walls and vaulted ceilings are common to both. Men name rocks and caves after castles and cathedrals; they had better name castles and cathedrals after rocks and caves.

How the lofty tower symbolizes the hollow tree-stump that sheltered the savage. Its foundations are sunk deep in the earth, like the roots of the tree; the gaping fissure becomes the arched gateway; knot-holes change to loop-holes and windows; the jagged and broken top becomes the notched and embrasured battlement, and men climb the winding staircase of the tower instead of woodpeckers and squirrels running up the ragged interior of the tree.

In ships—those floating houses of the sea—the same imitation of nature may be observed. Water has always had a strange and sweet fascination for the human being, and we can picture the aboriginal savage, wandering by the side of some woodland stream, watching the straws and acorns and driftwood floating down the peaceful current. Childlike he amuses himself by tossing in chips, and seeing them whirl down the eddying pathway. But humanity is ever adventurous, ever seeking the beyond, and he

wishes to explore the unknown land across the stream. The frog and the otter have taught him to swim, but the laziness of the savage is too strong within him, and he does not wish to struggle against the tide, so he sets his wits to work to devise some other and easier method of crossing. Thus if Necessity is the mother, Indolence is the father of Invention, and Opportunity its birth-place. Opportunity is not wanting here, for a floating log has stranded at his very feet, although, as yet, the thought of using it has not occurred to him. But suggestion comes also, for as he looks he sees a squirrel floating down stream on a chip. His bushy tail, sail-like, expanded, catches the freshening breeze, and he soon makes the opposite shore and scuds merrily away in the woods. The spell is broken! With a shout the log is pushed off, and with mantle extended to catch the wind, and with paddling hand and feet for oars, he sails merrily across. That first trip contained the germ of all future navigation. The fish, the frog, the water-spider on his curled-up leaf, the nautilus, and the ship-like swan, have all been man's teachers in the theory and practice of subduing the watery world.

In furniture, too, we have copied from nature. Instead of the mossy bank we recline on the cushioned divan; chairs, as seats, take the place of the stump or stone; we dine from tables, not from flat rocks; and we have reproduced the green of the grasses, the brown of the dead leaves, and the form and coloring of the flowers in our carpets.

And so it seems, that even as God in framing this universe—having no other pattern—made all things to resemble Himself, everything in nature suggesting or symbolizing something in Him; so human beings, in the absence of other models, have made everything to imitate the divine structures.

We imitate our Father's acts;
Our minds repeat His thought;
We copy—else we mar—His works,
And teach what He has taught.

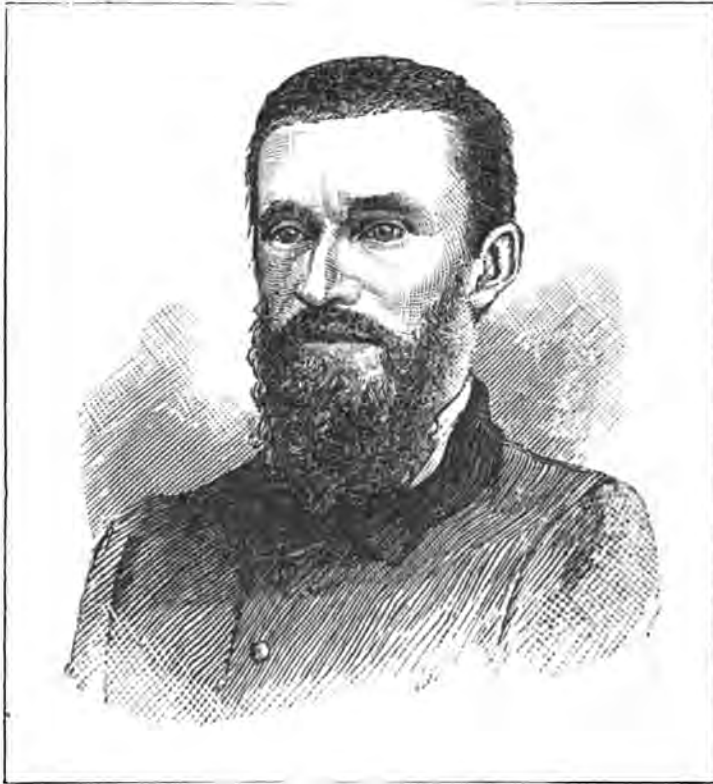
J. WILLIAM LLOYD.

CHARLES J. GITEAU, THE ASSASSIN.

WE have seen several portraits of this man, taken in different attitudes, and all represent him as having a broad and comparatively low head. The engraving which we present is a very favorable representation; we mean that most of the portraits represent him as

shows the head to be very massive at that region.

His Cautiousness is evidently large, and also Secretiveness, hence he is cunning and deceptive, and very watchful as to danger or interference. His Combativeness and Destructiveness qualify



more of the ruffian, with less dignity and stability than this portrait appears to give him. The wideness of the head between the ears and backward, above and behind them, shows a very broad, animal development. Directly upward and backward of the top of the ear is the location of Combativeness, which seems to be enormously developed; while Destructiveness, immediately above the opening of the ear,

him to be quarrelsome, severe, and inclined to dispute and wrangle whenever his operations are disturbed by others. He has large Approbativeness, hence is anxious to make a sensation and be conspicuous.

Most of the photographs we have seen, represent the head lower than the picture before us, but this is low in proportion to the width, and the chief height of the

head is in the region of Self-esteem, Approbativeness, and Caution. The temperament indicates nervous excitability, restless impetuosity, positiveness, considerable endurance, and the desire to be master of his time and of others. It is not easy for such an organization to settle down into the ordinary channels of regular and orderly deportment. His desire for notoriety, which is much aided by a feeling that he is able to give advice and take influential positions, is the result of his great pride and ambition. Then his Combativeness and Destructiveness give him, in conjunction with his irritability, a tendency to push himself anywhere and everywhere whether propriety would indorse his course or not. This would be shown by the many positions he has assumed, as a revivalist, a public speaker, as a lawyer, and in pretending to be connected with eminent men in political work, and latterly claiming an important foreign mission.

These things tend to show a warped, erratical, unbalanced organization without that extreme of mental disturbance which is properly denominated insanity.

CHARLES JULES GUTEAU is of French descent, as his name indicates, and was born about forty years ago in Freeport, Illinois. His father, J. W. Guiteau, was an old resident of that place. At an early period in his life he became interested in the subject of "Perfection," and lectured on it extensively. Subsequently he joined the Oneida Community with his wife and the younger children of his household, but after a brief experience therein returned to Freeport, leaving Charles, then about fifteen years old, with the Community. His career in Freeport from that time to his death appears to have been one of usefulness and respectability.

Charles appears to have developed some eccentricities as a boy. He was to prepare for college, but abandoned the plan soon after entering upon his studies at Ann Arbor. At his father's expense he studied law in Chicago, but showed no steady interest in its pursuit.

About 1870 he married a young lady in Chicago. The union did not prove a happy one, and in two or three years he deserted his wife. Not finding Chicago society after his liking, he came to New York, opened an office, but showed a similar irregularity here as in Chicago with reference to accounting for funds collected, finally landing in Ludlow Street Jail as an embezzler.

He attempted to play the part of a lecturer on religious topics, but only impressed his small audiences with the belief that he was either insane or a knave. In 1879 he published a pamphlet on the second coming of Christ, in which the language is for the most part bombastic and thoroughly illogical.

A great desire for notoriety lies at the bottom of most of his eccentric conduct. It is remembered by many in New York City, that in August last Guiteau delivered a campaign speech here, which was published in some of the newspapers, mainly on account of its oddity. He made certain oratorical efforts in other places, but does not appear to have found the appreciation he desired.

According to the terms of a letter written by his father in 1873 to Mr. John W. Guiteau, a brother of the assassin, Charles was then a man at once "stubborn, willful, conceited, and at all times outrageously wicked, apparently possessed with the devil," and likely to become a "fit subject for the lunatic asylum."

The brother above mentioned describes him as "the personification of egotism and obstinacy," and "lazy beyond degree."

At forty years of age, this man shows the development which results from the association of inherited peculiarities of mind, with a long period spent without definite aim and without earnest and steady industry.

How he shot the President as that gentleman in company with Secretary Blaine was entering the railway depôt at Washington on the morning of July 2d, has been described by the newspapers with the utmost minuteness, and need not be repeated here. The murderous act had been contemplated for days, and a deliberate plan arranged for its accomplishment. Guiteau's own statement shows that in this plan he exhibited all the skill, calmness, and precaution of one who deemed himself fully justified in his course. The idea of killing the Presi-

dent as a man who stood in his way to office and fortune fully possessed his mind.

The probable consequences of so atrocious a crime in embarrassing the affairs of State, and in bringing him to speedy punishment, do not appear to have occupied his attention in a way at all influential; he thought mainly of making his murderous work sure. The method he pursued was that of intelligence, the purpose merely was that of insanity—or of a man wrought up to a pitch of passionate desperation.

A TALK WITH OUR GIRLS.

NOW, girls, I want to tell you how my heart yearns over you, and how I would fain, if I could, throw around you a protecting arm, and keep you uncontaminated from the world. How gladly, too, would I, if I could, win back to the paths of purity and light, every one of the straying, erring ones of our sisterhood. To-night, there stands at the door of our hearts a stern questioner, who demands to know how well we are fulfilling our mission. Are we bending all our energies for the advancement of the right, or are we slowly drifting with the current toward the rocks of sorrow and despair? What would we think in passing by a lovely garden, where the rich mold was thrown up in perfect shape ready for the seeds and bulbs, from which should spring the beauteous shrubs and flowers, were we to see the gardener scattering with a ruthless hand the seeds of the thistle and the burdock and the roots of the poison ivy? If we were to say to him, "Friend, why do you thus scatter seeds that shall cause you so much trouble and annoyance in the future?" and he should answer, "What is more beautiful or fragrant than the blossom of the thistle or burdock, or what vine is more delicate than the ivy you condemn?" would we not say, "The blossom, indeed, is fra-

grant and beautiful, but what is the *fruit*?" an obnoxious, prickly pest, that becomes a nuisance and burden—a plant shunned and loathed by all; one that from its heart will send forth seeds that shall spring up again and again, until the ground is thoroughly overgrown with the obnoxious stuff. The ivy, too, with its delicately fringed leaves of dark green, is, though pleasing to the eye, a poison to the touch. There lurks within its veins the power to cause the tender white hand that comes in contact with it to swell and blister, and to lose, temporarily at least, its fair proportions, and become painful and repulsive. It takes but a few minutes to sow these seeds; but ah! how many weary days must be spent in exterminating them, after they have once taken root and settled their fibers deep in the earth.

If it would be strange to see a gardener thus carelessly sowing for himself hours of wretchedness and toil, what must it be to see the beautiful human heart that is capable of producing exquisite blossoms of faith and love, and the glorious fruits of righteousness, filled with seeds of envy, malice, and anger, and roots that shall send forth their poison throughout the life of the owner? Girls, do you realize that, as you sow, so shall you reap? Should some friend say to you

that "he who now stands by your side in all the flush and glory of young manhood, would one day lie upon the sofa in your parlor a bloated wretch, raving in the wild delirium of fire kindled by the torch of Rum!" you would laugh them to scorn; but such has been the fate of many, and such may be your fate, if you tamper with the tempter now. I saw, not long since, a fair young girl passing through a crowded street, apparently leaning upon the arm of a young man, but in reality steadying his form, that, despite all her efforts, would sway to and fro, while his maudlin talk and silly laugh betrayed him to the passers-by as an intoxicated youth. I saw the hot blood mount to her cheek as she met the pitying glance of a friend, and I wondered if ever again she would accept his company. A girl who will accept as her escort a young man whom she has any reason to suppose of loose morals or dissipated life, voluntarily lowers herself to his level; and how often do we see her not only accepting his arm for a promenade, but also taking refreshments with him in saloons and restaurants, and sometimes even holding the wine-glass temptingly toward him, coaxing (if by chance he hesitates) with all the coquetry and fascination in her power, until he takes the poisoned chalice from her jeweled fingers, and drains its contents; sometimes, alas! a serpent springs from the dregs of the glass, and planting its fangs in her own bosom, *stings her to death*. Why is the tender chivalry of the past so seldom seen now? Why is the rude jest or the profane word not checked now at the approach of a woman? Because woman has lowered her own standard of excellence; because she is content to sit and gossip with men who use these terms in their conversation; because the shafts of her wit and satire are often joined with, instead of being directed against, such coarseness and vulgarity. Have you never held in your hand a plum, and noticed the delicate bloom upon its surface? Then, having passed your hand over it, have

you not seen that bloom disappear, never to return? And do you not know, dear girls, that over your young hearts there is a bloom of richer hue, and far more priceless value, than the velvety blush upon the plum; and that if it be once rubbed off, it will not return? The priceless gem of virtue, if carefully guarded, will shine on and on through the fierce fires of poverty and affliction, or the temptations of wealth and luxury with undimmed lustre, reflecting from its pure center rays of life and beauty that shall gladden and bless not only its possessor, but all who shall come within its reach; but if the gem be once handled by coarse and unprincipled hands, if once its beauty be laid in the dust, its brightness and lustre are all gone, and it becomes only a coarse stone, possessing no beauty or value, but rather being a dead weight, dragging its unfortunate owner down to the dark waters of despair. No power can bring back its lost charms, save the blood of the world's Redeemer, which can make white the foulest heart; but better far is it to keep unsullied the pure young heart, than to plunge it into such depths of black darkness and crushing sorrow. It is woman's prerogative to *ennoble*, not to lower, the mind of man. She may, if she will, sway a scepter that shall command the respect of those by whom she is surrounded, and before which the libertine and profligate should not dare to lift their eyes. I have seen, and it has gladdened my heart, even a young girl flash back a withering glance of scorn and contempt upon the man who dared in her presence to utter an impure sentiment. This is our right; and just so far as we fail to trample beneath our feet the things of vice, just so far do we fall short of accomplishing the grand and glorious destiny for which we were created. A woman ought to be the good angel; but when she stoops to be the wily *temptress*, angels may well weep at the sight. One of the great evils of our social life to-day is what is commonly called "flirtation." This exists in many forms — the waving of handkerchiefs,

flirting of fans, and numerous other devices, to attract the attention of the opposite sex. It has always been a matter of wonder to me why a young and pretty girl should so far forget her modesty and maidenly reserve as to force herself thus upon the attention of those who, though they may return the flirtation, or even commence it, in their own hearts have little respect for the girl who seeks their attention. Girls, do not, I entreat you, indulge in this habit. There are plenty of ways of obtaining an honorable introduction to those with whom you wish to form an acquaintance, without resorting to this silly art; and every time you indulge in it, you throw open some avenue whereby you may be hurt by insult. You willfully thrust yourself upon the notice of men, many of whom are only too ready to find an opportunity to break the charm of virtue, and lay the honor of womanhood in the dust. Far better is it to be wary in seeking the acquaintance of strangers, and slow in forming attachments, without weighing well and carefully the motives that govern and control them. There are some natures whose purity and goodness are stamped upon their faces; but there are many others whose smile-wreathed lips and sparkling eyes, are but masks to hide the bitter and relentless serpent that lurks in their bosoms, ready to spring out and plant its cruel fangs in the heart of any loving, trusting girl who grants it an opportunity. "To such men every pure soul is a perpetual reproach, and must be sullied. Such an one is never inert; the less active he seems, the more he is likely to be insidiously at work to ruin." One-half of the so-called "society men" are nothing but spoiled dolls, who would form but a poor support for a woman to lean upon in an hour of trial. If you really can find nothing exceptionable, after carefully looking at them with all the thorough scrutiny your society acquaintance permits, then, if possible, ascertain what their *home life* is.

There are young men who in the round of society are termed "splendid fellows,"

whose merry jest and soft, dulcet tones would enliven and entertain a large and brilliant company, but who would enter their own homes with a dark, frowning brow and angry exclamations. Their soft, musical voices, which in the public drawing-room were so sweetly modulated or so bewitchingly tender, were raised in loud and angry tones when at the home-hearth; and sometimes the very lips which seem formed only for gentleness, open to emit such fearful blasphemy as to make one shudder. If the fair young girls, who perhaps but a few hours before had listened to the notes of soft and pleasing flattery, and had hung upon the arm as if in enchantment, could see the mask withdrawn, and behold their idol as he scatters disorder and dismay through his own household, I think the spell would be broken. Girls, would you wish to marry such a man—would you wish to unite your life and fortune to one who would prize you highly so long as youth and beauty lasted, but who, when sickness robbed your cheek of its bloom and your limbs of their elasticity, would leave you to combat alone with the adverse waves, and seek the side of the enchantress? To-night he stands by your side, his arm encircles your waist, he dares even to press a kiss upon your lips, and you allow it, believing him to be your own true lover. He tells you that no eyes are so brightly blue, and no form so perfect as yours. He calls you his lily and pride, and your heart beats high with gladness. You lay your head upon your pillow, and dream of him; morning dawns, and brings his image again to your heart, and you think of him constantly and long for the time to speed on his next visit to you. But how is it with him? Why, he left you that eve, and, when he had reached his room, threw himself lazily into his easy-chair, and smoked a cigar, and while the blue wreaths ascended, he soliloquized thus, "Yes, she is a pretty little thing; but pshaw! she is not the girl for me." The next eve, he sits by the side of a brunette. He praises her glorious dark eyes and

raven locks, and calls her his "gipsy queen," and doubtless ere he visits you again, he will have called upon other girls and told them the same story, varying it only according to their several qualities.

Do not think me a cold misanthropist, who has been disappointed in life, and therefore believes every seeming good to be an evil. Not so. I do sincerely thank God, that in this beautiful world there are many grand and noble men, whose pure, unsullied lives are a blessing to themselves and to all who know them; men who carry into their home-life the gentleness and courtesy so pleasing to the world; who, when they stand at the altar vowing to love and protect the gentle being who commits her destiny into their hands, regard it as a sacred trust, and whose spirit of love and chivalry are quickened into greater activity when the loved form is wracked by disease or the furrows of age or care are seen upon the dear brow. Such men never speak lightly or sneeringly of womanhood, in whatever form it may appear. Happy is the maiden who secures such a companion for her life-path. But while there are many such, yet there are also many others who perhaps seem more fair, but who in reality are unworthy of a pure maiden's notice. Girls, if you have good, kind, manly brothers, you should be justly proud of and thankful for them, for they will form a great safeguard around your pathway. Listen attentively when they point out to you those among their associates whom they deem unworthy of your society; and remember that they have a far better opportunity than you have of finding out masculine faults. Be not in haste to take upon yourselves the stern and arduous duties of wife and mother; far better prepare yourself for those duties by the most careful education and training of all your powers. Study well the laws that govern your being; learn something of the wonderful and complex mechanism of your frames, and do not despise the cultivation of every talent that can bring comfort to your homes.

Even if you are never obliged to labor, you should so thoroughly understand different branches of labor as to be able to teach others how to perform it, thus preventing many annoyances; for if you have the true instincts of a woman, you could not sit down undisturbed to a poorly prepared meal or enjoy the untidiness of an ill-kept sitting-room. Take a long course of home cultivation, and then, when your mind and body are matured, and your judgment also, you can enter with confidence upon the sacred duties of a wife and mother. You have really no right to take upon yourselves these duties without preparation. The unborn nations that are to people the world demand that our wives and mothers be educated for the positions they occupy. But if no such holy duties come to bless your lives, your education will not be lost; you may show to the world "how grand may be life's might without love's circling crown."

ETTIE H. DAVIS.

THE BEST PART OF MAN'S LIFE.--It has been my lot for many years to assist in making laws for the government of this country, but the more I consider the problems of social and political arrangement, and the forces that most influence and control it, the less do I find the statute books have to do in the regulation of the actual lives and occupations of the people. I mean how few of these occupations which engross the greater portion of our time, cause our labors and anxious considerations, in which we are most deeply interested, spend most of our money and bestow our powers in every way, are those to which any statute law or constitution compels us. The best part of man's life is in the world of his natural affections, and that realm has laws of its own that neither know nor heed king, kaiser nor president, nor reichstags nor congress, and are deaf even to the voices of shouting popular majorities, but heed and obey rather the gentle voice of woman and the cry of helpless and feeble childhood.

T. F. BAYARD.

THE QUEER FRIENDS.

AN OLD GERMAN FABLE.

A RAVEN was sitting high up in a tree, when there came along a bird-catcher, who cunningly spread his net upon the ground, strewed a little corn in and around it, and then went away. The raven silently watched the man's operations, and remained on her lofty perch to see what would happen. Soon a flock of wild pigeons approached and settled down. They perceived the corn and commenced to eat it greedily; but all at once several of them found themselves caught in the net, and they fluttered about, seeking vainly to free themselves. A good thought occurred to one of them, and she expressed it in this way: "It does not help us at all to flutter around so; now let us all try to fly up at the same time. Perhaps we can then carry the net with us." Her fellow-captives all assented to this, and at a signal they spread their wings and rose from the ground, carrying the net with them. In this way the pigeons flew some distance, and settled down in an orchard, but still in the meshes of the net.

All this time the raven had kept a close eye upon the pigeons, and now commending them for their wisdom in acting so much in harmony, he flew also to the orchard and perched himself in a tree, whence he could mark the further conduct of the imprisoned birds. He heard them consulting how they should get out of the snare, and one of them offered to call a mouse, an old friend of hers, who lived in one of the trees near by, and ask her if she could not help them. As nothing better was proposed the mouse was called. She happened, luckily, to be at home, and ran to the pigeons, and at a glance understood their situation. Going at once to work on the net with her sharp teeth, she speedily gnawed it in several places, so that the pigeons could get out.

"Well," thought the raven, "a friend is certainly a great help in time of need,

and I must find one. Perhaps the mouse will be such to me." Full of this idea he flew down and called the mouse; but when she had come out of her hole and perceived the large black bird, she was much frightened, and ran back. The raven entreated her to listen to him and be his friend. "Why can we not be friends," he said, "just as much as the pigeons and you are friends?"

"It is impossible," answered the mouse. "because in a little while your natural appetite for my flesh would make you forget all about friendship, and you'd eat me like any other mouse."

The raven earnestly promised that he would not do anything of the kind, if he had to starve, and at length overcame the fears of the mouse so that she ventured to come near him, and agreed to be his friend. As time went on the raven and mouse grew quite fond of each other, and the raven made a home for himself in a tree of the orchard. But the bird found the place too much exposed for his safety, because there were huntsmen passing by frequently. So he asked the mouse one evening if she had any objections to leaving that place. He knew of one more retired in the woods, near a pond, where he had an acquaintance, a turtle, who was a good fellow. The mouse said she was very willing to leave the orchard because a cat had lately visited it, and had watched her when she was out looking for her dinner. The raven then gripped the mouse by the tail and flew with her through the air and into the wood, where he soon reached the pond, and set down the mouse by a tree. A turtle crawled out of the water, and appeared greatly pleased to see the raven, and welcomed the mouse to her new home. In a few moments the nimble little animal had found a good spot for her house, and her teeth and claws soon made a snug and safe retreat for herself.

These three strange associates had lived a while together in intimate companionship, when one day they were disturbed by a singular occurrence. They were sitting side by side chatting on the ways of the world, when suddenly a deer came running by, and stopped at the pond to drink. Then the turtle jumped into the water, the mouse crept into her hole, and the raven soared up into a tall tree. Peering around in all directions he could not see any cause for fear, so he flew down and said to the deer, "Don't be afraid. There's no danger. I have never known a hunter to come into this part of the forest, and if you like, you may stay here. Fine grass grows around the pond, and the water is fresh, and I have some friends here who I'm sure will not refuse to give you a welcome." The deer was grateful for the raven's kindness, and though he thought the mouse and turtle were strange associates for him, made up his mind to stay there, and so he did, and in a short time became warmly attached to them.

One evening the deer did not come home at the usual hour, and his three friends felt anxious about his safety. The raven flew away to find out what the matter was, and in a little while discovered the deer lying in a snare. He at once returned to the pond and told the mouse and turtle how the deer was caught, and consulted with them as to what should be done.

The mouse spoke up and said: "My friend with the strong wings, carry me quickly to him and I will gnaw the net into shreds." The raven then picked her up and flew swiftly to the deer, and as soon as she was set down the sharp little teeth went to work on the cords which bound the deer. While the mouse was thus occupied, who should come up but the turtle. "What are you doing here?" asked the raven, scolding him for his want of wisdom. "Where will you go if the hunter should come? I fly away; the deer runs off swiftly, and the mouse conceals herself; but what can you do? Your pace is so slow that you can

not save yourself, and I am not strong enough to carry you."

Even while the raven spoke the hunter came to see if there were anything in his snare, and when he saw the horns of the deer he was much pleased, thinking he had secured a fine prize. But before he could come up the mouse had bitten through the cords and the deer sprang away into the brush, the raven mounted up in the air, and the little mouse crept to a place of safety, while the poor turtle stood trembling in every limb. Greatly vexed that his expected prize had given him the slip, and being made very angry by the broken state of his net, he picked up the turtle, wrapped the remnant of the net around him, slung him over his shoulder, and started off.

The mouse had seen this and called the raven and deer quickly to her, and held a council on what should be done for their unfortunate comrade. The raven advised that the deer should run in advance of the hunter and lie on the ground as if he were dead or badly hurt. "Good," said the deer and mouse, and off jumped the deer to act upon the advice. The hunter on his homeward way sees the deer stretched out on the ground, and throwing down net and turtle, hastens to secure the game; but ere he is upon it the animal springs up and runs slowly and laboriously a short distance and stops as if wounded and exhausted. The hunter follows, and is close to the deer again, when it starts to its feet and shuffles away again. This is repeated several times, until the hunter has been led a long distance into the darkening forest. Meanwhile, raven and mouse have been busy over the turtle, and ere long the work of releasing him from the net is done, and the raven's hoarse cry signals to the deer that all is well. Then the deer disappears in a twinkling from the eyes of the astonished and tired hunter, and rejoins his three friends. All now return to their quarters by the pond, and joyfully congratulate one another for the friendship which has proved so helpful in time of danger.

H. S. D.

LOOKING VERY WISE.

CONCEIT, faster than wisdom grows.
 I know a simpleton whose eyes
 Look out from shallow brows :
 Yet no one else can look so wise,
 And know so little as he knows.

With arms akimbo, see him pose
 His corpus near the shelves of books,
 And twig the angle of his nose.

To be as gifted as he looks,
 One must know more than mortal knows.

His hair erect, seems to disclose
 Astonishment and fright and pain,
 Though coarse it long ago arose
 And never ventured down again,
 Scared by conceit that little knows.

GEORGE W. BUNGAY.

THE DEAD-POINT IN MIND TENSION.

IT is a common subject of marvel that criminals in presence of immediate execution are usually self-possessed, and often exhibit singular composure. The doomed creature sleeps through the night before his violent death, and rises composed to pass through the ordeal. The exceptions to this rule are few, and there is no reason to suppose that the individuals who display greater emotion, or who are prostrated by the agonizing prospect of death, feel their position more acutely than those who preserve control of their demeanor. It is a prevalent but groundless error to suppose that the state of the mind in which most capital offenders meet their doom is one of scare or paralyzing amazement. They retain every faculty, taste, consideration, and even fancy. They frequently give tokens of especial thoughtfulness, and are punctilious in the observance of rules and the adoption of measures to minimize their own pain, and the trouble and sympathetic suffering of those by whom they are surrounded, or who will be left burdened with their memories. Mentally and physically the criminal, during the last few hours of his life, in the immediate presence of a cruel death, is self-possessed and tranquil. His pulse is even less disturbed than those of the officials who are compelled to take part in his execution. Why is this? The answer will be obvious on reflection. The mind has reached what may be designated a "dead point" in its tension. The excitement is over, the agony of anticipation, the trembling doubt between hope and fear of escape has ex-

hausted the irritability of the mind, and there is, as it were, a pause, an interval of passive endurance between the end of the struggle for life and the bitterness of remorse and agony of disappointment which may begin at death. In this interval the mind is released from the tension of its effort for self-preservation, and almost rebounds with the sense of relief that comes with certainty, even though the assurance be that of impending death. In the pause there is time and opportunity for the recognition of surrounding circumstances which have been, as it were, overlooked in the yearning for life.

The clearness of mental vision, the cognizance of detail displayed at such a moment, are remarkable, not only on account of the strange circumstances under which they occur, but in degree. Men and women who have for some time previously exhibited no trace of delicacy or refinement exhibit characteristic traits of thoughtfulness. They are, so to say, lifted out of themselves and placed in new conditions calculated to awaken feelings of courtesy, which seldom fail to respond. The mental state of a criminal during the hours preceding execution presents features of intense interest to the psychologist, and, rightly comprehended, it is to be feared they would throw new light on the supposed preparation these unfortunate persons evince for a fate which, being inevitable, they at the final moment are able to meet with a composure in which hypocrisy or self-deception finds the amplest scope.—*London Lancet*.



HOW CHILD-HABITS ARE FORMED.

WE are thinking just now of the *bad* habits which distinguish some children from others, and which, to a greater or less degree, mar the characters of all our little friends. Unquestionably the law of heredity has as much influence in this as in other directions; and when this influence is unfavorable, and is not supplemented by the most careful, painstaking, and incessant teaching on the part of parents, relatives, and visitors, it is not strange that the victim wins the appellation of *l'enfant terrible*. We wish here to emphasize the fact—and weighing carefully our words, we declare it to be a fact—that, in a very great degree, the naughtiness of the terrible child is the product of the most deliberate and painstaking instruction on the part of its parents and guardians.

It goes without saying among horse-breeders, that a colt at any given age is precisely what its birth and training have made it. Can any one give a rational explanation why this is less true of the little human colt? The child's nature is a matter of inheritance, of its surroundings, and, throughout its career all the way along, of what it sees, hears, and finds to *imitate*. At every stage in life we are sensitive to praise or blame; and, according to age and various circumstances, we are all more or less governed by these motives. We sometimes see an individual who seems to be an exception to this well-known rule—who appears even to

seek blame and to forbid praise by the careful avoidance of everything praiseworthy. God pity him and his parents and the community and all other contributing influences! But this seldom occurs in early childhood. A child's sunshine and shadow are the praise and blame it finds from day to day. And what a sunny beginning he has! How he is praised and exalted on every hand for simply being what he could not help—a baby! Ere long he begins, at first in a blind sort of way, to learn the meaning of this adoration; and the time comes when—looked at admiringly with praise-beaming eyes, and hearing the endearingly silly expressions—he laughs and crows outright, and soon comes to look forward to these exhibitions. As he grows stronger and finds that he can use his hands and feet, he strikes and kicks helter-skelter; and if papa's or mamma's nose happens within range and receives a good blow, the baby is cheered with a will. By-and-by he has become somewhat definite in his aim, and, after numberless experiences in having noses tucked into his paw to clutch and pull, and finding that it elicits praise, that it is “cunning” and evidently makes his friends happy, he begins to *aim* for noses, whiskers, ears, ear-rings, hair, and often inflicts severe pain. Even then he finds that he has done something nice, and that everybody laughs; and so, step by step, he is encouraged to perform acts

which a few months hence will produce a shocking change and excite anger and exhibitions of anger on the part of his parents, and perhaps bring him a sharp box on the ears. Now he is frightened, grieved, mad—and retaliates precisely upon the same principles adopted by his elders, who have not learned to “turn the other cheek.” Long before he has come to this first bitter experience resulting from his aptness in learning what has been so carefully taught him, he has witnessed exhibitions of temper between father and mother, or between them and the servants, or elder brothers and sisters—and none of these lessons are lost on him.

By less excusable methods he is now taught to lie. Not by his parents? Yes, by his parents—and Christian parents at that; and I am speaking of the rule, not the exception. A child has already eaten too much candy, for example. Mamma had first given him a generous supply, and when that disappeared, had several times produced more, in response to eager coaxing, after she had told him he could not have any more. He is thus taught by his mother that her word is unreliable. Think of what is comprehended in this terrible lesson! He can not trust his mother's word, and he has an example to follow. But he has obtained possession of some more candy, and his father wishes to put it away. Is it taken as if he had a right to do it, and in the right way—in such a way that the child will begin to understand that this big fellow has, somehow, a right to direct his movements? Ah, no! he is now to have from his father a lesson in cheating, stealing, and lying. The candy is snatched up, with an attempt to be quicker than the little one's eyes, is carried behind the back, and when the little precious thing looks wonderingly in the direction in which the hand has disappeared, his mother or father, as the case may be, says, “Gone, gone, gone.”

Many parents treat their babies as a little girl does her doll—as a plaything; and, after having in the manner indica-

ted, or in the thousand similar ways—for the pernicious method exists in endless variety, made the little creature what she is, they cap the whole by advertising her guiltless sins. “I don't know what I shall do with Alice,” said a young mother to her guests, while the little creature looked and listened; “she doesn't mind me at all, and she tells wrong stories, and I have to *hide* everything away from her securely, or she will hunt until she finds it. Why, she will hold an apple behind her, and look me right in the eye, and declare stoutly that she hasn't anything in her hand!” (An application of the lesson referred to above).

This habit of talking about children's peculiarities (especially when these are undesirable) in their presence, is exceedingly unwholesome, and is the surest way to fasten the habit for life. Take the matter of likes and dislikes for certain articles of food, for example. A child from being overfed (and what child is not?) has, at some time when its stomach was over-full, or its appetite was gone from previous excesses, refused to drink its milk, and this may have occurred a number of times. In his presence friends are told that “we can't get him to touch a drop of milk lately; he does not like it, and will not take it. We have tried and tried, but it is no use.” And thus, by the most effectual means, one of the most wholesome articles is banished from his diet. Had no apparent notice been taken in the first instance, and had his diet been judiciously regulated—less frequent feeding, or possibly the skipping of a single meal—he never would have known that he did not like milk.

How common such remarks as the following, and in the child's presence: “If there is any dish of which he is particularly fond, he will make his whole meal on it. Sometimes he won't eat anything but cake.” Again, and in the presence of visitors: “He won't touch his pudding unless it is drowned in butter. He eats more butter than any other two at the table”; or, “His milk has to be made

just so sweet or he won't touch it." The little two-year-old sees some desired object in his sister's hands, and, reaching for it, makes a peremptory demand for it in the shape of a loud bawl. "Let baby have it, Mary—he won't stop howling until he gets it." And then, to a chance visitor, while the baby listens: "Such a trial as he is—he never will be pacified. He always screams like that, and keeps it up until he has what he wants. I must break him of it—but I don't know how to begin." Another poor tired mother says publicly, and in her child's hearing: "He is terribly selfish. He wants whatever he sees any one else have; and if *he* has anything nice, he won't divide it with others. I am so fearful he will grow up selfish—Johnny never was so at all." Johnny, who is likewise listening, may possibly receive a fresh impulse to continue unselfish, along with a lesson in self-conceit, and he learns also that his brother is selfish, and he selfishly determines to excel him in unselfishness, instead of by some brotherly influence to improve his moral state.

Again: "He never comes home with a dry rag on, if he can find snow or water enough to soak his clothes in; and as for dry feet—I have three or four pairs of stockings drying for him all the time. He has a 'cold' about all the time, and seems to delight in it—for the cough-syrup, I expect; he drinks it as if it was maple syrup." She doesn't know, poor woman, that this cough-syrup (boneset and hoarhound candy) are the cause of his "cold's" hanging on so. The excess of carbonaceous material unbalances the circulation, and is a severe tax upon the respiratory organs.

"Just hear that war-whoop," says another fond, but indiscreet mother; "it is impossible to hear ourselves talk. He seems bent upon drowning all voices but his own," and to keep up his reputation the boy fairly out-yells himself. Again: "He has a temper of his own, I tell you!" as if in praise of the violent outburst of temper that was born in him and has been encouraged in a thousand ways

through the ignorance and folly of his well-meaning parents.

It may to some seem unnecessary at this late day to warn against "scaring" children into obedience, but I see the wretched custom practiced to a greater or less degree on every hand. "The old black man" is still "behind the door," or "down cellar," or "in the dark"—to serve no lasting purpose, except to make little children afraid of their own shadow, and later on, skeptical of their parents' truthfulness.

Never should there be even a hint tending to check in the least degree a child's fearlessness of the dark. To engender fear in the little one's mind of the dark or the woods, and then seek to counteract it by teaching him that "God is everywhere to protect from danger," is to engender an artificial disease in order to try a favorite remedy.

Great, indeed, is the pity that some Power is not ever present in our hearts to prevent us from crowding the minds of our children with false impressions which can be removed only along with their confidence in the wisdom and truthfulness of their parents. We might go on almost endlessly enumerating the many ways of forming child-habits. People who would not consider themselves capable of training a *well-born* colt, or a *thoroughbred* puppy, even, and would have sense enough to seek the aid of an expert in such a case, undertake, without hesitation, the training of this too often *badly-born*, and therefore morally and physically diseased and "nervous" child, and reject all suggestions from those who may have had a taste for the study of child-nature and ample time to devote to it. And this may be in accordance with the Divine plan; but parents undertake this work with so little reflection, so little of care and study, so little appreciation of the fact that the little ones are daily receiving lessons that are to gladden or sadden their whole future, that the wonder is not that so many go to the bad, but that so many escape.

C. E. PAGE, M.D.

HYGIENE OF THE EYES.

A SERIES of questions on the care of the eyes was submitted to Dr. E. G. Loring, Jr., by the Medico-Legal Society of New York. Dr. Loring replied in a paper which was published in the *Medical Record*. The first question was, whether bad air has any direct effect on the sight?—the author replies that vitiated air has a specially irritating influence on the mucous membrane of the eye; and that bad air, as a primal cause, may set in train morbid processes which not only will affect the working capacity and integrity of that organ, but may even lead to its total destruction. The second question was, whether size and quality of type would cause disease of the eye? The answer, that the smallest print which a normal eye can readily recognize at a distance of one foot is about one-fiftieth of an inch, and at eighteen inches is about one thirty-second of an inch. The normal eye should not be subjected for any length of time to a type smaller than *this size*, or one-sixteenth of an inch, and it would be better, after middle-life, to employ a type even a little larger than this; but the employment of spectacles removes in a great degree the necessity of a larger type with advancing years. The finer the type the closer the book has to be held to the eye, and the greater the demand on the focalizing power and the muscles that bring both eyes to bear at once upon the print. On the other hand, too coarse type is wearisome to the eye, requiring more exer-

tions of the muscles that govern the movements of the eyes. The distance between the lines should be about one-eighth inch; nearer than this is apt to be confusing, farther apart is also confusing. Heavy-faced type is preferable to light-faced. An almost imperceptible yellow tint in the paper, "natural tint," is very desirable; pure white paper, especially if it has a metallic lustre with bluish tinge, should not be employed. The paper should have a close, fine texture, and be free from sponginess. To the third question—whether too long and constrained attention to one object, without rest or variety, will cause eye-disease?—Dr. Loring replied in the affirmative, and assigns the customary reasons known to the physiologist. Finally, he was asked whether the angle at which the light strikes the eye is important? He replies that the light should not come directly in front; neither should it come directly behind. It should not come from the right side, because, in writing, the shadow of the hand falls across the page; and a moving shadow over a lighted surface not only reduces the quantity of light and leads to a stooping position, but it is also more annoying to the eye than a uniform reduction of the illumination of even a greater degree. The best direction for the light to come is from the left-hand side, and from rather above than below the level of the hand.

THE MOLD OF FRUIT, ETC.

ANALOGOUS to the mold or fungus which, under favoring conditions, will grow on bread, is the mold of fruit and cheese. The cause of the appearance of these molds is the decomposition of the albuminous matter in the bread or fruit, and therefore they indicate decay, and warn us against their use as articles of food. Under the microscope, as we have already learned, many things appear attractive and highly

instructive, which to the naked eye seem repulsive.

The green mold of cheese or fruit, *aspergillus glaucus*, as it is technically named, appears to the unassisted vision as a flossy crust, first white then dark green. The figure *a* supplies an idea of this appearance, while the other figures represent the fungus as it is revealed under the glass.

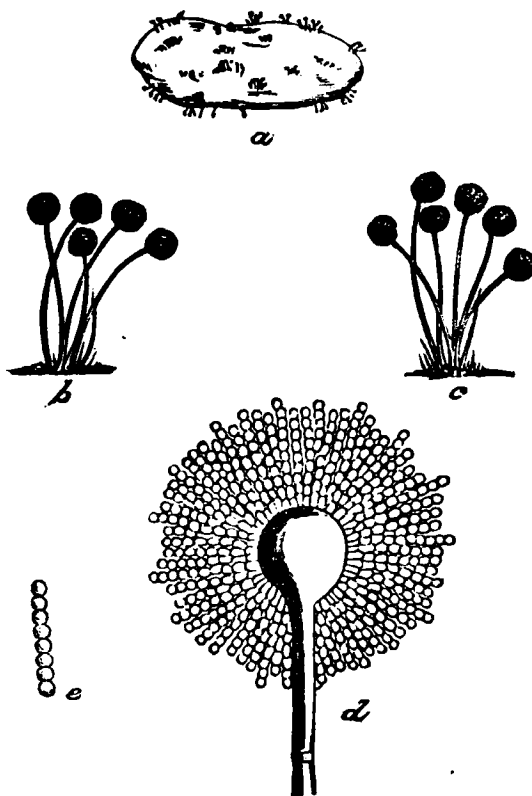
Dr. Bary's researches into the nature

of fungoid growths supplies the following description of them: "Microscopical examination shows that cheese and fruit fungus consists of richly ramified fine filaments, which are partly disseminated in the substratum, and partly raised obliquely over it. They have a cylindrical form with rounded ends, and are divided into long outstretched members, each of which possesses the property of a vesicle, in the ordinary sense of the word; this contains, enclosed within a delicate structureless wall, those bodies which bear the appearance of a finely granulated mucous substance, or protoplasm which fills the cells. The older a cell grows, however, the more watery cavities or vacuoles appear within it.

"All parts are at first colorless. The increase in the length of the filaments takes place through the preponderating growth near their points; these continually push forward, and, at a short distance from them, successive new partitions rise up, but at a greater distance the growth in the length ceases. This kind of growth is called point growth. The twigs and branches spring up as lateral dilatations of the principal filament, which, once designed, enlarges according to the point growth. This point growth of every branch is, to a certain extent, unlimited. The filaments in and on the substratum are the first existing members of the fungus; they continue so long as it vegetates. The parts which absorb nourishment from and consume the substance, are called the *mycelium*. Nearly every fungus possesses a mycelium, which, without regard to the specific difference of form and size, shows the nature in its construction and growth.

"The superficial threads of the mycelium produce other filaments beside those numerous branches which have been described, and which are the fruit thread (carpophore) or conidia thread.

These are on an average thicker than the mycelium threads, and only exceptionally ramified or furnished with par-



MOLDS OF FRUIT AND CHEESE. MAGNIFIED.

titions; they rise almost perpendicularly in the air, and attain a length of, on an average, one-fiftieth of an inch, but they seldom become longer, and then their growth is at an end. Their free upper end swells in a rounded manner, as shown at *b* and *c*, and from this is produced, on the whole of its upper part, rayed divergent protuberances, which attain an oval form. The rays divergent from protuberances are the direct producers and bearers of the propagating cells, spores, or conidia, and are called sterigmata. Every sterigma at first produces at its point a little round protuberance, which, with a strong narrow basis, rests upon the sterigma. These are filled with protoplasm, swell more and more, and, after some time, separate themselves by a partition from the ster-

igma into independent cells, spores, or conidia.

"The formation of the first spore takes place at the same end of the sterigma, and in the same manner a second follows, then a third, and so on; every one which springs up later pushes its predecessor in the direction of the axis of the sterigma in the same degree in which it grows itself; every successive spore formed from a sterigma remains for a time in a row with one another. Consequently every sterigma bears on its apex a chain of spores, which are so much the older, the farther they stand from the sterigma. The number of links in a chain of spores reaches in normal specimens to ten or more. This growth

is shown at *d* highly magnified. All sterigmata spring up at the same time, and keep pace with one another in the formation of the spores. Every spore grows for a time, according to its construction, and at last separates itself from its neighbors. The mass of dismembered spores forms the fine glaucous or dark green hue which distinguishes the fungus. The spores, therefore, are articulated in rows, one after the other, from the ends of the sterigmata. The ripe spores, or conidia, are cells of a round or broadly oval form, *e*, filled with a colorless protoplasm, and, if observed separately, is found to be provided with a brownish, finely-dotted wall.

MALARIA.

THE word malaria is in the mouth of everybody, and one would suppose from the remarks which a hundred different people make on the subject that malaria had a hundred phases and modifications; in other words, that malaria stood as the representative of every form of disease. The meaning of the word is simply "bad air," or air laden with poisonous ingredients which become the seeds of disease in those who inhale them, more especially if the patient be in a condition to develop the poisonous germs.

Some persons appear to be just ready for any provoking cause to produce disease, like a furnace in which all the materials for a fire are laid ready for the match; others, on the contrary, have such a condition of vitality, health, and vigor, that these poisonous germs are not developed. If a fire were to occur in a village where many of the roofs of the houses were of shingles and some were of tin, and the sparks were to be carried like a shower from the burning structure over the roofs of the neighborhood, the sparks alighting on the shingle roofs would find material to kindle a flame, while those falling on the metal roof, finding no kindling material, would die.

A company of persons may go from a healthy region and spend one day in a district where swamps are drying up and roasting in the sun, and three out of four of the party will contract malarial trouble, and perhaps have chills and fever off and on for three years; while the others, being healthy, well-balanced, and harmonious in their functions, will entirely escape. They are clad with the "metal roof," while the others, though passing for healthy, have a susceptibility to malarial poison.

Forty years ago people were troubled to some extent in a similar way, but they had other names for the disorder. Now it would seem that "malaria" is made the sponsor for nearly all the ills that flesh is said to be heir to. In point of fact our large cities are more healthful to-day than they were fifty years ago, though they have largely increased in population. Five times as many people live on a hundred acres of space in New York or Philadelphia now as there did fifty years ago, because the houses are more compactly built, and, instead of being one or two stories, they are sometimes five or six stories high.

In 1840 the supply of water in New York was from wells and cisterns. Slops

and garbage were thrown into the middle of the streets and decayed there in the sun. The streets are now sewered, and so kept much cleaner than formerly. Soft water is brought into every house and the drainage taken away, yet people complain of malaria more than they did forty years ago. Then they had bilious fevers occasionally, cholera, and yellow fever; now we have escaped yellow fever, but are troubled with what is called malarial poison.

This brings us to the point in this article, that malaria, though a reality, is made available as a scourge in consequence of wrong habits of diet.

In this country of health and plenty, luxury in all forms abounds, and in no country in the world is there consumed so much sugar and butter as in America. The extraordinary amount of these articles which enter into the diet, even of the poorest, is largely the source of disease. The liver is loaded, the system is kept in a feverish, excited state, the nerves are exasperated, and the patient is thus rendered liable to be affected by malaria.

And not only is butter and sugar largely consumed, but the use of superfine flour, which is simply heating material, is added; then coffee, tea, and tobacco are superadded, and each subject of such habits is rendered as susceptible to any poisons which may float in the air as the shingle roof is to take fire from the falling cinders. We may inveigh as much as we please against malaria, but in reality the chief trouble lies in mal-diet and mal-habit.

Let a person bathe enough to keep the skin clean from the waste, dead matter which it has cast out of the system and remains on the surface; let him wear clean clothing, and that which shall screen the wearer from the effects of the sudden changes of our changeable climate; let him eat wholesome food, avoid stimulants, and sleep abundantly; and to him "malaria," as it is commonly talked about, will become a dead letter. It will not do away with malaria or bad

air, but it will fortify nine-tenths of the people who now suffer from it against its effects; in other words, it will put a tin roof over them which malaria will not kindle into a flame.

It may be asked, What is the proper food to maintain health in the best condition? We will not say that every person can thrive on such food as we believe to be best, but we think ninety-nine in a hundred can do it. The hundredth man we count out. He was born badly, has been perverted, and may not be, in his condition, amenable to the common law of diet. We admit this without believing it, to stop the mouth of one in a hundred who is given over to his habits of wrong diet and prefers to live, as he calls it, *well*, while he does live, though he may die twenty years too soon.

The human system requires three prime elements in food—one is that of heat; another, that which sustains muscular growth; third, that which feeds the nerves and brain. Some articles of diet seem compounded of exactly the right materials. We suppose Deity understood and aimed at the right thing in the preparation of food for young animals; we must, therefore, accept milk as perfect food. Young animals who can not seek and select their food are provided with milk, and it fills every requisition of their nature. The calf appropriates it, and rejoices all over. It will not be doubted that a bear and squirrel, pig and turkey, could be fed on wheat and nothing else, and flourish in every fiber of their being. We know that lions and eagles live as long, are as healthy, and are as strong for their size as anything that breathes; and they live on flesh-meat solely. Other animals live on fruits, nuts, and vegetables; others live on fish.

If a person will eat milk, cream and all, he would be perfectly sustained; but if he takes the cream from the milk and eats it as butter, he will get that which loads the liver and inflames the system with too much heat. If he will eat wheat without excluding the dark part

of it, which ministers to the growth and nourishment of the brain, bone, and muscle; if he will eat fruit without sweetening, and partake of the plain vegetables without spices, vinegar, Worcestershire sauce, and other articles which would draw a blister if applied to the back of the hand—he will have such health, such nutrition and vigor, that malaria will not touch him.

Even in Memphis in 1879 all did not have the fever; and now that they have sewered and drained the city, they seem to have cured the difficulty—not having been afflicted with it since.

Malaria is a fact; but if men will eat rightly, they will rise above malarial influences in most cases. The popular cry of "malaria" all over the land should be changed, and urged instead against the daily dietary habits of people.

Malaria feeds on the intemperate habits of the people—their food and drink, their modes of dress, and last, though not least, their irregular and deficient sleep. These are the cause of nine-tenths of all the trouble which the public charges to "malaria."

NELSON SIZER.

ABOUT A SET OF TEETH.

TEETH are both ornamental and useful. Many teeth, however, are devoid of both beauty and utility. Some are even hideous to the sight, and of little or no value for any purpose. A few are the source of satisfaction and even pride to their owners. Many are the opposite of this, causing mortification, discomfort, and, not unfrequently, severe suffering.

Like many other things, teeth are good or bad according to circumstances. Just to the extent these circumstances are under our control, we are responsible for the good or bad condition of these organs. In most cases, a part of the responsibility at least falls upon us. Shall we "own up" and use our best endeavors to make amends for the errors of the past?

Let us trace the history of a set of teeth. They belonged to a dyspeptic—a hereditary invalid. The mother's teeth were all gone at fifty, and the father's lower ones at forty-five years of age. Prenatal influences were therefore unfavorable. But the first set came sound, regular, and good; the second also promised well. How were they cared for? Let us see: Hot coffee, strong and well sweetened, three times daily; salt pork, fresh pork, gravies, butter, sauces, etc., as freely as a sensitive and rebellious

stomach would admit of their use; milk, sweet and sour, strong cheese, pickles, supplemented by snap beans, greens, and other things *saturated with the strongest vinegar*; apples, pears, peaches, cherries, plums, and berries at any time as might happen. Many other things now forgotten might well be added, but this is enough so far as dietetic agencies go. Then eating ice became a common habit. Cracking nuts with the teeth was rare sport, and if the enamel was cracked or the ivories broken, it was considered a good joke. . . . In due time acid and acrid conditions of the gastric fluids began to play an important part in the work of destruction. The doctor came with his drugs, contributing to make matters worse. Tooth-aches began to add variety to this interesting programme. Headaches were of frequent occurrence; bad dreams and horrid nightmares made the hours of rest a terror; life was a burden. Gloomy and despondent, what object could there be in living?

The inquiry arose, "What is to be the end of all this?" New ideas were awakened; new methods were adopted. Coffee and all hot drinks were abandoned. Shortened biscuits gave place to plainer and more wholesome kinds of bread; pure cold water, taken when

thirst demanded, but not with meals, became the only drink. Meats were used more sparingly, and finally abandoned entirely. Pickles and vinegar, with every article in the process of decay, or itself the product of decay, were tabooed. Fruits and vegetables raw, or prepared in the simplest manner, were added to the dietary as rapidly as the disordered state of the digestive organs would admit of them. The dentist was called, and the decayed and decaying ivories passed under his hand. Some were removed; some were filled and cleaned. The progress of decay was not stopped, but it was greatly retarded. Of the lower set only a few are wanting; above, a few only are left. The decay causes soreness at times. Toothache had rarely occurred since this great change of habits was made. All the aches and pains of former years are strangers now, and the wreck of thirty is much less a wreck at sixty than in early life.

Now, what if these changes had been made years before? What if good habits of living had been cultivated from the first rather than after so many years of suffering? What if, beyond this, prenatal influences had been as favorable as they might have been? Is it not reasonable that good health might have been enjoyed from infancy, and that the teeth might have lasted as long as their owner had use for them?

The teeth in question were never injured by the use of tobacco. A good deal of care was taken to keep them clean. A few times preparations containing mineral acids were used for this purpose. In no case was any such agent used more than once. The diseased condition of the mucous membrane caused absorption of the gums, leaving portions of the teeth without their natural covering and protection. Crusts of "tartar" formed on and between the teeth. Knowledge and care might have prevented all these troubles. Let all who want good teeth take the hint and profit by it. J. S. GALLOWAY, M.D.

Hawlewood, O.

MORE ABOUT SUNLIT ROOMS.—No article of furniture should be put in a room that will not stand sunlight, for every room in a dwelling should have the windows so arranged, that some time during the day a flood of sunlight will force itself into the apartment. The importance of admitting the light of the sun freely to all parts of our dwelling can not be too highly estimated. Indeed, perfect health is nearly as much dependent on pure sunlight as it is on pure air. Sunlight should never be excluded, except when so bright as to be uncomfortable to the eyes. And walks should be in bright sunlight, so that the eyes are protected by veil or parasol when inconveniently intense. A sun-bath is of more importance in preserving a healthful condition of the body than is generally understood. A sun-bath costs nothing, and that is a misfortune, for people are deluded with the idea that those things only can be good or useful which cost money. But remember that pure water, fresh air, and sunlit homes, kept free from dampness, will secure you from many heavy bills of the doctors, and give you health and vigor which no money can procure. It is a well-established fact that the people who live much in the sun are usually stronger and more healthy than those whose occupations deprive them of sunlight.

It is quite easy to arrange an isolated dwelling so that every room may be flooded with sunlight some time in the day, and it is possible that many town houses could be so built as to admit more light than they now receive. — *Builder and Woodworker.*

FATAL TOBACCO.—Recently in Paris a porter cut his finger with a knife with which he had been clearing out his pipe. The next day the finger swelled, and the arm became inflamed, while tumors 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.

NOTES IN SCIENCE AND AGRICULTURE.

The Late Comet.—This beautiful visitor was probably first seen by Dr. Gould, in Buenos Ayres, S. A., and before its perihelion passage, while there are several other claimants for the honor of its discovery in our northern horizon after its emergence from the solar glory.

The apparent motion of the comet was nearly a direct line toward the bowl of the "Little Dipper," in the constellation Ursæ Minoris, and was quite close to that cluster at the time of its disappearance, which occurred about the middle of August. Its tail swept to the east, and was over 35,000,000 of miles long—greater than Donati's. Prof. Henry Draper succeeded in obtaining fine photographs of it, a feat never accomplished before.

The head or nucleus was not so large or bright as has been known of many other comets, but the surrounding envelope makes up for this deficiency by its unusual size. The nucleus was about 1,200 miles in diameter, and the surrounding envelope about 14,000 miles through its thickest quarter. Early in July the nucleus divided so that through the telescope there were seen two comets moving side by side.

Regarding the identity of the comet much has been said. Some believe it to be the return of the comet of 1807, others that of 1812; while Prof. Newcomb believes it to be an entirely new comet, which, moving in parabolic orbit, has now visited this system for the first time in the history of the world.

Although the comet of 1812 is expected at this time, there is quite sufficient difference in their orbits to warrant us in believing them different bodies; neither can any irregularity be reconciled by the supposition that it passed sufficiently near any of the great planets to suffer a change in its orbit, for such was not the case. Neither can we believe it can be the one of 1807, as the observations from which the ephemeris of that comet was computed extended over a period of about six months, and are supposed to be quite accurate. These computations assigned to that comet a period of nearly 1,700 years; and, besides, there is not enough similarity in the two comets to believe them identical.

What the Ancients Thought of the Moon.—Nor is it to be marveled at, when we consider that this planet was the most brilliant and changeable, as well as the nearest and apparently largest celestial body that presented itself to their nightly view, and that in the clear, exquisite ether of Arabian skies, and the calm nights in India and Egypt, it shone among the heavenly host with a lustre unknown to dwellers in the crowded cities of a northern clime.

But the children of these tropic lands did something more than gaze, speculate, and

admire; with supreme patience they reared lofty towers and grand pyramids, and invented instruments which have led up step by step to the transit instrument, the micrometer, and the telescope of to-day. A college of astronomy was founded by the priesthood of Egypt, the worship of the moon growing out of their frequent use of her pictured or carved image in making their meteorological announcements to the people: as, for instance, when the Nile was about to overflow, warning heralds were sent through the streets bearing aloft the familiar symbols of the river goddess, and a gilded figure of the moon in the phase it would present at the date of the expected rising.

In the course of time, the signification was forgotten, the symbol was worshipped, and finally what it represented deified. The moon no longer appeared to the unlettered populace as merely a brilliant lamp suspended from a revolving dome, and shining until extinguished by the waters of the ocean, but now was looked upon with awe as a region of sublime mysteries.

This veneration of the moon gradually spread with population to all parts of the world. We have records of ancient Chinese ceremonials; relics found among Druidical remains in Western Europe; accounts of astronomical picture-writings of a religious character, and lunar calendars of gold, silver, and stone, discovered in ancient temple ruins in Mexico, Central and South America.

Among the buildings devoted to lunar worship may be mentioned the wonderful Temple of Diana at Ephesus, built at the combined expense of the nations of Asia, and the magnificent mansion of the moon adjoining the Temple of the Sun in ancient Cuzco; this building was in form a pyramidal pavilion with doors and inclosures completely incrustated with glittering silver. Within, on the southern wall, was a painting in white, representing the moon as a beautiful woman; on either side along the eastern and western walls, on massive thrones of silver, were seated the dead queens of Peru, embalmed and arrayed in regal splendor. — *Popular Science Monthly for August.*

Statistics show that in France there are now 100,000 lunatics, or one for every 400 inhabitants. Two-fifths of them are in public and three-fifths in private asylums. Ten madmen come from the liberal professions to one from the agricultural population. Further, it is shown that one artist in every 100 is mad, one lawyer in every 120, and one professor or man of letters in every 230.

Fire-Resisting Qualities of Building Stone.—Dr. Cutting, State Geologist of Vermont, has concluded his unique series of tests on the fire-resisting qualities of building stones. He sums up the result in

the current number of the *Weekly Underwriter*. He declares, in substance, that no known natural stone deserves the name fire-proof. Conglomerates and slates have "no capability" of standing heat; granite is injured beyond cheap or easy repair by even so mild a heat as that which melts lead; sandstones, including the variety called brownstone in this city, are better, and limestones and marbles are perhaps the best in this respect. But even they are injured by continuous heat of 900°, and at 1,200° are changed into quicklime. Therefore it would seem that no stone buildings are fire-proof, and some of them, Dr. Cutting even says, are as much damaged by fire as wooden structures are. Brick, on the contrary, is usually uninjured, and is often rather improved by heat until it is melted. But as most brick buildings are trimmed with iron or stone, the damage is often considerable, even when the walls stand. To avoid this, Dr. Cutting recommends soap-stone trimmings, which are open only to the objection of expense. But although brick stands heat so well, it is objectionable, because its power to resist pressure without crumbling from dampness or frost, is less than that of stone. Nevertheless, as brick is in fact only a kind of artificial stone, the search for an ideal building material is not hopeless, but it must be prosecuted rather by the maker than by the quarryer of stone.

Agricultural Fairs.—In all the old States and most of the new, fairs have been held this season. In some of the Middle States, notably New Jersey, many of the counties have each its annual celebration. We believe in these fairs, but, as an exchange says, they may have been brought into disrepute in some localities, and rendered temporarily unpopular by the introduction of fast trotting and other objectionable features—such as regular side shows, gambling, and the sale of spirituous liquors on exhibition grounds—yet there can be no doubt in regard to their beneficial influence when judiciously managed. Those who are opposed to the objectionable features alluded to, should labor for their correction, instead of condemning all fairs. Every progressive farmer should attend the meetings and fairs of his society or club, and use his influence in favor of good men for officers and a proper programme for exhibitions. By adopting this wise course, instead of keeping aloof and then complaining of faults which they might have prevented, the right-thinking farmers and horticulturists of any locality can readily institute reform in the management of their society. One great trouble is that too many ruralists are prone to allow office-seekers, politicians, and speculators to hold the prominent positions and run the exhibitions. Change all this—let the farmers, gardeners, and their legitimate adjuncts, manage the affairs of their own organizations, and we shall hear no further complaints in regard to the demoralizing influence of certain features of

agricultural fairs, for those features will no longer appear in the programme or on the exhibition grounds of any respectable rural association.

Washington on Agriculture.—It will not be doubted that, with reference either to individual or national welfare, agriculture is of primary importance. In proportion as nations advance in population and other circumstances of maturity, this truth becomes more apparent, and renders the cultivation of the soil more and more an object of public patronage. The life of the husbandman, of all others, is the most delightful. It is honorable, it is amusing, and with judicious management, it is profitable.—GEO. WASHINGTON.

A Cancer Removed without the KNIFE.—The attention of medicists has been called recently to a remarkable cure of a cancerous affection of long standing. The patient being himself a physician of much experience, the fact of the disease and its ultimate relief by treatment consisting merely in the local application of a preparation whose basis is a common plant, is accepted beyond peradventure. The cancer was situated on the lower lip, and already had assumed a size and aspect which warranted the most anxious apprehensions for the doctor's safety. Especially was it feared that it would prove ere long fatal, because for upward of fifteen years there was reason to suspect a constitutional tendency to cancer, and he had adopted some general measures for its correction if possible.

The happy discovery of the virtues of wood sorrel, as a caustic applicable to the relief of carcinoma, which Dr. E. Eltinge has made, should not be withheld from the general public, and as he himself communicated a history of his own case and the mode of treatment which he had adopted to his fellow-practitioners of Brooklyn, we have deemed it important enough for mention here. Dr. Eltinge in commenting upon the nature of epithelioma before the County Society, says:

"If, in considering the nature of epithelioma, it is generally conceived to be primarily a simple irritation of the epidermis, or of parts devoid of dermoid tissue, exhibiting either a dry scabrous flat surface, or indurated fissure, which quite readily exfoliates, but by repeated exfoliations presents more than simple irritation, even marked ulceration, then it must be conceded that it becomes a subject of more serious consideration and of vital importance, not only to consider the tissue involved, but also the relation of such tissue—in other words, the relation of tissue to tissue.

Epithelioma, as its name would imply, naturally predisposes us to apply the disease to the epithelial structure only, but in reality should carry our application to the compound membrane also, *i. e.*, the mucous tissue with its cells, the cutis with its follicles, in fact secretory glands and serous and synovial membrane. But when considering the com-

pound tissue, we must not lose sight of the extent of the epithelioma even in the blood-vessels and ventricles of the brain and the arcola interlacing of the vessels and membranes. To be more explicit and comprehensive, the serious fact is, that epithelioma may involve the anatomical element—the elaboration of the materials of the blood itself at even the very extremities of the vascular secretory system, and which only differ in each organ according to its particular structure. No middle ground here being taken—where is the line of demarcation between epithelioma and cancrroid, or true cancer? I answer simply in name—governed by degree and tissue involved. It may seem a broad assertion, but it is worthy of consideration that more full research may be made respecting the subject. With regard to the treatment, it should be both constitutional and local. In our anxiety for local treatment, we must not forget the high importance of constitutional to ensure a favorable result.”

An infusion of the wood sorrel, or *Oxalis Acetosella*, was made and applied to the cancer as an escharotic, with the result in a few days of destroying the morbid growth and detaching it entire from the healthy tissue. Afterward the lip rapidly healed, resuming its natural shape, and now scarcely a scar is noticeable to remind one of the painful and swollen lip the doctor had carried so many years.

To Keep Shaded Places Green.—

Especially in the front yards of dwellings, both in town and country, which are much shaded, we often see the ground completely bare, not a living thing being perceptible. Sometimes there are many nearly nude, straggling limbs lying upon the ground or very near it, which are unsightly and every way worthless, that ought to be cut away. This would give room for the growing there of some plant or vine that would be adapted to it, and which would not only cover the naked spot and make it a “living green,” but would be adding very much to the general appearance of the premises. The best vine for this purpose is undoubtedly the periwinkle. It will grow almost anywhere in the shade if the proper attention is given to it, but not otherwise. It is a beautiful vine and will densely cover the ground, producing nearly the whole season a very pretty blue flower. Weeds, however, are its deadly enemies. It can not fight them. Steadily they will encroach until they drive away our favorite and occupy the field of battle. A little help now and then, however, will defeat the common enemy, and allow us to enjoy the cool-looking popular evergreen for many years without renewal. — *German town Telegraph*.

A Prehistoric Vessel.—A late issue of the *Popular Science Monthly* gives some very interesting details concerning the finding and the excavating of the largest vessel of antiquity that has yet been discovered. It

was unearthed at Gogstad, in Norway, not far from the coast. The dimensions of the vessel are 22½ meters (72 feet) long, 5 meters (17 feet) wide in the middle, would draw a meter and a half (5 feet) of water, and had 20 ribs or benches for rowers. A piece of the beam in the prow showed the hole in which the shaft of an anchor had been inserted. By the side of the large vessel two or three small oaken canoes of very fine form were unearthed; a number of oars were also found, some of which were intended for the canoes, and some for the vessel itself. They were eighteen or twenty feet long, and resembled in shape those which are now used in England at regattas. The floor of the ship was as well preserved as if it had been built yesterday, and yet it is estimated that the time to which this belongs is the most ancient iron age, or to the ninth or tenth century of our era—most probably to the age of Harold the Fair-haired, founder of the Norwegian State. A neatly-shaped hatchet, a large copper utensil, and other objects of interest were found at the same place.

Population and Temperature.—

A census bulletin shows the distribution of population in the United States in accordance with temperature. Arranging it in groups by 5 degrees of mean annual temperature, it is found that no less than 98 per cent. of the total population live between lines marked by 40 and 70 degrees Fah. The cotton region is above 55 degrees, sugar and rice above 70 degrees, and tobacco between 50 degrees and 60 degrees. The prairie region of the Mississippi valley lies almost entirely below 55 degrees, while the great wheat region of Minnesota and Dakota is mainly below 40 degrees of mean annual temperature. The highest maximum temperature is in South-western Arizona and South-eastern California. Of the entire population, 89 per cent. are found in the classes which have a maximum temperature between 95 degrees and 105 degrees. In considering minimum temperature, it is seen that 95 per cent. of the inhabitants of the United States live between the lines of 35 degrees below zero and 10 degrees above, for extreme cold.

From this it is evident how population tends to increase in regions rather north of medium temperature; or, more correctly speaking, between isotherms of low degree.

Compost for Tomatoes.—“I can find nothing better,” says Mr. Hunter in the *Ohio Farmer*, “than what I call a garden compost, for enriching the soil for tomatoes. This is composed of all the litter gathered from the garden during the season, such as potato and tomato vines, trimmings from the sides of the walks, weeds, etc., mostly in a green state, thrown on a pile and left to rot for at least two seasons, and turned over several times. Many persons have an idea that it is not necessary to have the soil very rich for growing tomatoes, some going so far as to say they require a poor soil. Now this is

a mistake, as it is just as necessary to have well-flavored tomatoes by having the soil in good condition, as it is to have nice, tender, and well-flavored beets or any other vegetable. It is also recommended to raise tomatoes on a poor soil if they are wanted early. I think the fault often lies in the kind of soil in which they are grown and the manure that is used. If I had a heavy loamy soil I would never use raw barnyard manure, as both have a tendency to delay the ripening process. A light compost like that described above would be more profitable.

"Raw manure should never be used under any circumstances for any kind of garden vegetable. It should be composted one or two years with about one-third its bulk of good, loose soil or muck which has been exposed to the action of frost. This compost is better for all kinds of soils than the raw material. A loose gravelly soil, which is very leachy, may be excepted; in this case, coarse raw manure may be plowed or dug in to good advantage; it will help to hold the finer manure from leaching through, and is at the same time making a better and more loamy soil."



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H. S. DRAYTON, A.M., Editor. N. SIZER, Associate.

NEW YORK,
SEPTEMBER, 1881.

THE LATE SHOCK TO THE NATION.

THE attempt of an unbalanced, misguided wretch upon the life of President Garfield, and the train of incidents connected with the experience of the chief officer of the nation as a seriously wounded and suffering yet grandly heroic man, will occupy an important place in our country's history. It would be difficult to name an event since the day when the bell of Independence Hall sounded its call to liberty which so thoroughly aroused the sympathy of the American people. All classes (the native and foreign born), forgetful of their differences in political opinion, their social distinctions and personal prejudices, united in one grand outpouring of horror, indignation, and grief. From Maine to California, from Minnesota to

Florida, the tide of emotion rolled, and it seemed as if a heavy cloud had darkened the whole land. The day of all the year chiefly given to festivities was, for the most part, a day of mourning; for in every large city and in every country village the public celebration of Independence Day was stayed.

How great the expression of sympathy across the Atlantic! Kings, princes, and nobles vied with their people in messages of condolence, and when a ray of hope dispelled a little of the gloom, there flashed through the ocean-threads a hundred exclamations of thankfulness and a hundred earnest words of encouragement. It was indeed "a marvelous tribute."

In all this we see a world's sympathy for the man Garfield, consideration for a noble character, a lofty manhood. But in the emotion which pervaded the American people we see much more—a deep respect for the office Mr. Garfield represented. The shots of the assassin were aimed at the President, the nation's chief, the expression of our highest authority. The feelings of anger, grief, dismay that swelled in the great popular breast and found their varied utterances in the talk of the household and the street, and in the printed columns of the newspapers, indicated with an emphasis most unmistakable how precious the peculiar system of government we call

our own is! how vigilant, indeed, the masses are in behalf of constitutional right!

To the patriot, this phase of the crime can not be otherwise than cheering, for it is a revelation of the deep and abiding confidence of the American people in the elevated character of their political institutions. He that would attempt to pull down a single element in the fabric of government at once arouses a storm of indignation, and is looked upon as a most abhorrent wretch. In this powerful underlying sentiment lies our safety, and despite the rancor of partisanship, the ambitious schemes of demagogues, and the bribes of monopolists, the ship of state will sail prosperously on.

But will not America learn a wholesome lesson from this severe experience? the young man the importance of purpose and diligence in his daily activities, that he may not, like the miserable Guiteau, run from pillar to post in a vain search for a sinecure which will give him the means for comfortable living, and, at the same time, feed his indolence and vanity; the man in political life the necessity for imparting dignity and worth to official station through the employment of competent and patriotic men in civil service and keeping them therein notwithstanding the changes in elective offices wrought by the success of this or that party at the ballot-box. The integrity of the civil service once placed beyond the control of the politician, election canvasses would soon cease to be arenas of vituperation and calumny.

GOOD TREATMENT.

IF, as it is stated, the experienced surgeons who have been in attendance

upon the President made a mistake of diagnosis with respect to the nature of the wound, they are entitled to our esteem for the wisdom exhibited in their treatment during the critical stages of the distinguished patient's condition. The old methods of alcoholic stimulation, probing, and narcotizing were quite ignored, while the reasonable and natural ways of hygiene were, in the main, carefully observed. The case of Mr. Fisk comes to mind as one somewhat like that of the President's, as the wound was an abdominal one, and the wounded man in robust health when shot. On the trial of his murderer, some respectable physicians were of the opinion that his death was largely due to the injury done among the viscera in probing for the bullet; others, equally respectable, asserted that there was too much morphine administered, so that functional activity was obstructed or suppressed.

A deep wound in the abdomen is productive of intense pain, and it is necessary to administer sedative agents, otherwise his suffering may weaken the patient to the degree of fatal collapse. But, by skillfully administering them, so that the injured man may obtain some degree of comfort, without being reduced to unconsciousness, they may be made most important aids toward his recovery.

Criticism on the treatment of the President's case has been plentiful, some of the newspapers having every day a column or so of somebody's views on this or that feature of it. It is therefore a delicate matter for us to venture anything of the sort, especially as we believe that the physicians in charge are doing their best: it would be infamous to think otherwise. But in view of the late recurrent chills and fever which have taxed

their skill, may it not be that the quinine which has been so persistently administered daily is at the bottom of this cause for grave apprehension? We have seen and heard much of depressed vital conditions which were traceable to the use of quinine as a tonic, and feel that in the President's case this powerful nervine has some relation to the relapses which keep our fears alive.

VALE LARD!

OUR hygienic friends will have occasion to throw up their caps if the discovery lately announced, that "cotton-seed oil is a most satisfactory substitute for lard," be true. We hope it is true, for the sake especially of the many house-keepers who are sorely tried in their cooking, by that product of the swine, which like butter varies in its quality, and whose odor usually awakens in the imaginative kitchen goddess visions of closely pent-up, garbage-fed and slimy porkers, and mayhap a notion or two of trichinæ snugly ensconced in their oozy vesicles. No one is afraid of good vegetable oil; its impressions are quite cool and refreshing. It whispers of dewy meadows, vivifying breezes, sweet aromas, and so on. But lard! everything it suggests is at blood-heat, and hotter—even the temperature of the cauldron. However, more to the point:

Col. O. O. Nelson, of Huntsville, Ala., says he has repeatedly used the oil at his house, and finds it equal to the best article of lard. A hotel-keeper at Memphis publishes a statement to the same effect. It has been tried by several citizens of Tusculumbia, Ala., who say they can discover no difference between the oil and the lard.

The best thing about it, as most economical housewives will say, is the cost, that not being more than half the price of the pork extract. If cotton-seed oil can be used to the extent of 10,000,000 gallons yearly by our trans-atlantic neighbors to adulterate the olive oil which they send to us for use upon the tables of epicures, why is it not suitable for culinary purposes pure? is a question which carries with it almost by necessity an affirmative answer. At all events what a revolution in the pork trade this discovery will produce should it turn out a fact undeniable! And what an impulse it will give to the cotton interest of the South, coming, too, just in time to speed the revival of industry and enterprise there. Everybody must grease the pan: the hygienist for his rolls, the carnivorous for his steak, and all will welcome the sweet, translucent distillation of nature.

CORRECT THE CHILDREN.

THERE would be fewer "little savages" running about loose in society terrifying timid ladies—not their mammas or aunties, of course—and exciting the ire of men—not their proud papas or instigating uncles, of course—if the advice of a *Tribune* correspondent to an inquirer were generally followed in home-training; as follows:

"To 'N. N.'—You have two good traits in your boy, affectionateness and generosity. Treat him kindly. When he takes from strangers go with him and see that he returns what he has taken. If it is destroyed, make him work and earn the money and pay for it. In case of deceit, keep steadily at him until he owns up to the fault; sometimes you will find he is innocent. Make the other members of the family apologize to him when they have done him wrong, and *vice versa*.

Never allow sins to accumulate. Take time and patience and you will be rewarded."

This sort of moral training would necessitate much trouble and time, but it is nevertheless the plain duty of every parent.

"INSTITUTE OF PHRENOLOGY."

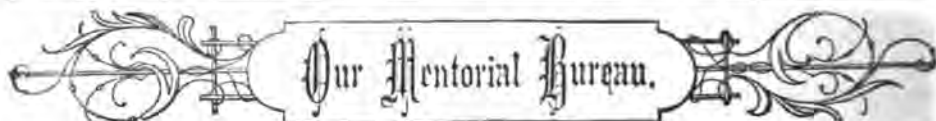
REV. S. J. B. writes us from Indiana, under date July 6, 1881:

"Ever since I graduated from Union Theological Seminary, in 1876, I have wanted to come back to study at 'The American Institute of Phrenology.' I rejoice that Phrenology is 'marching on,' as I believe, to a glorious triumph, and I

am giving it what aid I can in my profession."

We remember that when Mr. B. was a student in New York, he occasionally attended our lectures in Phrenology, and we remember him as a most attentive and earnest listener. A course in the "Institute of Phrenology" would do clergymen more good than they are aware. This one has had a taste of the subject, and we hope he may yet double his power by taking a full course, and graduating.

Those who wish to learn all the particulars about a course of instruction, may write, asking for "Institute Circular." The term commences the first Tuesday of October in each year.



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.

TO OUR CONTRIBUTORS.—It will greatly aid the editor, and facilitate the work of the printer, if our contributors generally should observe the following rules when writing articles or communications intended for publication:

1. Write on one side of the sheet only. It is often necessary to cut the page into "takes" for compositors, and this can not be done when both sides are written upon.
2. Write clearly and distinctly, bring particularly careful in the matter of proper names and quotations.
3. Don't write in a microscopic hand, as the compositor has to read it across his case, a distance of nearly two feet, and the editor often wants to make changes and additions.
4. Never roll your manuscript or paste the sheets together.
5. Be brief. People don't like to read long stories. A half-column article is read by four times as many people as one of double that length.
6. Always write your full name and address plainly at the end of your letter. If you use a pseudonym or initials, write your full name and address below it.

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.

GUNNERY.—Question: At what time does a bullet have the greatest velocity—just as it leaves the gun, or at a distance from the gun? The question has been under discussion here, and there are various opinions in regard to the matter.

Answer: The initial velocity is the greatest; for the reason that from the moment the ball leaves the gun it encounters the resistance of the atmosphere, and that, together with the influence of gravity, reduces its speed until it falls to the ground.

INHERITANCE OF ORGANS.—M. L. C.—A large development of an organ of the brain is as likely to be transmitted from parent to child as a small development. If, however, there be a strong exercise of the organ in the mental operations—or, in other words, if it be a dominant power in the character of the parent, the child will be more likely to inherit that strong organic peculiarity than he would an organ of moderate power. Cultivation will do much toward strengthening the action of organs. Even faculties weak in a child may by judicious training be made to do good service in after years.

HYGIENIC BREAD.—J. R.—Have you followed carefully the recipes given in the hygienic cook-books? Most people find it difficult to make good bread at first with Graham flour. The most satisfactory results are to be obtained with the form of bread called "gems." In the March and April Numbers of this magazine for 1880, recipes were given from the experience of a lady who never fails to prepare delicious gems. Your Graham flour is probably good enough, but perhaps your fire was not sufficiently hot, as quick baking is one of the essentials to success.

INFLUENCE OF THE INTELLECT.—R. L.—Yes, the office of the trained and balanced intellect is that of a counselor, and helps one to regulate and control the action of the other faculties. When a man is informed concerning his defects and excesses, and accepts the opinion, he can, by determined effort and the assistance of a well-stored intellect, do much toward improving his mental condition. The treatises on Phenology supply a great amount of information in this department of the subject.

HOME STUDY.—J. B.—For the improvement of your style as a writer and speaker, you can not do better than to read and study the methods of phrase-making used by our best authors. Trench, Arnold, Lowell, Motley, W. C. Prime, Kinglake, Robertson, Hamerton, Ruskin, J. S. Mill (System of Logic), Weaver, Combe, and Taine are among the writers you can read with benefit. It would be well to write out paragraphs which are specially striking, and so fasten the methods of a writer in your mind. Mulligan on Grammatical Structure would be a help, also Duy's Art of Discourse.

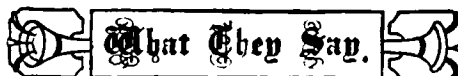
WATER IN DYSPEPSIA.—B. W. R.—We do not advise copious water-drinking at meals in any case, and for the dyspeptic we deem such a practice decidedly injurious. If feverish, drink freely at other times—not, however, gulping down the fluid by the glassful, but taking a small quantity at a time. In case of acidity or flatulence, hot water is beneficial; a gill or so being swallowed at a time. We can not prescribe a definite quantity adapted to all cases, as that would be impossible. No two persons are exactly alike in temperament, and there are differences in the food taken from time to time and changes in the state of the organism, all of which modify the need of water.

WEAK HEAD.—*Question:* Is there a remedy to strengthen or purify the brain? I use Copenhagen snuff freely to protect the eyesight, but do not believe in that remedy for the eye. Does snuff injure the brain in any shape or form? If it does, please let me know of a remedy to purify or strengthen the brain, if there

is anything for it. If there is not, please excuse me for my . . .

A. A. B.

Answer: The best means for strengthening the nervous system and at the same time invigorating the brain is good food, pure air, good habits, and suitable out-of-door exercise. Go into the mountains and live plainly, knock about, use your senses upon the objects of nature, and for a time let books and study go. What good snuff can do your eyes is beyond our ken. If you are troubled with catarrh, proper diet, bathing, and exercise will help you. Go to a good hygienic home among the hills.



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

TRUE METHOD OF EDUCATION.—From *Le Devoir*, a weekly publication, edited by M. Godin, well known as the founder of the "Familisterre," at Guise, France, the following paragraphs are taken. The editor, in discussing methods of public instruction, points out the essentials of a thorough, practical education, such indeed as will make good citizens in all those features of industry and patriotism which lie at the bottom of true national welfare:

"Let us stop here," he says, "and fix attention upon the error which everywhere falsifies the instruction of youth in the family and in the school. Parents, teachers, directors, etc., proceed as if human beings differ only among themselves in the degree of instruction each has received. This idea has even had its advocates, but whatever may be the opinion which individuals entertain to-day on the subject, the father acts still with reference to his child as if it were sufficient to cause him to pursue a certain curriculum, to become distinguished by his knowledge. Every-day experience contradicts palpably the error of this practice. . . .

"Teaching would bear very different fruit if young people were developed in accordance with their faculties. If they were taught specially what they are in condition to learn, this indeed is the reform which democratic institutions should work at in the domain of public instruction. But it must not be forgotten that there are many obstacles to be overcome before this reform can be realized. In the very outset there are prejudices and obstacles which in the past have blighted nearly every effort made in the direction of reform, and now, too generally, parents strive to relieve their children from productive labor as far as they can. Parents in all conditions of life should aspire henceforth to give their children only that form of education which

conforms to their tastes and aptitudes, and not devote them to a mission, or to studies for which they have not been organized. . . .

"One of the remedies for error in public instruction is the introduction of methods for the teaching of science and in the establishment of special classes corresponding, as far as possible, to the grand divisions of social activity. These classes should have professors competent to classify, and as far as possible they should be selected for the training of classes made up of youth possessing special aptitudes. The teachers themselves should have a taste for practical teaching in each of the departments; in this way their instruction would be fruitful and profitable. Before entrance into one of the special upper classes, whose object is to perfect the acquaintance of the pupil with the nature of his vocation, or the career to which he is destined by his tastes, it should be necessary to put his tendencies and aptitudes to the proof as much before the eyes of the pupil himself, as before those of his teachers and fellow-pupils. Special upper classes should be created in different parts of France in such a way as to be most useful in accordance with the character of the neighborhood. Established at first in small numbers, they could be multiplied in proportion to the demand. Each class should specialize one grand division of national activity, for instance that of agriculture, or mining and metallurgy, applied mechanics or architecture and public works, or the industries, manufactures, or social economy, medicine, civil service, normal education, languages, letters, etc.

"Science has made its entrée in all productive careers; it is necessary to them in the highest degree. It should not be introduced, however, incidentally, or by ruse; but on the contrary, it should be introduced carefully through the means of studies seriously pursued in establishments accessible to all the children of the people. In this way society would quickly be in condition to select men worthy of engaging in all enterprises."

THE COMING CONFLICT.—Life is a struggle for existence, in which the law of progress is maintained by the survival of the fittest, *i. e.*, the strongest. This is a fact of science which it were vain to deny, and which can not be changed by argument. Intelligent men will not enter into a hopeless contest; only the ignorant do that. Instead of making war against the laws of nature and being defeated, we should adjust ourselves and our plans to them, and thus make them our allies in the conflicts of life.

Savages struggle with each other on the physical plane. Courage, strength of muscle, and steadiness of nerve give the victory. The cunning of diplomacy is a factor in savage life, but

courage and strength are the chief elements. The law of progress is maintained under such circumstances by the development of a race of fleet and powerful athletes, fitted for the chase and for war.

In semi-civilized society, intellect becomes the force that rules; hence, with such people life is a struggle of brain, a conflict of mentality, with the selfish propensities in command. Here is a history of humanity in the past and the present. The conflict of civilization is to be conducted upon a much higher plane, and the results will be far more permanent and grand. It will be a conflict of intellect, but the moral sentiments, and not the selfish propensities, will command the forces.

The selfish phase of competition, which prompts the strong to compel involuntary service from the weak, and which in the past has had its most palpable illustration in human chattel, slavery, is now chiefly manifested in individual and corporate monopoly. Strong men alone, or in combination, control the money of the country through the machinery of banks. The same men, or others equally strong, control the prices of all the products of labor that require transportation, by means of a combined monopoly of railroads. Others still levy an enormous tax upon intelligence through telegraphic monopoly. Thus the masses of the people find themselves, through this new and indirect form of slavery, tolling nominally for themselves, but really to enrich beyond measure the Vanderbilts, Goulds, Belmonts, and other railway kings and money princes. The conflict which is now upon us is a conflict between the day-laborer, the tenant farmer, the landlord, the merchant, the manufacturer—all who produce or exchange wealth; and the men who control the instrument of trade, money, and the lines of transportation. Yesterday slavery and freedom were grappling in deadly conflict; to-day corporate monopoly and the rights of labor are challenging each other to battle. Slavery was recognized by the Constitution and sustained by Congress and the Executive and Judiciary. Corporate monopolies with special privileges are unconstitutional, though they do enjoy legislative sanction and protection. What the people should do, what they must do, and what they very soon will do, is to elect a Congress of the nation and legislatures of the several States which will repeal all monopoly laws, and in their stead pass laws which shall restore to the people the control of the currency and of all public highways, whether common wagon roads or railroads. Monopoly is a relic of barbarism. Abolish it by legislation, at the demand of a people who have an intelligent appreciation of their rights, and the nation leaps at once to the lofty plane of a true civilization. Foster it for a decade longer, and the last vest-

ige of freedom and equal rights will have disappeared from the continent, and naught but bloody revolution can save us from a despotism more terrible than any that now exists on the continent of Europe.

T. A. B.

PERSONAL.

IN the sudden death of Dean Stanley the Christian world has sustained a severe loss. A great leader has gone, a man whose broad religious faith, generous sympathies, and pure life rendered him not only a revered teacher, but also a genuine example. He lived of the gospel as a minister, but he also illustrated it.

MR. GLADSTONE and Mr. Tennyson are said to have disputed over the size of their heads, and had them measured. Mr. Tennyson's proved the wider, the other the higher; thus the one has a phrenological reason for being a poet, and the other for his political ambition and church interest.

MRS. W. E. WILDMAN, who attended the Phrenological Institute in 1878, died at her residence in E. Farmington, O., last June. She was very active in the home and church circle, and greatly beloved by her friends.

THE REV. JOHN CUMMING, D.D., the eminent minister of the Scotch Church, and well known as a writer upon the interpretation of prophecy, died in London, July 6th.

NEW JERSEY has seven living ex-Governors—Messrs. Price, Newell, Parker, Ward, Randolph, Bedle, and McClellan. Only four ex-Governors of the State have died since 1842, namely, Stratton, Haines, Fort, and Olden.

GEN. BENJAMIN HARRISON, the new Senator from Indiana, is a son of President Harrison, an able lawyer and powerful orator, a man of high qualities of personal and political character.

THE Major-Generals of the army in the order of their rank are as follows: Hancock, Schofield, McDowell. The Brigadiers in like order are Pope, Howard, Ferry, Augur, Crook, Miles.

WISDOM.

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

"THE horse that frets is the one that sweats."

ONE day is worth three to him who does everything in order.

RETURN the civilities thou receivest, and be ever grateful for favors.—PENN.

THE greatest evidence of social demoralization is the respect paid to wealth.

No church will prosper that has not room and sympathy for the humblest of the people.

LIFE is not so short but that there is always time enough for courtesy. Self-command is the main elegance.—EMERSON.

HOPE is like the sun, which, as we journey toward it, casts the shadow of our burden behind us.—SAMUEL SMILES.

ALL of us who are worth anything spend our manhood in unlearning the follies or expiating the mistakes of our youth.—SHELLEY.

HE who can not wish that the whole world may think and act like himself, has no right to call himself an honest and a free man.

WHEN real nobleness accompanies that imaginary one of birth, the imaginary seems to mix with the real and become real too.—GREVILLE.

THE harmony and happiness of life in man or woman consists in finding in our vocations the employment of our highest faculties, and of as many of them as can be brought into action.

IF any man is able to convince me and show me that I do not act or think right, I will gladly change, for I seek the truth, by which no man was ever injured. But he is injured who abides in his error and ignorance.—M. A. ANTONINUS.

THERE is a sacredness in tears. They are not the mark of weakness, but of power. They speak more eloquently than ten thousand tongues. They are the messengers of overwhelming grief, of deep contrition, and of unspeakable love.—WASHINGTON IRVING.

WHATEVER expands the affections or enlarges the sphere of our sympathies—whatever makes us feel our relation to the universe "and all that it inherits" in time and in eternity, to the great and beneficent cause of all most unquestionably refine our nature and elevate us in the scale of being.—CHANNING.

MIRTH.

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

"WHERE do they catch these mock turtles, waiter?" "Don' know, surr; maybe its near the sham-rock."—*Commercial Advertiser*.

CURIOSITY SHOP.—"Oh, what a lovely vase! It's antique, is it not?" "No, ma'am, it's modern." "What a pity! it was so pretty."

"Is that mule tame?" asked a farmer of an American dealer in domestic quadrupeds. "He's tame enough in front," answered the dealer.

JONES complained of a bad smell about the post-office, and asked Brown what it could be. Brown didn't know, but suggested that it might be the dead letters.

THE small boy reasons in this way: "If a dog cat-ches a cat," it can not be wrong to say, "A dog pig-ches a pig,"—and that is the way he wrote it.—*Hawkeye.*

A SICK glutton sent for a doctor. "I have lost my appetite," said he in great alarm. "All the better," said the doctor. "You'll be sure to die if you recover it."

GIRL (yawning over her lessons): "I'm so tired; I should like to go to sleep." Boy: "I'll tell you what to do, then; get up early to-morrow and have a good sleep before breakfast."

AT a social reunion the question was asked, "Of what sort of fruit does a quarrelsome man and wife remind you?" The young lady who promptly answered, "A prickly pair," got the medal.

"WHAT side of the street do you live on, Mrs. Kipple?" asked a counsel cross-examining a witness. "On either side. If you go one way, it's on the right side; if you go the other way, it's on the left."

"Let us play we were married," said little Edith, "and I will bring my dolly, and say: 'See baby, papa.'" "Yes," replied Johnny; "and I will say: 'Don't bother me now. I want to look through the paper.'"

A MAN in passing a country graveyard saw the sexton digging a grave, and inquired, "Who's dead?" Sexton: "Old Squire Bumblebee." Man: "What complaint?" Sexton, without looking up: "No complaint; everybody's satisfied."

A GENTLEMAN once remarked to a witty lady of his acquaintance that he must have been born with a silver spoon in his mouth. She looked at him carefully, and noticed the size of his mouth, replied, "I don't doubt it; but it must have been a soup-ladle."

WHEN spelling is "reformed" she'll write:
"I'm sailing on the oshun,
The se is hi, no sale in site,
It filz me with emoshun."
But one "spell" will not change its name,
For she'll be se-sic just the same!

PAPA: "That picture shows the story of Prometheus, and the vulture that fed on his liver. Every day the vulture devoured it, and every night it grew, for him to eat it again." Sympathetic child: "Poor, dear old vulture! How sick he must have been of liver every day!"

A LESSON IN ENGLISH.—What queer blunders these foreigners make! A German woman living on Tenth Street had a severe attack of cramps the other day, and a doctor was called in. He gave her some ginger to relieve the pain. Next day he called again, and said:

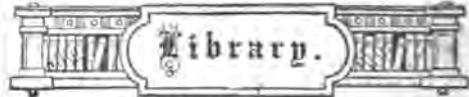
"Well, Mrs. Bummenschlager, how do you feel to-day?"

"Fust-straidt, doctor," was the reply; "shooost so goot as never vas!"

"Do you feel any pain?" he asked.

"Vell, I'fe god a leedle pain in my athummleek, but it don't hurd me!"

The grin on that doctor's face sprouted into a guffaw when the door closed behind him, and burst all the buttons off his coat by the time he reached the street.



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.

AMERICAN NERVOUSNESS: Its Causes and Consequences. A supplement to *Nervous Exhaustion (Neurasthenia)*. By Geo. M. Beard, A.M., M.D. 12mo, pp 352. Price, \$1.75. New York: G. P. Putnam's Sons.

The field which this industrious observer and author has chosen widens; he finds new and most interesting subjects for study in it with every step; and bringing, as he does, the results of his study to the notice of the public, he is making it his debtor for much valuable information and practical counsel. Telling us in the outset that nervousness is a want of nerve force—a fact which no one with a knowledge of physiology will dispute—he proceeds to consider the peculiar phases of this abnormal condition in the American people. As our civilization has its own characteristics which distinguish it from the civilization of the older nations, so our people are subject to special forms of nervous disorder. Of course climate has an important bearing on the matter, and Dr. Beard is prompt in his recognition of this, and endeavors to show the manner of its influence.

Plain language is used in discussing the injurious effects of stimulants and narcotics, and it is for brain-workers particularly to take warning that they are not entirely safe from morbid nervous distempers so long as they indulge in even moderate drinking. The higher classes are gradually withdrawing from drinking practices, and using less tobacco and less drugs, because of their increasing susceptibility to the disturbing effects of such things. It is now highly important that a physician should study the tempera-

ment of his patient if he would be wise in prescribing treatment.

Many suggestions worthy of careful observation are given in the course of the work with regard to diet, the employment of time, study, brain-labor, etc. We are in perfect agreement with him that the truly psychological and most economical method of education is that which makes the most use of all the senses, and that the system of the schools is in the main quite the reverse of what it should be, ideas being forced into the brain "through any other pathway and every other way except the doors and windows." Medical education as conducted in the colleges he particularly decries as the "leading offender." The author is encouraged by an improvement in the American physique in later years to hope for the development of a race on this side of the Atlantic, which will be great in both body and mind, and, indeed, "a higher order of humanity." So that the final outcome of our nervous excitability will be a generally ameliorated physique.

ANATOMICAL STUDIES UPON BRAINS OF CRIMINALS. A contribution to Anthropology, Medicine, Jurisprudence, and Psychology. By Moriz Benedikt, Professor at Vienna. Translated from the German by E. P. Fowler, M.D. New York: Wm. Wood & Company.

We have had occasion to mention the important services of Prof. Benedikt to craniology more than once in the pages of the PHRENOLOGICAL, and now we are pleased to inform the reader that a concise exposition of his studies in our language is easily procurable, thanks to the interest taken in them by a New York physician. Prof. Benedikt in the outset of his book awards high credit to Dr. Gall for giving a special impulse to craniological and brain studies. Like Gall, he, though eighty years later, encountered not a little opposition from bigoted and prejudiced men in the prosecution of his chosen work among the criminals of Europe.

These unfortunate offenders against law and order, Prof. Benedikt concludes, exhibit "mainly deficiency—deficient gyrus development—and a consequent excess of fissures which are obviously fundamental defects." . . . "Crime is in no way analogous to monomania; it results from the psychological organization as a unit, and its particular form of expression is determined by social circumstances."

Twenty-one cases, with upward of thirty-five views, showing the structure of the brain, are described. These cases are murderers and robbers whose comparatively small intellectual lobes, irregularly developed hemispheres, and in many instances peculiarly disposed cerebella, afford a most interesting series of studies to the phrenologist, and indeed should be carefully considered by all who give attention to the maintenance of order in society.

HISTOIRE NATURELLE DU DÉVOT. Par le Dr. Gaston Delaunay. 18mo, pp. 192. Paris: Horace Straus, publisher.

The name of Dr. Delaunay is not unfamiliar to some of the JOURNAL readers, as he has taken special interest in anthropology, and results of his investigations have from time to time appeared in our volumes. The above entitled little treatise presents a concise review of the author's observations in one line, that of religious devotees, those specially who pursue from youth the career of the monk or the nun. Dr. Delaunay, after the manner of the scientist, has sought to make his work thorough. He presents measurements of the head and brain, and estimates of the body and mind in a systematic manner, and the inference which he has deemed himself warranted in deriving from them, is that the life of the religious devotee is restricted, one-sided, and abnormal. He finds that the head is generally small, that in stature he is below the average, that his arms are longer than the average. The brain averages less than 1,450 grammes, while well-developed people, in secular walks of life, have heads exceeding in nearly every case that weight.

We can not accept his statement that the religious life, "considered from the point of biology," is productive of an inferior cerebral condition, because our own observations do not sustain it.

We could point out a great many leading men and women in Europe and in this country who have been distinguished scarcely less for their high devotional sentiment than for their intellectual capabilities. The present premier of England is a man in very close connection with the Established Church, and one of its warmest defenders. The present President of the United States is generally recognized as an earnest church-member. It does not follow, Dr. Delaunay, that a man of deep religious sentiment must be small-brained and weak in intellect. We presume, however, his conclusions bear upon the ascetic, monastic class of France, and have no reference to the ordinary member of a Christian church.

PUBLICATIONS RECEIVED.

ROUTES AND RATES FOR 1881. Summer Tours. By the Utica and Black River R.R. This interesting book to the traveler on the Utica and Black River Railroad, which is the only all-rail route to the Thousand Islands, supplies a deal of information for the tourist. A very considerable number of excursions are tabulated with prices, showing that a great variety of pleasant trips through the St. Lawrence country can be taken at small expense. The pamphlet is copiously illustrated by beautiful views. Central office of the company is at Utica, N. Y.

PROCEEDINGS OF THE NINTH TEMPERANCE CONVENTION, held at Saratoga Springs, N. Y., June 21 and 22, 1881. Containing the papers presented, speeches delivered, resolutions and reports adopted, action of religious bodies, roll of delegates, etc. Taken altogether this appears to have been one of the most interesting of temperance conventions; many of the addresses are admirable expositions of the value of temperance reform. That of the Rev. Mr. Morris, on the relation of educational institutions to the temperance movement, indicates very clearly the great importance of temperance teaching to the young; and also the weakness existing in the pulpit with regard to advocating temperance principles. Professor Davis, of the Chicago Medical College, points out the great want of system (or principle) among physicians in their use of alcohol in their practice, and discussed with great force the noxious influence of it as a medicament. Price of the Report, which contains upward of 240 pages, 25 cents. Published by the National Temperance Society of New York.

A LUTHER FESTIVAL IN THE THURINGIAN FOREST. By John P. Jackson, author of "The Passion Play at Ober Ammergau," of the English version of Richard Wagner's music, dramas, etc. Published by Fowler & Storey, London. A very interesting description of the commemoration of one of the most important events in all history; to wit, the opening of the Reformation. Illustrated with fac-similes of old woodcuts.

THE CULTIVATOR AND COUNTRY GENTLEMAN comes promptly to hand from week to week, and always contains matter of value to practical farmers. The present management maintains the old standard of literary excellence with creditable industry.

IDALIA, MAZURKA CAPRICE. By William Adrian Smith. A lively, tripping aria with variable progressions, and occasional passages of genuine brilliancy, well adapted to practiced fingers. Price, 50 cts. Published by the composer, 143 East 18th St., New York.

WHAT SHALL WE DO WITH THE INEBRIATE? By J. D. Crothers, M.D., Sup't of Walnut Lodge, Hartford, Ct. An argument in favor of a retreat for the victim of drink where under learned and humane control he may be helped to overcome his weakness, and be restored to health and usefulness.

HISTORY of the Attempted Assassination of James A. Garfield, President of the United States, with a sketch of his life; a sketch of the life of Charles J. Guiteau, comments of the press, etc., etc. By J. S. Ogilvie. Price, 20 cts. J. S. Ogilvie & Co., Publishers, New York.

NINETEENTH ANNUAL ANNOUNCEMENT of the New York Medical College and Hospital for Women, 213 West Fifty-fourth St., 1881-'82. Opportunities are afforded by this institution for thorough preparation for the medical profession. Its three-year graded course seems to us to be more likely to give society better equipped physicians than many of the much-advertised medical schools for men.

THE HARVARD REGISTER. The final issue, we regret to say, of a bright, progressive, well-made monthly. Why have not collegians and lovers of good literature been appreciative of such a man as Moses King? We will miss his periodical among our exchanges.

THE NEW TESTAMENT—REVISED VERSION. Edition authorized by the American Committee on Revision. Price, paper, 15 cents; sent, postage-paid, for 18 cents. I. K. Funk & Co., New York.

MONTHLY WEATHER REVIEW for late months. Full details of meteorological phenomena which occurred in all sections of our continent, furnishing interesting studies for the student of weather matters.

THAT BEAUTIFUL WRETCH. A Brighton Story. By William Black. Complete, paper. Price, 10 cts. No. 44 of "The People's Library." Published by J. S. Ogilvie & Co., New York.

POPULAR SONGS—old but good—such as: "I Cannot Sing the Old Songs," "Scenes that are Brightest," "When the Swallows Homeward Fly," "Shells of the Ocean," "Her Bright Smile," "The Old Arm Chair," and others, with music. Price ten cents. J. S. Ogilvie & Co., New York.

GONE ON BEFORE O'ER THE RIVER OF TIME. Words and music, by P. O. Hudson. Price, 40 cents. F. W. Helmwick, Publisher, Cincinnati, O.

SUMMERFIELD MARCH. Composed by Wm. Adrian Smith. A composite piece, with two ruling motives; needs taste and digital skill for its rendering. A good subject for the practice of the musical student. Published by Wm. Adrian Smith, New York.

YE PALAVERMENT OF BIRDS. By Sylvanus Satyr. A humorous poem.

"A tale of birds, as you shall see,
Of birds of every feather and degree,"

that assembled in convention and discussed various topics of grave importance to birddom. Published by L. N. Fowler, London.

"IT (THE PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH) is without question the leading journal of the kind published on the globe, and its monthly visits are looked for with as much interest as any publication of today."—*Detroit Com. Advertiser*.

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[WHOLE No. 515.



JOHN A. BROADUS, D.D., LL.D.,
THE EMINENT BAPTIST CLERGYMAN.

THE average reader has been so much in the habit of seeing the names of Northern men quoted as eminent for scholarship in the Oriental tongues and ecclesiastical learning, that it may be a surprise to him to be told that the South has a clergyman who can be called great in these respects, on the warrant of a

reputation which extends much beyond the limits of the scholarly circles of his own country.

Dr. John A. Broadus, Professor of New Testament Interpretation and Homiletics in the Southern Baptist Theological Seminary, has, from choice, devoted his life to Christian work, in spheres of marked usefulness, to be sure; but it would be acknowledged by all who know him that he possesses the natural gifts and varied acquirements which would long ago have won name and fortune had he elected some secular calling appropriate to his capabilities.

The portrait of this gentleman indicates strength, stability, solidity, and soundness, rather than the lighter, more showy qualities of mind and character. He looks self-contained, self-assured, well satisfied with his inherent powers, and conscious that he is master of the situation. One would suppose that he was always ready, and never in a hurry; that he moved with steady strength and with a consciousness of being able to meet the emergency and to win success without help.

His broad chest compares with the broad cheek-bones; his large neck compares well with his broad head; his solid, fixed, strong features give an expression of solidity and stability, and latent power. The temperament is favorable to endurance, and the exercise of physical strength and mental endurance. His brain is large, and evidently well nourished; hence his thoughts are harmonious, his feelings steady, consistent, and self-assured.

The amplitude of his forehead indicates breadth and compass of mind, the power to reach upward and onward, solving problems which baffle many others,

and working out results without worry or anxiety, which most men would have to struggle with; for instance, he would stand at the head of a college or pastorate, or be a speaker of a congress, and his word would be law, his decision accepted; and when other people would seem worn out, needing a vacation, he would remain fresh and able to continue without anything but his daily resting hours. He is a hard worker, and consequently presses his cause. As a boy, he usually tired out all his associates, because he used his forces judiciously, and had a plenty to use.

He is a man who can be angry and not boil over, who can reprove delinquents without abusing them, who can preach strong doctrines without seeming personal. Some have to be angry before they are strong or brave; he is both strong and brave without the necessity of showing anger. When he is much provoked, and it will not help his cause, he does not permit himself to explode.

His power to reason and criticise, his power to combine facts and logical arguments, to systematize and build up a subject or an argument, are shown in all his work.

He has large Ideality, hence a sense of beauty, polish, perfection, pervades his work; but he believes in strength first, beauty afterward. He makes a strong logical trellis before he puts forth an æsthetical and imaginative foliage. He sees the witty side, and uses that element to show an absurdity, that which is illogical.

He reads the stranger, and is able to control and mold men; hence his power to govern is remarkable.

The top-head, in which the moral and religious organs are located, is largely

developed; and we judge he has very strong Firmness and no want of Self-esteem. The base of his brain is large enough to give force and courage; and the signs of the social development are strong enough to make him a devoted friend and an affectionate companion.

An organization like this would rank well in any department of effort and usefulness, where the competition is strong and the duties demand courage, out-reaching thought, and dignity and force of character.

JOHN ALBERT BROADUS was born in Culpepper County, Virginia, on the 24th of January, 1827. His family is of Welsh extraction, and the name was formerly spelled Broadhurst. His father was prominent for many years in political circles of the Old Dominion, and served his district in the Legislature. John completed his studies at the University of Virginia, the honorable old institution which owes its existence, in great part, to Thomas Jefferson, whose interest in it was practically shown to the very close of the great statesman's life. Dr. Gessner Harrison was then Professor of Ancient Languages, as he had been for more than a quarter of a century, and with him young Broadus formed a close intimacy. In after years one of the results of this friendship was the marriage of the quondam student-friend to the old professor's daughter. In 1850 Mr. Broadus received his degree from the University, and a year later he was offered and accepted the position of Assistant Professor of Ancient Languages in his *alma mater*. This position he occupied about two years, when the opportunity came for his entering upon a sphere more in harmony with his leanings; the Baptist church of Charlottesville invited him to take its pulpit, and he accepted it. But the University was loth to lose her earnest alumnus, and in 1855 invited him to return to her walls as chaplain. He did

so, and officiated in that capacity two years. This relation did not quite meet his wants, as we find him two years later the pastor again of the Baptist church. As a young man he was eminently fitted for the place of a teacher. This the prominent members of Southern Baptist circles were not long in discovering; and when a vacancy occurred in the Theological Seminary he was looked to as among those best fitted to supply it. So, in 1859 he was invited to take the Professorship of New Testament Interpretation and Homiletics, which he still occupies. The seminary was then located at Greenville, S. C.; it is now in Louisville, Ky.

An acquaintance of Dr. Broadus says he "is a man of deep and varied scholarship, and of commanding ability in the pulpit. In his knowledge of the Greek of the New Testament, he is without a peer in the South. There are frequent calls upon him to preach in the churches in Louisville, and the announcement of his name does not fail to draw a large congregation. Even his own students, who attend his daily lectures, consider it a privilege to hear a sermon by him and to come under the sway of his power, which is remarkable in the lecture-room, but is far more so in the crowded assembly. The Baptist denomination in America has no man to-day of whom it is rightly more proud, and there is probably no man in the denomination who has done more for it than Dr. Broadus."

As a man he is genial, and courteous in conduct, and very sympathetic, so that he wins upon first acquaintance. His students generally exhibit much affection for him, and he takes an almost parental interest in their mental growth and physical comfort.

He has published a volume or two of sermons, an account of a visit to Palestine, and lectures on the History of Preaching, which were delivered in the Newton Theological Seminary, Mass. In his own department of special instruction he has published little, principally a Review of the American Bible Union's version of

the New Testament, which was contributed to the *Religious Herald* of Richmond, Va., in 1867-69.

As a speaker Dr. Broadus is remarkable for the simplicity, yet vigor, of his style. He wins the attention at once by the easy, off-handed manner of his opening, and develops the truth and application of the most profound principle with so much clearness, fertility of illustration, and self-command, that the listener is surprised to find apparently easy what he had previously regarded as paradoxical.

A quotation or two from an address delivered at a gathering of Christian workers, clerical and lay, at Chicago will, we think, fairly exemplify his customary manner. The subject under discussion was "How to Read the Bible":

"The main support of every individual is a Christian life, and the mainspring of all work must be the truth of God. Truth is the life-blood of piety. Truth is always more potent and precious when we draw it ourselves out of the Bible. I rode out yesterday with a kind friend, until presently we passed a little fountain where the water fresh and sweet and bright was bursting from the hill-side. The water we drink in the houses here is delightful; it comes from the pure lake; but there it was a fountain, and there is nothing like drinking water out of a fountain; and I remembered what my Lord Bacon had said, 'Truth from any other source than the Bible is like drawing water from a cistern; but truth drawn out of the Bible is like drawing water from a fountain.' Oh, brethren, this Christian Word we have to-day in the world will be wise and strong and mighty, just in proportion as its influence is drawn out by ourselves from the Word of God. And now I have come to speak to people who want to study the Bible, and would fain love it more and know it better. I am not to speak to Biblical scholars, though such are present, no doubt; however, I am not to speak to persons of great leisure, who can spend hours every day over their Bibles, and who may be able to build up

a law to themselves from the precious word of God; but I am to speak to busy workers, most of them busy in the ordinary pursuits of human life, in their accounts and business affairs, and all of them busy, no doubt, in the varied work of Christian people in the world; and they wish to know how busy people should read the Bible, and how, with the time they have, they can make the most of their daily readings, and therefore they will be willing perhaps to listen. . . .

"The Bible is one book, but the Bible is many books. It is rather an interesting subject to look back upon the processes by which men ceased calling it 'books,' and began to think of it as a book. You well know that the correct name means the sacred books, and when they borrowed the Greek word they called it '*Biblia Sacra*,' and now that word has been changed to the single 'Bible' in our language. Well, when the various writings of inspired men had all been completed and collected together, it began to be thought of as one collection, complete with itself, and when men began to note the singular and beautiful harmony which pervades this wonderful collection of books, they saw it was not only a complete collection of books, complete in themselves, but all in harmony with each other; and then the idea occurred to the Christian mind that this was really one book, and is a very beautiful thought, the internal harmony of all these various writings of inspired men. They were all written separately, and most of them published separately, and they were originally read separately from each other; and they have a different character, and, substantially, a separate meaning, and they should have a practical influence over those who read them, and they ought to be read as separate books. And then, each one of them must be read as a whole, if we are to understand it well. You can not understand any book if you read it only by fragments. A cultivated gentleman at dinner to-day remarked that he was reading for the third time that beautiful

book of piety, 'The Memorials of a Quiet Life,' and that he was reading it fifteen minutes of every day during the third reading. That is very well when he is reading it for the third time, but if he had read it fifteen minutes of each day for the first time, he would not have learned the meaning of the book so well. John Locke had experience on this subject; he said that in order to understand one of the Epistles of St. Paul, he must read it as a whole. Suppose a man has received a letter from an absent friend he loves very much, and he reads a page of it to-day, and another to-morrow, and a third the next day, until completed, how much will he know about it when he is done with it? He tells you, I have been reading a letter from a very dear friend, and you ask him concerning its contents, and he does not quite know what it is about. You must take the letter as a whole, and sit down and read it from beginning to end, and see what it is all about, and then if it is very valuable you will afterward take it in parts and see what the letter says about this subject and that, and so on to the end. That is very plain common sense, and yet what a pity in dealing with the precious word of God, the idea has not sunk more deeply into the mind of the Christian world.

"I will mention a little personal reminiscence. It occurred a long time ago—I am afraid to tell you how long ago. I was a college student at the University of Virginia, and one day, in going away from a lecture, Dr. McGuffee, speaking to the students while the manner of reading the Bible was under discussion, said: 'I want you to get "Horn's Introduction," and copy a paragraph there from John Locke in regard to reading the Bible as a whole.' The young man got it, and read it, and the thought sunk deep into his heart of reading the Bible in that way, and in order to show you the impression that was made I must mention that one result of that was, a few years later that young man delivered a series of Sunday-night sermons on the life and writings of Paul, treating each

Epistle as a whole. His discourse was given in the place where this advice was given, and the students of history crowded the aisles and doors and filled a new church, and a few nights later the young man was drawn very reluctantly from the pastor he loved, to try to be the teacher of others in these things, and this man can now tell you, as he looks back over his life, how much of his success was due to the recommendation of this professor. Oh, that all teachers of young men might know what one little word will do in controlling the whole life of the young man who walks by your side!"

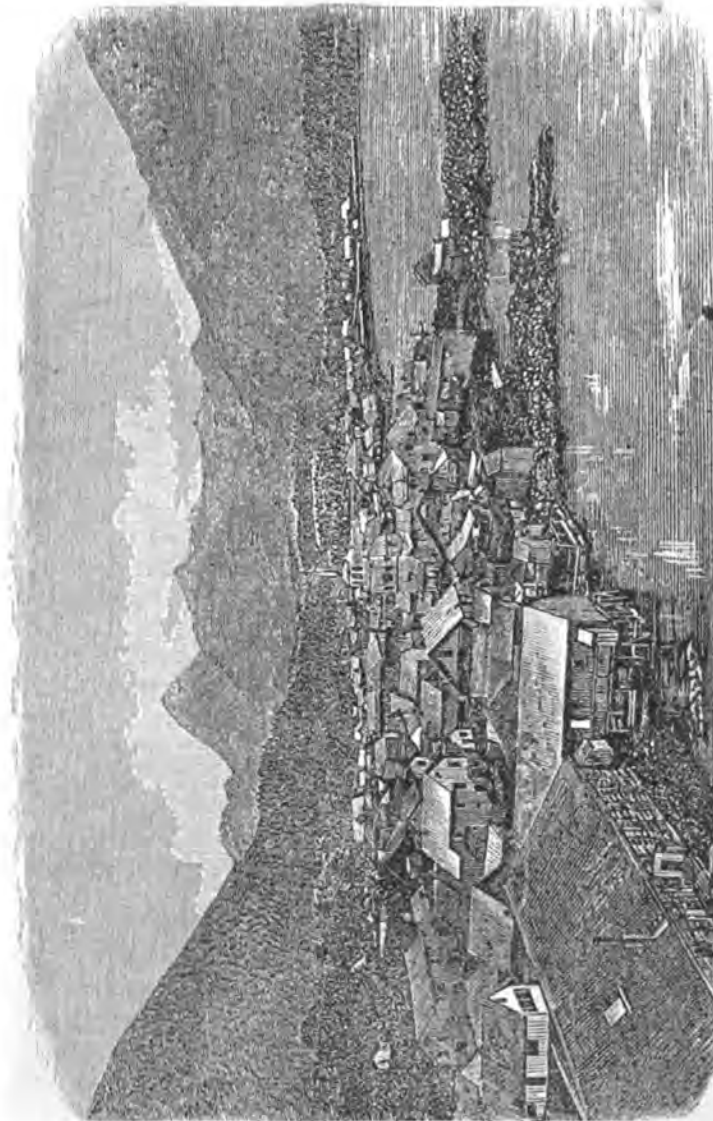
THE NOSE AND THE FACE.—A somewhat singular fact has been observed with reference to the shape of the nose, or rather the setting of it in the face, so to speak. To be strictly correct, from the artist's point of view, the nose should be accurately in the middle of the face, and at right angles with a line from the pupil of one eye to that of the other. As a matter of fact, it is rarely or never thus placed; it is almost invariably a little out of the "square," and the fact of its being so is often that which lends a peculiar expression and piquancy to the face. A medical writer points out that there are anatomical reasons why a slight deviation from the true central line may be expected, and that the nose which is thus accurately straight between the two eyes may after all be considered an abnormal one; the only absolutely true and correct organ being, in fact, that which deviates a little to the right or left.

LITTLE THINGS.—Springs are little things, but they are sources of large streams; a helm is a little thing, but it governs the course of a ship; a bridle-bit is a little thing, but we know its use and power; nails and pegs are little things, but they hold the parts of a large building together; a word, a look, a smile, a frown, are little things, but powerful for good or evil. Think of this, and mind the little things.

ALASKA'S PROMISE.

WITH the thermometer in the nineties it is agreeable for one to read or write about regions bathed in coolness far up toward the eternal ice of the polar

its temperature in summer is rarely uncomfortably warm in any part. And yet, in the southern region, particularly among the islands, the ocean currents



VIEW OF SITKA—ALASKA TERRITORY.

circle. Hence we have turned our gaze toward Alaska, and invite the reader to do the same. So near to the pole, its northern shores washed by Arctic seas, and possessing great fields of glacier, contributing a perpetual series of icebergs to be floated downward in the Pacific,

from the tropics so affect the temperature of winter that it rarely falls much below zero. The winters at Sitka, for instance, are by no means extremely cold. St. Paul, Minn., has a more rigorous temperature in winter.

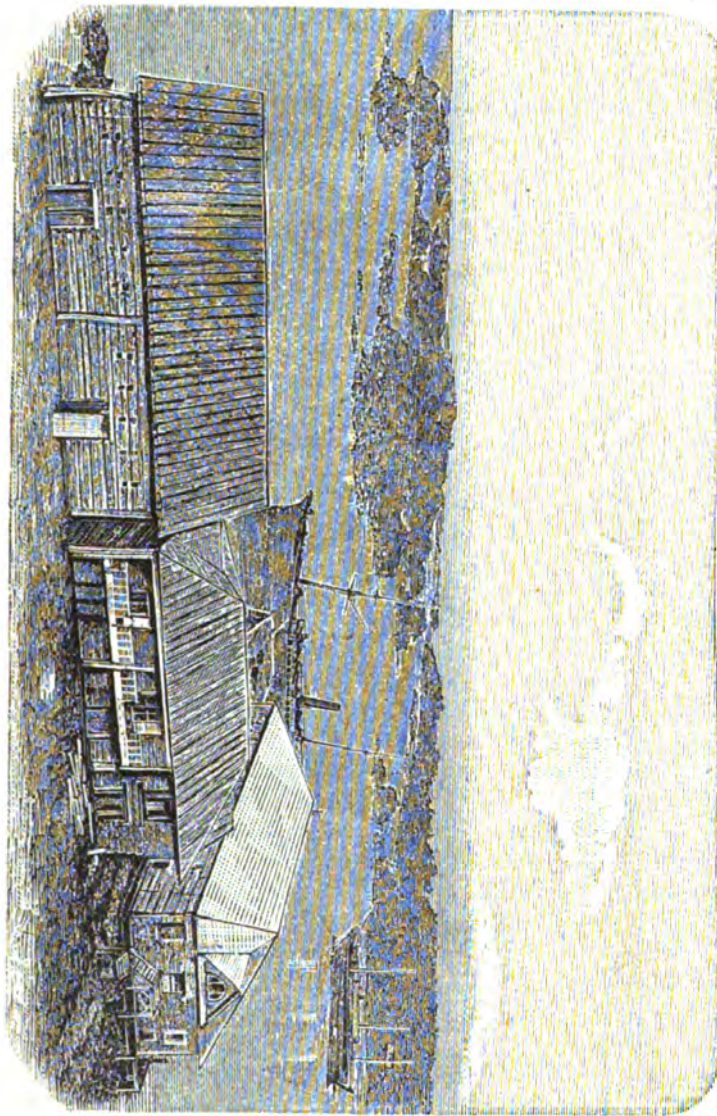
We are beginning to learn that this

new Territory contains resources which will eventually demonstrate the wisdom of its acquisition. Travelers and prospectors report incalculable stores of wealth in its fisheries, its forests, its furs, its mines, and already many enterprising

readers a practical idea of the character of the country, and will disturb the serenity of many who have been in the habit of decrying it as a desolate, far-off tumble of rocks and ice.

As shown in the engraving, Sitka has

THE BAY OF SITKA, WITH ISLANDS IN THE DISTANCE.



American merchants have established stations at different points. Alaska scenery too has its special wonders which must attract the tourist and artist. Mr. Conklin's book, "Picturesque North-West," from which the accompanying illustrations are derived, furnishes its

already attained a very respectable growth, and bids fair to become a metropolitan center before many years.

Its situation is very happy, overlooking the bay of the same name from a fine elevation. This bay is a beautiful body of water—studded with islands in most

picturesque order, yet permitting the eye to glance through them upward upon the northern seas until the waters are lost in the horizon, and sea and sky commingle. There are visions here

of a Grecian archipelago and an Italian sunset. The bay is very well protected on all sides, and its many islands give it a very interesting and varied character.

STUDIE IN COMPARATIVE PHRENOLOGY.

CHAPTER IX.—(CONTINUED).

CEREBRAL LESIONS AND THEIR EFFECT.

THE diseased conditions which have the most influence upon the skull are chronic lesions of the brain and of its membranes; hence that thickness and hardness which are found so frequently in the skulls of persons affected with mental derangements for a very long time. Next are the maladies known under the names of rachitis, scurvy, and syphilitic disorder. In some scorbutic cases the bones of the skull lose their consistency, and are atrophied to a remarkable extent. In Dr. Vimont's collection there was the skull of a young man who had died of consumption which lasted three years, and was accompanied toward the last with scorbutic symptoms; the entire skull weighed but ten ounces. The external table was not more than a quarter of a line in thickness, and at several places had completely disappeared, thus showing the diploe.

Experienced physicians are aware that venereal disease is peculiarly destructive to the skeleton. The skulls of persons who have died victims to its ravages often present on the exterior a rough aspect and numerous depressions similar to the markings of small-pox on the skin.

Animals are subject to osseous growths which may make their appearance on the outside or inside of the cranium. When the abnormality is of interior development its pressure upon the brain substance is generally accompanied with more or less disturbance of the animal's conduct. This in dogs has been known to simulate epilepsy. In old dogs a deposit of calcareous matter on the inner

table of the skull and projecting into the channels between the convolutions is quite common. This has for its chief effect to render them languid and sleepy with an excess of irritability when disturbed. Epilepsy is rare in dogs, but comparatively common in cats. As the latter are made much of in households, and fed and petted in a manner quite out of keeping with their true natures, it is not singular that they should exhibit phenomena indicative of physiological derangement.

ALTERATIONS IN THE CEREBRO-SPINAL SYSTEM AND ITS MEMBRANES.

The maladies of the cerebro-spinal system and its membranous envelope may be either congenital or accidental. To the first class belong all monstrosities of form, and departures from the normal in size and number of the parts which enter into its composition. This branch of the subject has already received our consideration in part; but its most interesting features are far from exhausted. The brains of idiots show deficiency of structure, the convolutions being considerably less developed and fewer in number than in well-organized heads.

The atrophy or loss of an entire hemisphere of the brain has been met with, and it has been claimed by the observers that notwithstanding so great a defect the intellectual functions were apparently complete. As the organs of the brain like those of the physical senses are double, each hemisphere containing a complete set, a lesion of one side may oc-

cur without seriously affecting the other. Dr. Gall cites the case of an ecclesiastic who died suddenly of apoplexy; only three days before, he had been prosecuting the routine of his office with his customary ability. On opening his skull Gall found that the entire median region of the right hemisphere had undergone alteration, and was composed of yellow clotted matter. Some authors have stated that they have noted the absence of the corpus callosum, or optic thalami, or pineal gland. Meckel denies the occurrence of such a cerebral condition as the absence of the pineal gland, and thinks that they who assert such a thing were not sufficiently exact in their observations. Sæmmering, however, claims to have found this body double. Meckel is of opinion that this was only a peculiar division of the gland. Vimont says that in examining a fox which had been killed by shot-gun, no trace of such a body could be found, and that the animal's previous history warranted no inference of mental disturbance.

CEREBELLAR.—The only malformations of a congenital character which have been authentically observed in the cerebellum have consisted in a diminution of its size, and of the number of its laminæ.

It is not within the plan of this treatise to enter into a general discussion of traumatic or accidental affections of the brain, as that would involve too broad a field of inquiry; but it is important that we consider some of the injuries or lesions which have a close bearing upon the phenomena of brain-function, and serve to demonstrate the influence of nervous tissue upon the mind.

It has already been seen that where a part of the convolutions are wanting idiocy is observed; and the proof is therefore incontestable of the relation between brain-organization and intellectual function. The number of accidental affections which have been carefully examined for the purpose of deriving information with reference to the connection between organ and function are very numerous, and certain facts are tabulated as beyond

dispute. For instance, one of the effects of apoplexy is a more or less complete impairment of the intellectual faculties. Their partial impairment demonstrates clearly enough that the brain does not act *en masse*, or as a whole in its functions, but that different functions belong to this or that part of it. Peculiar disturbances are known to follow an apoplectic attack, such as loss of the memory of proper names, or of language, otherwise the mental state known as aphasia. Of this many instances are reported. The subjects of it will exhibit their average intelligence in other respects, recognize friends, discriminate readily with regard to food and drink; show at once on its presentation whether an object is desired or not; in many cases working at their ordinary employment with their customary zeal, and often being perfectly well, with the single exception of being unable to speak coherently.

One of the early, well-authenticated cases is that reported by Mr. Hood, of Kilmarnock, Scotland. The subject was a man sixty-five years old, who suddenly evinced a difficulty in speaking. He had, in fact, quite forgotten the names of natural objects, while his memory of past experiences appeared, with the single exception of names, to be as good as ever. His senses were also clear and active, and he was able to work. He, however, complained of uneasiness and aches in the eyes and region of the eyebrows. Mr. Hood advised the application of leeches, and also that a blister should be placed upon the left temple. This treatment was adopted, and relief appears to have followed it. The man, however, did not recover his memory of names, but in the course of a month or two had acquired considerable skill in making himself understood by signs. Within half a year from the first of the attack he died, and the autopsy, which was made immediately afterward, revealed changes of the cerebral substance in the left hemisphere. In the convolutions of the anterior lobe, where it rests upon the middle region of the orbitary plate, were two small cysts,

lodged in a depression which appeared to extend from this point to the ventricle, where it expanded in the form of a trumpet. The right hemisphere indicated no unusual condition.*

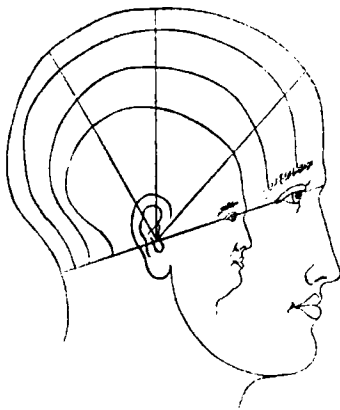
Messrs Bouillaud, Lallemand, Serres,

* *Edinburgh Phrenological Journal*, Vol. III.

and others are among the observers who have contributed to the older testimony with reference to the existence of an organ for speech. Among the many late observers is Dr. Charcot, of the great hospital at La Salpetriere, Paris, who has contributed several important cases to the history of Aphasia.

FORM AND GROWTH OF HEAD.

BY the engraving, copied from an English book by Nicholas Morgan, it is designed to illustrate the form and relative size of the head, from infancy to the age of fifty years. The chief magnitude of the inner or infantile figure is seen to be upward and backward from the opening of the ear. The anterior, or intellectual region, is comparatively small. As nature is economical in many ways, that portion of the brain which is first needed by the infant to preside over animal life,



is of ample size, while the intellectual and moral region, not needed at first, is kept small, for an obvious reason. The opening of the ear in this case is exactly in the middle of the head, but the back portion being higher, is much the larger.

The second outline shows the same head, developed by increased age, in which the anterior part of the head has increased in size more than the back part, showing nine parts in front and seven parts behind the ear. In the third outline, as will be seen, it has increased

still more in front of the ear, and in the anterior, upward expansion, than it has in the back part; and the last, or outer figure, showing a head at fifty years of age, at its best maturity, has been increased mainly in the upper and forward parts.

The brain will grow, if it be exercised, and is connected with a body sufficiently large and healthy to give requisite support to the brain, until the age of sixty-five, though many grow little after the thirtieth year. The brains represented in the diagram would contain—1st, 38 cubic inches; 2d, 75 inches; 3d, 114 inches; 4th, 150 inches, admitting them to be of only average size; but it has been ascertained by thousands of careful measurements of heads, by the late Mr. James Straton, of Scotland, that the largest so measured, would give, 1st, 48 cubic inches; the 2d, 95 inches; the 3d, 143 inches, and the 4th, 190 inches; thus showing, as in the average, a great, gradual increase of brain.

Now if the reader will refer back to the May Number of this paper, and consider the radical lengthening of the fibers of the brain, from the center to the circumference as therein shown, he will see in the present diagram the effect of such growth from infancy to mature life. Yet there are no "bumps," and the true phrenologist never looks for any, but for radial distance from the brain center.—*Practical Phrenologist*.

WHOEVER looks for a friend without imperfections will never find what he seeks. We love ourselves with all our faults, and we ought to love our friends in a like manner.

WELSH PREACHING AND WHAT IT DID.

VERY unsatisfactory was the status of Welsh religion at the beginning of the eighteenth century. The ecclesiastical salt had lost its savor. There were churches not a few; but the stars about the candlesticks moved in questionable orbits, and so flickered with uncertain light that doubt was begotten whether they were in Christ's hand. The Squire might have patterned after Sir Roger De Coverley, yet had evidently forgotten to supply his Vicar with ready-made sermons; and like him of Wakefield was accustomed to go to sleep in the most pathetic parts of his homily. The best idea of the church was its needful service as an appendage of good government. The so-called better classes were generally godless, and the lower given to brutality and vice; and Sabbath games and rustic dances drew off the population from all serious worship.

About the time when Whitefield was drawing the English masses to the true ideal of the Cross the fire of God fell upon Daniel Rowlands, Griffith Jones, and Howell Harris. Nominally churchmen they were discountenanced by Episcopal authority. The successors of the apostles discredited their apostolic zeal, and thrust them beyond the church walls; its men of uncommon energy and oratorical endowment, they went evangelizing through the Principality, extemporizing the grassy bank, the church-yard tombstone, the empty wagon, and the rough table, as acceptable pulpits. In the Market-places, at the Fair-days, or at the gatherings for criminal execution, the untiring evangelists made themselves heard. Rowlands was silenced by his Bishop; but his parishioners built him an Independent chapel, where to dense crowds he preached on the Sabbath. Howell Harris was a layman, and preached for nearly half a century to immense and weeping throngs who followed him as the multitudes did the Saviour. When, in 1738, Whitefield met him on his first visit to Wales, "their souls met and blended

like two flames," and they two went forth, the great English preacher baptized with Welsh fire to "set the whole Principality into a flame." Howell Harris was a man mighty in oratory and Christian experience; but Wesley said he owed nothing to art or education. Preaching often three or four times a day, in nine weeks traveling over thirteen counties, often preaching to the people at midnight, and sometimes for weeks together never taking off his clothes, he moved as a column of evangelistic fire among the people. Howell Davis was another associate. He was a churchman of the school of Jones and Rowlands, preaching everywhere, yet especially to a church of two thousand communicants which, it is said, had to be emptied twice to make way for a third congregation to receive the communion at his hands. David Rowlands was ordained when twenty years of age, but with no pretensions to piety; an expert rather in revels and games than in sermon or prayer. Griffith Jones, and a Dissenting minister named Pugh, were the instruments of his conversion. When he was twenty-five years of age he became a transformed man, to the wonder of his congregation. He threw himself body and soul into his sermons, and when he preached, the churches were crowded to suffocation. The church-yards were filled to hear him speak. The sleepers were awakened, and those as dead in sin as the buried forms reposing in their graves were oblivious to active life, were aroused as in Ezekiel's Valley of Vision. The effects of his impassioned utterances were unexampled, and his hearers would fall powerless to the earth. People came fifty or sixty miles to hear his awakening discourses. On sacramental Sabbaths his communicants would count from two thousand to two thousand five hundred, coming as the Jews came to the Passover, and returning home joyfully singing psalms and hymns upon their way. He was as mighty in the pulpit when seventy years old as he was when fifty; and for

nearly fifty years his immense popularity never suffered abatement. His voice was one of unusual power, and thousands would listen as entranced to his preaching in the open air. His elocution was unrivaled, a remarkable revival of religion commencing in his congregation through the touching and piercing tones in which he read the words of the Litany, "By thine agony and bloody sweat, Good Lord, deliver us!" the people beginning to weep and cry aloud as if moved by supernatural power. In preaching, his voice, animation, zeal, pathos, appearance, were beyond description; his face glowed like an angel's, and his hearers seemed to be brought face to face with the burning cherubim and fiery cloud. Every muscle and nerve of his body worked in harmony with the strugglings of his soul, so that, as one who heard him said, "I did not know that my feet were on the ground; I had no idea where I was, on earth or in heaven."

These apostolic men were succeeded by others of a kindred faith and zeal. Their mantles fell upon Elishas at the plow, who found a higher calling in the barren soil of human depravity—upon Amoses among the herdsmen like Christmas Evans—upon weavers' boys, like the wonderful John Elias, of whom an intelligent old saint remarked after hearing his first sermon: "The Lord keep him from error; the people will have to believe whatever he says."

There was Robert Roberts, who so spake that no one could question his sincerity, the sermon being an outgrowth of what was to him the most intense reality, speaking of heaven or hell as if he had just seen them. There was Williams of Werne, the contemporary of the latter, and of Elias, and Christmas Evans, who would hesitate to preach till he was on fire with his subject, and felt that he was drenched through and through with the spirit of his theme. These men compelled the attention of the multitudes in the spirit of the old Greek who said: "Strike, but hear me!" or in that of Whitefield, who, if he beheld any lagging

attention, would exclaim: "I must, and will be heard!" They drew upon the hearts of the people. Nothing drew like a sermon, because they were determined to make it draw. That was their high calling. They emptied the theater and filled the church. The circus went begging, while the conventicle was the attraction of the country-side. The fair-day would often suffer in attendance, but the field-preacher would not fail of hearers. Balls and merry-makings were forsaken for the conference and prayer-meetings. Intervening miles between a popular preacher and the people were regarded as small obstacles to bring them together, if without horse or vehicle they had the use of their own feet. Rainy weather or stormy skies could not keep them back; they would listen attentively to a long sermon amid the weeping clouds, because the descending truth was too precious to be lost.

The results arrested the attention of the world. As in no other country the population attended public worship, Bibles were in every house, and studiously read. The books printed, circulated, and read were soundly religious. Infidel publications could find no purchasers or readers. The Sabbath day was the great day, and to foreigners nothing seemed so wonderful as the numerous places of worship, so filled with hearers, not only on the Sabbath day, but in week days. The people became eminently moral. The corrupt and debasing customs of former times became unknown; and the moral and intellectual character of Wales and Welshmen was transformed by the ministry of the Word. The name of a Welshman became the synonym of intelligence, industry, reliability, and pure religion. Even Bible-loving Scotland was left behind; the preachers being, as a class, more zealous, and the agencies employed more numerous. The causes of this phenomenon need attention. What was the reforming power? It was manifestly the preaching of the Gospel, but the preaching was of a marked kind. In its spirit and volume it was Calvinistic,

whether Episcopal, Methodist, or Baptist ; not the dry bones of a theological system, but the body of living truth descended from the skies to lead men there. The preacher came with a "Thus saith the Lord," and that was the end of all controversy ; he did not apologize for it, or seek to tone it down, but urged it on the conscience, and left it there to do its work. The preaching was not in the learning of the Schools. Rowlands was no college graduate. Harris was repelled from entering Oxford by an insight into its immoralities. Griffith Jones and Howell Davis were by no means scientific. Neither Christmas Evans nor John Elias could lay any claim to scholastic training. Robert Roberts, deformed and insignificant in person, a broken reed, and as if shaken by the wind, became transformed in preaching, was mighty in the Scriptures, and overpowering in persuasion. Classical knowledge was to him among the unknowable ; yet he had that which the erudite Owen envied in Bunyan, and which led him to confess his willingness to surrender his learning for the acquisition of the illiterate preacher's power. College curriculums and diplomas might adorn a Shakespeare and a Burns, a Patrick Henry and John B. Gough, but not create them. There are gifts of nature and grace which no book knowledge, no lingual attainments or mathematical ability can bestow. No training can change a black-bird into a nightingale, or a Samuel Hopkins into a Chrysostom. Let not this tend to the depreciation of learning, but to the exaltation of genius.

Next to the fervent piety of these Welsh preachers was that quality denominated by an English statesman, "*blood earnestness*." Every faculty of body and mind was rendered tributary to bringing God's fire into the listening congregation. From the impulses of a roused nature, it vented itself in tears, cries, appeals, arguments, and unrestrained emotion ; being at times the organ-tones of the celestial choir ; the rushing of a Carmel-wind or the descending fire ; the shooting of Sinai's flames, or the rocking of the earth beneath the

tread of Omnipotence coming to judgment. So the preaching-places became Mounts of Law or Gerizims of blessing ; Zions of grace or Jerusalem visions of peace, in which the powers of the world to come were brought sensibly before the congregation. The preacher spoke as Paul would speak, fresh from his sight of the Paradise of God and the third heavens of all unutterable things. They could not understand why a Garrick, a Kemble, or a Kean should present fiction as truth, the voice, the action, the look, wrought up to the utmost intensity of feeling, wetting the stage with tears, and making many of the audience faint ; and the preachers of the great verities of the universe set them before a congregation as if they were of no more personal concern than the belts of Jupiter or the rings of Saturn. They knew that members of Parliament of leading ability and influence thundered and lightened in their speeches ; the great Earl of Chatham spoke with lightning in his eye, while his lips seemed clothed with thunder, so that Walpole called him "Old Garrick" ; that Sheridan, and Grattan, and Fox, and O'Connell uttered themselves as combinations of alternate cloud, flame, and whirlwind ; giving rein to every varied feeling ; shouting, stamping, walking to and fro under the inspiration of this subject, assuming every variety of attitude, being pugilist or gladiator, as the torrent of their eloquence demanded. Would the needful for the orator of a Parliamentary measure be unbecoming the spokesman of salvation ? Such philosophy was never learned where angels burn with zeal, where Jesus wept in his discourse, and Paul besought with tears. It might have been taught in Laodicea, but never at the Jerusalem Pentecost. It was born of State craft, semi-infidel moderatism, and prescribing laws and manners where holy nature should be heard ; vented the proverb, "dull as a sermon," and made the Lord's house a spiritual dormitory. Not so thought Whitefield, who compelled Garrick to admit that while he was but a *player* the preacher was *real*. Not thus thought

Edward Irving or his older associate, Dr. Chalmers; not thus thought the kingly preachers of Wales, or Rowland Hill, or Guthrie, or Duffey, or E. N. Kirk, or Gavazzi, or Spurgeon. The *pulpit*, not the platform, the bar, or the stage, should be the center of true eloquence. Why should Lord Chatham speak as if his mouth was clothed in thunder and his eyes blazing with lightning; a Grattan present himself in his political utterance as a combination of cloud, whirlwind, and flame; a Mirabeau deliver his speeches with dilated nostrils, his whole system swayed as by electric irritability or preternatural agitation; a Choate plead his case, so carried away with the intensity of his feeling, as to be dripping with perspiration, running his tremulous fingers, long and bony, through his curling locks, while the convulsive jerks of his body seemed to shake every bone in its socket; a Pinkney so present his cause in Congress with such vehemence and volcanic force as to move the members at his will? Should a Clay so present his political ideas that every muscle of his face, every movement of his hand, every tone of his voice impressed his auditors with his sincerity as a mighty intellect burning through his body of flesh to lead men to do what he deemed desirable for the nation's well-being; should a Chalmers surround his pulpit as with a blaze of fire; a Knox be so carried away with the spirit of his theme as to lift it to the throne of God; and a Christmas Evans so pleading for Christ as to lead his hearers to break forth into hosannas of prayers and hallelujahs of praise, be censured as lowering the dignity of the pulpit, and making it the place of theatric display? This guarding the dignity of the pulpit has been too often the repression of the voice of Nature, the negation of common sense, and the enthronement of dullness. The Savonarolas of the sacred desk never attempted the *role* of the tragedian; they only endeavored to be true to their calling—the baptism of fire.

The preacher's office demands the highest eloquence, feeling, and earnest-

ness, because all other subjects of interest to human beings are inferior to his. He who does not feel this, fails to comprehend his mission. His subject must be all or it is nothing. Salvation is infinite or else unworthy of attention. Its theme is inspiration itself, making tributary imagination, fashion, zeal: reason illuminated, logic inflamed, sympathy aroused with intensest emotion to achieve its greatest results; embodying patriotism in defence of the everlasting Fatherland, the pressure of business for ending gain or loss, love for the sum of all excellence and beauty, together with a regard for the rights of God and the welfare of the universe. The philippics of Demosthenes against the tyrant of Macedonia, the invectives of a Cicero against Cataline, the pleadings of a Chatham for the rights of the colonies, the fervid strain of a Patrick Henry against the encroachments of the Crown, may all be combined in the preacher of the everlasting Gospel against tyrannies, encroachments, and servitudes which dwarf the former into absolute littleness.

Here old Welsh preachers regarded the sermon as God's instrument of power, a divine ordinance, and the pulpit a throne where Revelation uttered its voice. They would not admit the right of the rostrum, the bar, or the stage to interest men in temporal affairs more than the vantage ground given them by God himself above all of them. Hence if they did not see their congregations moved upon to the strictest attention, melted into tears or raised into rejoicing, the sermon was regarded as a failure for which they were responsible. A virtue had gone out of them which they had failed to nurture and keep. If they often misjudged in this, the error was on the right side: regarding the sermon not so much as an intellectual treat, but as a moving force to reformation of life. Hence the inquiry was common, "What is the *key* to effective preaching?" How could they make the sermon the way of God's truth to the heart? Christmas Evans used to say that by careful hearing he got it from

Robert Roberts. This monarch of the pulpit, who owed nothing to his personage, could hardly sleep a wink before preaching his mighty sermons. He would walk about his chamber excited by his lively conceptions, roll at times upon the floor in troubled thought and prayer until he was all aglow with his subject. Evans generally went through a singular process: he would walk about, Bible in hand, abstracted from all earthly objects, breathing out prayers or excited words, and then with his face calm and bright walk fully prepared into his pulpit. Livingstone, before his sermon at the Kirk of Shotts, where five hundred were converted, was thus exercised all night. Dr. Chalmers would pace about his study, speaking and gesticulating till an *afflatus* seemed to fall upon him. Whitefield could be heard praying before sermon time: "Lord, I can not go unless thou go with me!" John Welsh, the Scottish oracle, would rise from his bed and, wrapped in his plaid, go through this soul-struggle in order to success. Daniel Rowlands was of the mind that unless he was heated or inflamed by prolonged meditation and prayer, he was disqualified for the delivery of his message. The study and closet of these worthies was the Jerusalem in which they tarried until they were empowered from on high. "Why is it," said the celebrated Sydney Smith, "that we are natural everywhere but in the pulpit? No man expresses warm and animated feelings anywhere else with his mouth alone, but with his whole body; he articulates with every limb, and talks from head to foot with a thousand voices. Why this holoplexia on sacred occasions only? . . . Why are we, who are rocked in the cradle of ancient genius, who hold in one hand the Book of Wisdom of God, and in the other grasp that eloquence which ruled the Pagan world, why are we never to rouse, to appeal, to inflame, to break through every barrier up to the very haunts and chambers of the soul?" What thanks are due to these grand preachers of a revived Gospel in showing,

both from nature and grace, for what the pulpit was designed, and what it could accomplish!

They had a deep conviction of the necessity of a *preaching temperament*, a necessity more binding than the wearing of a black gown. If a man had it not, they doubted much his call from God. The ministerial call involved ministerial *fitness*. As all men could not be poets or singers, so many were never called to the pulpit because with no ascension gifts, no prophet's mantle, no divine *enswathement* revealing their mission. It was the needful anointing, and, if temporarily wanting, they struggled for it until they could themselves see and feel the great themes of Revelation. If the actor strove to lose his own personality in his Hamlet or Lear, so the minister of Bible character and truth must be identified with them in soul-experience, compelling the attention of the people, as would a rousing Peter or weeping Paul. To ascend the pulpit as with a special message from God, to carry into it the *key* of access to immortal minds, to feel that they must be heard, and that they could not and must not fail without a sense of blameworthiness, made the production of a sermon and the ability to preach it, an agony, an effort of the whole heart, conscience, intellect, and imagination. Thus endowed, the preacher ascended his pulpit, rose to deliver his message as the mouth-piece of God; he swayed from side to side, he moved backward and forward; like Chalmers, his movements seemed begirt with sacred flame; like Robert Hall, his sentences came like the recoil of heavy artillery; or like Robert Roberts, he seems like the mighty angel, having the everlasting Gospel to preach, so that one boy said to another: "Is he a man or an angel? Good heaven! but how much better an angel preaches than a man!" The orator's face glowed with celestial light, growing more and more impassioned, a divine *afflatus* seemed to surround him; then the Welsh *hwyl*, meaning *full sail*, bursts from him; a wild, irregular chant of triumphant utterances, or wailing ca-

dences; speaker and hearer were carried along in a current of irrepressible excitement, of murmur, assent, praying, or shouting "Amen," "Bendigedig," "Dio-beh-lyth"; in some intermingled with joyous laughter, and by others with pouring tears. The preacher stopped, the sermon had accomplished its end; it had centered the people into the great realities of God.

The best test of preaching is *what it does*. Too much of it at the present day is severely intellectual. It is aimed too high. This straining at strong thinking and fine writing makes so many sermons delivered before ecclesiastical bodies so tame and profitless. The demand of the age is for more *heart*-eloquence, more fire, more oratory, more emotion. The full and eloquent preacher will ever leave behind the one of great profundity and heavy delivery. Learned preachers will go begging for a pulpit from church to church, while the Bunyans, the Evanses, and the Moodys will ever be in demand. Lengthening the period of theological study will not meet the cry of our congregations, unless the learning is *the how* to move the people to feeling and action. The successful candidates for the ministry may fail in mathematics or the classics; but they must not fail in the preaching temperament, the burning heart, or the eloquent tongue. As the true poet is not made, but *born*, so the enthroned monarchs of homiletics must come forth with endowments education can polish, but not bestow; and a partially-educated Rowlands or Finney will lead their thousands to Christ by their sterling eloquence, where a James Völer or Samuel Hopkins will preach to empty seats. This is the derivable lesson from the results of Welsh preaching.

REV. JOHN WAUGH.

TRELAWNEY, THE FRIEND OF SHELLEY AND BYRON.—A writer in the *Whitehall Review* said of this well-known Englishman: "The last time I saw him was at his place at Sompting, on the South Downs. His own particular sitting-room

there reminds one considerably of a ship's cabin; it is very plainly furnished, without curtains, and the wall-paper, brilliantly colored like a child's picture-book, has small square designs of different nations engaged in characteristic occupations. In the morning I heard this wonderful old man, now aged eighty-seven, singing as he rose. He always takes a kind of air-bath before dressing, draws his own water, and chops his own wood. He breakfasts off cold water, bread, and fruit, which he eats standing. The crumbs of his table he scatters on the window-sill for the birds, being very fond of animals generally. He is extremely abstemious, taking only one solid meal a day, and, like his beloved Shelley, he prefers a diet consisting of vegetables, milk, and fruit. His astonishing health and strength ought certainly to make many converts to his mode of living. He goes out every day, no matter how inclement the weather may be, and of late years, when he has chiefly lived at Sompting, he strolls to a duck-pond and feeds the ducks. He has a fondness for children, and, if unobserved, will walk with a stray child clinging to his hand, and regale it with 'Turkish Delight,' a favorite sweetmeat of his own. Winter and summer he wears the same costume—no under-clothing and no extra outer-clothing. His air and appearance are singularly commanding."

THE WOODMAN'S CHIPS.

A spring-tide stream meanders through
A hill-side forest, pathless, deep,
Where rapids o'er great boulders leap,
And into foam swift currents brew:
While burly chips that woodmen hew,
Where gummy logs the steeps bestrew,
Are eddied into dizzy whirl,
And into merry spinnings twirl;
Till floating on they reach the flume,
Past bulky logs in mooring boom,
And dash with mad onset anew,
To dripping, ever-turning wheel,
Beneath the saw that cleaves the deal,
And there are quickly lost to view.

CLARKE W. HARRINGTON.



MAN AND WOMAN IN SOCIETY.

IN every nation the man performs the heavy labor: he cuts down the forest, builds the fences, breaks up the land, plants the fruit-trees, digs the canals, builds the bridges, railroads, engines, and steam-ships, erects private and public buildings, constructs aqueducts, docks, forts, and arsenals, mines the silver, gold, and other metals, works them into forms of use and beauty, carves cameos and cuts diamonds. All great inventions, all machinery in our factories and mills, all heavy furniture, and the most part of carpets, dress-goods, and cloth fabrics are his work. In a few European States women toil in the fields, and somewhat in the coal-mines of England; but with slight exceptions, man subdues the fields and makes the private and public works that are necessary for carrying on commerce, manufactures, scientific research, and the arts.

Our finest poets, our wisest prose-writers, our greatest artists, our chief sculptors, our grand musicians have been men. In looking through early history we see how rarely it has been necessary to mention women as originating or perfecting any work of magnitude. For such works great physical strength and great mental endurance were requisite, and nature has not equally endowed women with either of these attributes. It is evident man was designed to do the heavy, mechanical work of the world.

As God formed the trees of the forest and the field-lilies, so He made man and woman—one for sturdy uses chiefly, the other to show the skill and delicacy of His handiwork. It is not seemly, or beautiful, or good, for women to mingle unduly in the harsh, rough labors of life. Woman is the home-maker; there can be no homes unless she create and maintain

them. A man can not make a home by himself; yet woman can, and she shows at once this is her truest and best sphere. Woman is the natural nurse and instructor of childhood. It is her province to kiss, fondle, and caress the cooing infant, to teach the lisping child, and mould almost at will the growing man or woman.

Doubtless man first organized governments, made laws and established a degree of security in the possession of property, life, and liberty; he invented printing, wrote the earliest books, built and endowed the first schools and universities, established professorships and filled them. In truth, man seems to hold his present position in society by right of having created the position. We have no authority for supposing him to be an usurper who has driven woman from her original fields of labor.

Woman's work in early days was undoubtedly domestic, including cooking, spinning, weaving, making of garments and embroidery. Gradually her sphere of labor has widened and now includes clerking, book-keeping, telegraphing, wood-carving and engraving, editing, singing, speaking and acting upon the stage, teaching, painting of pictures, making of statues, authorship, and the learned professions. Woman's sphere has widened more in mental than in manual ways, for she is more nearly man's equal mentally than physically, and until she is his physical equal she can not become fully his mental equal.

Woman's position has almost universally been the position of a child; the child of the father and the child of the husband. She has had little independence of thought or action, being always fettered by dress, etiquette, and masculine author-

ity. The poorer class of women, in every land, have been, and are now, the most independent in their movements, in their dress, in freedom from criticism, and in changing their places of residence. A man comes and goes without inquiry or suspicion. A woman must be accompanied by her "uncles, aunts, or cousins"; every one must be informed wherefore and whither she journeys, else she incurs distrust and risks loss of caste. In those old, savage days when mankind was so fierce and dissolute, woman needed to be surrounded by every protection to insure safety. Now that society has changed and women are frequently obliged to depend upon their own resources they need more freedom of movement and action.

"Superfluous women" formerly found refuge in convents, or were taken into the homes of kinsmen to be cared for and protected, spending their lives in spinning, weaving, and embroidery. Those days are passed, convents now are few, and few are the relatives who wish to support any women save those of their own immediate household. There remain then two alternatives for honorable women: work or—suicide. "What shall they do?" "Why, teach!" That is the almost invariable answer to the question, What shall the superfluous women do? And this brings us to the question of "women and the schools."

The schools in every land have been reluctantly, but slowly opened to girl-pupils. Three centuries ago in France a young girl wished to establish a girls' school in her native village. Her father, horrified at the idea of a woman's wish to become so conspicuous, called together four doctors of the law, "to decide whether teaching girls were not a work of the devil." In the schools founded by the Pilgrims, girls were allowed to attend two hours daily. They were taught reading, writing, and the rudiments of arithmetic. In 1688, Fenelon, one of the earliest champions of female education, published a work "Upon the Education of Girls." The change of opinion in regard to girls' education from that time

is now very marked. To-day all departments of thought and knowledge are open to women. True, a few Universities and Colleges are not yet willing to receive women-pupils, but that matters not, since equal advantages are available elsewhere. Women now have facilities to fit themselves for teachers of high order, if they will take the time and give the requisite labor. Many women in different countries are using their advantages nobly and taking good rank as scholars.

There are about a hundred thousand women-teachers in the United States, doing as good work in their several departments as men-teachers of the same grades. It is much to be regretted that they have no separate educational organization or society where they can have a chance to show the world plainly their numbers, work, and capacity. A woman's association for teachers ought to be formed at once, officered and managed wholly by women, holding annual meetings, with discussions, essays, readings, or whatever will most interest and instruct.

Women in the past lacked opportunities to unfold their powers; now knowledge is almost as free as the light. Life is short; though it be but the introduction, the preface to life hereafter, none can afford to waste its privileges. All need to make the most of every moment. Each human being is a separate creation, has a peculiar combination of mental and physical qualities; usually each person is better fitted for some one employment, or calling, than for any other. It is the highest wisdom, and is for the general good, that each should find and fill his own proper niche in life. In the progression of society in our own land this is possible to a greater extent than ever before.

In our State women have grand facilities for education. Besides good common schools, the academies and the normal schools all open to girls, we have Vassar, Syracuse, and Cornell ready to equip women in science, art, and the learn-

ed languages. And just over in Massachusetts conservative old Harvard has reached out a wing for young women to brood under and grow. Boston University is helping women, and so also is the Boston society for promoting "home study," and the Chautauqua Society for the same purpose. Women can desire little more save that Harvard and Yale shall fully open their doors to the sex. The Empire State has recently stepped into line with sturdy Massachusetts and the vigorous sister States of the West in giving woman a voice in the control of the public schools, and we trust women will now show more interest in educational matters.

Old Greece and Rome were almost upon a plane with us in intellectual development, but their immorality was too revolting for mention. In these countries women were kept in almost as complete seclusion as in India, China, or Turkey; they were almost powerless in society or government; through their corruption these nations perished. No arguments or objections against woman's higher education or her participation in public affairs can be drawn from ancient history, for then woman was a slave, or a toy, utterly ignorant, utterly untrained. The Northern European nations first gave woman any degree of freedom.

All thoughtful women should use their utmost influence to open to their sex every school, every privilege connected with school affairs, and every literary occupation. Woman is not fitted by nature to perform the rough, heavy work of the world. But for work that requires fine powers of observation, quick perceptive faculties, acute sensibilities, æsthetic tastes, and keen discrimination between rights and wrongs she is eminently fitted, and into occupations demanding such powers she should fearlessly enter. Nature has made her the world's teacher by giving her the motherhood of the race, and she should strive to make that motherhood the noblest possible. The destiny of the world is in her hands, for she moulds the world.

"My Mother" is a talismanic word or

thought to every one: the high-bred maiden at her devotions, or the hardened criminal cursing fate and God in his cell.

If the possession of the ballot will make woman better, stronger, nobler, she must have the ballot. The world demands that each member of society should live and do their very best for the good of all, and whatever promotes strength, nobility, honor, and power should be sought diligently. Women hold the destiny of the world in their hands. As they are, as they teach, so is the world.

If women generally were base, frivolous, wicked, the avalanche of wrong, wickedness, and sin of both sexes combined would crush and destroy mankind.

Women must be roused to feel more deeply their moral responsibilities. The training of childhood is their work, the social training of the youth, the building up beautiful homes and home-life is their work. Hopeless criminals in their cells await their teachings! Untaught youth in our streets await their teachings! The sin-shadowed sisters of shame await their teachings!

Nothing contaminates the light; woman is the light of life—she must shine into earth's dark places, until, as on Creation's morn, the world is once more resplendent in the loveliness of purity; then all sin and shame shall pass away with all the grief, agony, and remorse that wickedness has ever caused. To aid the world effectually she must study and work for the prevention of sin and crime, rather than for its cure. The broad fields are spread before us, and as yet the laborers are few. They who come at the first hour, or at the eleventh hour, shall win their reward. One seed may become the great harvest of eternal good. AMELIE V. PETIT.

YET much remains
To conquer still; peace hath her victories
No less renowned than war. New faces rise
Threatening to bind our souls with secular
chains;

Help us to save free conscience from the paw
Of hireling wolves, whose gospel is their maw.

Milton.

TWO ENGLISH QUEENS.

THE two queens whose faces illustrate this article, are types of two distinct classes of womanhood. For the sake of humanity we hope that the one class is largely in the minority, as we believe it is; yet alas! we meet every day on the sidewalk, in the street-cars, at the theater, at the church, women whose faces mark them of the Elizabeth Woodville stamp,

would have been. Here all the parallel ends. In intellect, in character, in loftiness of aim, in womanliness, in birth even, the difference was as striking as that between a sparkling diamond and a piece of worthless lead. In private or public life, in prosperity or in adversity, as queen, wife, mother, widow, one was a perfect contrast to the other.



ELIZABETH WOODVILLE.

women supremely selfish, utterly heartless, puerile in character, unloving, supercilious, who will go to their graves, perhaps, without seriously thinking one noble thought, without performing one generous deed.

It is doubtful if there could be selected two other queens of England between whom the contrast is so complete and striking, as between Margaret of Anjou and Elizabeth Woodville. Neither were bad women at the bottom, yet the strong virtues of one led her to commit crimes, while the negative, cold, selfish character of the other made her more contemptible than any mere imp of wickedness

Both these queens played an important part in a very interesting period of English history. They were contemporaries, though one succeeded the other upon the throne. Both secured the most dazzling successes, both felt the extremest woes of adversity; yet the memory of one is that of a heroine, while that of the other is scarcely respectable, so dwarfed and debased is it by the comparison.

When Margaret of Anjou went from France to England in 1445, a young and beautiful bride of fifteen, there were but few who envied her not her good fortune. It was a wonderful match, they thought,

for a portionless beauty, whose father, though he styled himself a king, had neither kingdom, nor money, nor power. To be queen of the most powerful realm in Europe was indeed a lofty fortune, but Margaret's position from the first was one that required rare powers of mind, great strength of character, and a heroic courage. The king, her husband, was a hopeless imbecile, the great nobles were quarrelling for power, and when her son was born the rival family of York rose into

ville makes in the English annals is during the early years of Queen Margaret's reign, when she appears at court as a maid of honor and a belle. Even then she shows the spirit of the parvenu. The daughter of the obscure Woodville, though she has in her veins the blood of a princess allied to ducal and regal houses, is true to her rank. She is selfish and treacherous, and an upstart. She shows much low cunning and a calculating nature. By her beauty and blandishments



MARGARET OF ANJOU.

open rebellion. The young queen was forced to take the sole authority into her hands. She had to be both queen and king, both father and mother. Before she was thirty years old she led an army, and she showed the valor and the ability of a general in the field as she had formerly exhibited the faculty of a politician in the cabinet. She faced every danger unquailed, she rose unconquered above every defeat. Brave, unyielding, spirited, she never relinquished the struggle until both her husband and son were dead, and then she retired defeated, but not dishonored.

The first figure that Elizabeth Wood-

she wins a gallant knight, rich Sir John Grey, of Groby. In less than five years she is a widow bereaved and destitute, for her husband had taken arms with the losing side. From this low state she is raised by an unexpected stroke of good fortune. Young Edward of York loses his heart to her, and after a long wooing reluctantly makes her his queen. Without grace, without dignity, she fills the station of the exiled Margaret. The daughter of a simple knight sits in the place of her who had the proudest blood of Christendom, of kings, of emperors, of great crusading chiefs, in her veins.

Adversity, sudden and unexpected adversity, comes to the woman who could not even meet the smiles of fortune graciously as a woman should, as a true woman would. Without friends—for she never had the faculty of making any—without any reserved force of character the poor queen bends to the storm. She delivers up her sons; she is ready to sell her daughter, if only she can gain the favor of the usurper. Self has been her idol all her life; she is not hampered by a single noble sentiment. Ease, luxury, splendor, the privilege to do as she pleases—this is all the woman cares for.

Look at this woman's head. What is there of high, exalted character, of noble, striking beauty about it? Beauty she had indeed, but it was beauty of the lowest order, the beauty of long, shining, golden hair, of smooth soft flesh, and a brilliantly fair complexion. There is no loveliness, no soul-beauty there, nothing to captivate the mind or hold the heart of a true man. The face is narrow. The features, though regular, yet would be insipid but for an expression rather of cunning than of intellect. How little of character is there in the small, pointed chin! No woman with a chin like that could be a queen royal, or a strong, loving, ardent wife. There is something of superciliousness in her whole expression, strengthened by a slight curve of an otherwise beautiful mouth, and the high arch of her eyebrows.

What of her intellectual faculties? None of the organs that make woman pre-eminently an intellectual being are largely developed on the head of Elizabeth Woodville. The brow is broad enough and high enough, but it has a certain vacancy or dullness. We find little Benevolence, and Firmness is small—"unstable as water" might be written of her as well as of Jacob's first-born—but her Spirituality appears large, and Self-esteem and Approbativeness are well developed. A very good faculty—Ideality—we find largely developed in Elizabeth Woodville. She had excellent taste, and her Cautiousness was extremely large;

she never went to excess in anything: in fact, all her faults were negative. Her cold affections and prudent calculation made her insensible to the faithlessness of her husband. She could deliver a young daughter to be the wife of her greatest foe for a generous life annuity. She had no intuition, and with little Causality or Firmness, without knowledge to read men or a heart to win them, she had no real power in prosperity, and no friends in adversity.

The head and face of Queen Margaret are of quite a different stamp. There is character in every feature. In her organization there were strength and substance rather than shadow and show. Looking at her you exclaim, "Behold a woman!" She is beautiful, but she also has power. There is great dignity, pride, will, and sense of character indicated in her physiognomy. The whole face is grand, queenly, womanly. Observe the full and ample chin, the full lips and mouth, indicating vigor, strength, and affection. Observe the strong, well-formed nose, Greek in its general outline, yet with a dash of the Roman in it. Then note how well-set and expressive the eyes are. They look as though there were something above, and behind them; and though the features be in perfect repose, such eyes would reveal the strong character of which they were the instrument.

There was nothing of "your humble servant" in this person. See how proudly balanced is that stately head upon those superb shoulders. She was well educated, and she could be ladylike and refined, but her pride, her resolution, her self-reliance are unmistakable. She was a woman of many talents and great versatility. She could lead in society, she was a shrewd politician, and she could fight like a lioness in the field. She combined the masculine and the feminine, the resolute and the executive, with the genial and kindly, the social and the domestic. Her brain was broad, rather high and long, and she not only had a sharp, clear, practical intellect and a will of her own, but deep and strong sympathies and

much devotion. She had both economy and generosity, concealment and candor, imitation and originality. Ideality, Sublimity, Constructiveness, and Combative-ness were all prominent, while Cautious-ness and Approbateness were not so large as to restrain or prevent her from manifesting herself fully.

Margaret of Anjou had all the vivacity, grace, and versatility of a Frenchwoman. She had all the scholarship and genius that distinguished King Rene; but she had enough of the Saxon and Teutonic character derived from her Lorraine mother to render her steady and enduring. Her very faults arose from her virtues. All things with her were in the extreme—her affections, her sympathies, her devotion, and her ardor. She stood by her friends with the impetuosity of a Jackson. Loving her husband, idolizing her boy, when that husband was imprisoned, when that son's life was threatened and his crown stolen away, she showed the fierce energy of a tigress robbed of its young. She was not by nature cruel; but when the stern enemies of her house fell into her hands she was ruthless, for the very life of her son depended on their destruction.

She never thought of self. A woman of gentle birth and cultivated mind, accustomed to all the ease and luxuries of a royal court, she could put on armor, ride all day without rest, and make herself agreeable to the bold, rude soldiery of the North. Delighting in music, gayety, embroidery, and books, for her husband's sake she could forego all these, and take her place at the council board to pit her intellect against a Gloucester, a Cardinal Beaufort, and a Richard of York. For her boy she left a luxurious retirement to cross the stormy Channel and again do battle. Her energy and her courage were wonderful. Her magnetism, her generosity, her power over men were marvelous. Her friends never ceased to rally around her, and those who served her were ready to die for her.

In Elizabeth Woodville, on the other hand, there was a strange lack of mes-

merism. There was something about that weak and frivolous queen that ever failed to conciliate friends. She was perpetually striving to create a party, a faction, but never succeeded in gaining confidence or respect. And no other raised so high was ever left so friendless as Elizabeth was, when the potent Edward left her a widow. An eternal consciousness of self, a breathing egotism, made all hearts doubt her. Her eye was cold and stealthy, her smile displeasing, her mind trivial, and her temper dissimulating. Vain in prosperity, she was abject when misfortune came upon her. No one wonders that in her gloomy widowhood, when the sanctuary was her retreat, that she could basely consent to commit her daughter to the custody of the man whom she accused of the murder of her royal sons, and whom she *knew* to be the executioner of her brother and of her child by the bridegroom of her youth, and who had subjected herself not only to woes and privations, but to the stain of harlotry. A nearly as bad instance of her frivolity and selfishness is found in her willingness after all the woes of her second widowhood, and when she was little short of sixty years old, to take a third husband—James III. of Scotland, a marriage that was only prevented by the death of the Scotch king.

Margaret of Anjou died, still preserving the memory of her disrowned husband and her murdered son. She was true to them and to herself, to the last. No other crown could have made her forget the one she had lost, the one she had struggled so long and so bravely to hold for her son. Some have called her ambitious, and placed her in the same category with Semiramis and Lady Macbeth. But Margaret of Anjou was a heroine from a sense of duty, or rather through her strong affection for her husband and her child. A crown was nothing to her unless she could share it with her loved ones. She could waste through fields of carnage to save her boy's heritage; but when he was gone, when the imbecile but saint-like Henry was dead, she had no

strength to battle more. True wife and loving mother! I love to think of her, so daring for others' sakes, so gentle, so womanly, so loving when there was no longer anything to fight for.

The contrast in the personal appearance of these women was as striking as in their character. Queen Margaret was a dark, rich brunette, stately, tall, and in her latter years somewhat corpulent. French and Norman blood showed itself in her eyes, her hair, her noble features.

The fire of the South was in her veins, its majesty in her queenly form.

Elizabeth Woodville inherited the Saxon fairness of her father. She was a pure blonde, with glorious masses of sunny hair, and a dazzling white neck to show it off. Her figure was tall and rather slim, but not at all commanding. She could endure but little; and though she passed through but trifling privations compared with those of Margaret of Anjou, she died at about the same age.

FRED. MYRON COLBY.

ON HAIR.

SOME time ago a writer in one of the newspapers gave an account of the character of our hair, which was partly scientific and partly commercial. He commenced by an allusion to the researches of the late French savant, M. Broca, who several years ago exhibited in Paris a collection of *human hair* taken from men, women, and children representing nearly all the races, civilized or savage, on the earth. Among them were seen nearly all the colors of the rainbow, yet Mr. Broca's assortment contained but a feeble part of the specimens that the twelve or thirteen hundred millions who inhabit the globe could furnish.

It is stated that a professional barber of Paris, who makes some pretension to science, has been engaged for a long time past in making a collection of the hair of his customers, methodically classifying them according to size, color, and flexibility. Thanks to certain characteristics which the microscope revealed to him, our hair-dresser even endeavored to make a sort of phrenological analysis. "In fact," he was in the habit of saying, "these little stems, thoroughly impregnated with electricity, as we find them to be, are a continuation of the personality—the soul of the man revealing itself externally. Cut the hair, and what has entered, comes out no more—you have imprisoned a portion of the living being himself. Lovers are not deceived in this

matter—they know the value of a tress." When this man wanted to select a wife, he examined a lock of the candidate's hair, and made up his mind only when he thought that he had detected all the qualities that should distinguish a thorough expert in his own line of business—for of such he stood in need at the time.

He proved very successful in this hairy mode, for he has secured an excellent home companion.

"Nature had but to sculpture the hair of a virgin," says Saadi, a Persian poet, "in order to surpass human art as far as virtue rises above hypocrisy." What, then, would the illustrious Oriental have said could he but have seen a single hair of the humble *bat* by the aid of the microscope? The stem of that creature's hair is enveloped in a species of ornamental collar consisting of delicate membranes exquisitely fringed. These are in reality little funnels curiously set one inside of the other. Their external edges are folded with a delicacy that would excite the envy of our most elegant belles. They never wore so tasteful and beautiful a kerchief.

Look at the annoying and, to the frugal housewife, disgusting *moth*, that devours our clothing. It is covered with hair formed of cones most gracefully interwoven, one at the end of the other, so as to make a sort of rosary. The surface

of each of these segments, delicate as they are, is studded with points much more delicate still, and articulated in the strangest manner. By an incomprehensible contrast, the microscope discovers in the wrappings of this filthy worm, this grovelling insect, something that reminds one of the bird!

But the hair that is most wondrously wrought, is undoubtedly that of the rats and mice, among the smallest of the mammiferous animals. One needs a robust faith in the infallibility of the microscope in order to believe that a filament, the thickness of which does not surpass some thousandths of an inch, is covered with several series of plates or scales exquisitely sculptured, and by an absolute excess of luxurious elegance arranged in five-sided cells. The wool of sheep, those docile and indolent slaves of man, is not so richly fashioned. But how elaborately these long-haired cylinders which we have been accustomed to consider as all of one piece, are put together with manifold complexity!

Where is the instrument which could detach from hundreds of fringes not the hundredth of an inch in length, other fringes as perfectly cylindrical as though

each stem had been fashioned by and for itself? Human art can not even go so high as to claim that it consists in *imitating nature*. Let us be content to profit by the treasures that she has placed at our disposal, and we shall find that she makes nothing that might not be converted to our use. Thus, for instance, these fringes, which we find it impossible to imitate, are of the greatest service in *the manufacture of felt*. Hundreds, nay, thousands of tiny hooks bind together the different stalks, and render the whole tissue, when seen by the microscopic eye, an interlacement of thorny bush-work.

The soft, gleaming hair that we so much admire, and which appears to us so fine that it seems hardly to belong to earth, is covered with genuine *scales*; and if we examine the hair with an instrument sufficiently powerful, we shall discover a series of hollows filled with a kind of colored oil. We shall find, also, a multitude of wrinkles and scars on the outer surface like those seen on the trunks of palm-trees. Thousands of them may be counted in the length of a single hair, as though its growth had been that often interrupted and resumed.

INFLUENCE.

TURN what page we will of God's great lesson-book—Nature—we find something which if applied to our lives would make us better men and women.

To-day, as we passed along the street, another page of this great book was unfolded to our gaze. It was only a little stream, swollen by last night's rain, that went laughing and murmuring along, winding here and there through the grassy fields, singing a low, sweet melody that it would seem could not but turn the thoughts of the passers-by to pure and holy themes. As it flowed from out the leafy wood and through the fresh grasses, it was free from stain—clear as crystal, and pure as the snowflake when it first falls from its cloudland home. But only

a few steps onward, and it was joined by a muddy, turbulent flood, that had gathered all the filth and dirt from the roadside. For the space of a few feet, one could see a distinct line of separation between the pure and the impure water; distinctly two they passed under a crossing; when we saw them again they were one, and went rushing, tumbling, and dashing along in a mad, careless way, a muddy, dirty, disagreeable stream which one would scarce think of as ever being pure—and yet the pure water was there.

Thus, methinks, it oftentimes is with human life. The young mind may be compared to a channel where runs a tiny stream of thought. As it advances in age, other people's thoughts enter its channel, and

the tiny stream becomes daily larger and larger. This is a necessity of mind growth—imbibing the thoughts of others—and like the little brook which is enlarged by a fall of rain, mind must receive more or less of its expanding power from the mass of thought that is poured into it.

There are two grand classes of thought—good and bad. There are some children who are reared in a realm of pure and holy thought, and there are others who are surrounded by an atmosphere of ignorance and degradation; let the two come together, and for a brief time one may draw a line between the conduct of each class; but it will not last long—either the pure will sink with the depraved, or in time raise them to their level. By constant association, the two streams of thought will coalesce.

Sometimes we see a life so stained and blackened by sin, that to our eyes there seems no room for pure and elevated thought. But in nature there is no stream so muddy or impure but which

somewhere has its tributaries of clear water. So no human mind is so filled with evil but that from some source good thoughts enter it.

Our thoughts are the tributaries which swell the mighty stream called Human Thought—shall that stream be darker or brighter for our having lived? Often as men say, "Well, I can't help my thoughts," thought is measurably under our control. Would we purify a muddy stream, we can do so by turning an abundance of clear water into its channel, so that the impurities may be swept away; just so, if we would rid our minds of impure thoughts, we must fill them with thoughts drawn from the pure and good. True, it is a constant battle, but there is a real happiness in overcoming the bad in our nature—a real happiness in knowing that our influence is for good.

Which way, then, shall our lives flow into the fathomless sea of eternity? Shall they be dark with sin, or bright with a holy purpose? JAMES PERRIGO.

THE YOUNG FOLKS OF CHERRY AVENUE.

CHAPTER XIII.

A CROQUET PARTY, AND CONCLUSION.

CLACK, clack, clack, they are playing croquet on the grounds of Mr. Sommers. Who are the players? Two young ladies and two young men. There are two or three other young people looking on, and now and then exchanging remarks about the game and incidental matters. Those handling the mallets are Millie, Lizzie, Tal, and Truman; and the lookers-on are Edith, Sophie, and Alfred Williams. We recognize them easily, although they have grown several years older since we last met them.

"I declare, Mr. Tal Manley," exclaimed Lizzie, "You are still up to the same old pranks. One wouldn't think he'd just graduated, would they, girls?"

"He's the same mischievous boy he was eight or nine years ago," rejoined

Edith, laughing; "and plays so many tricks upon us at home that we scarcely know what to do with him."

"Is it true that he's going to Andover?" asked Sophie.

"Oh, yes, he's decided to study for the ministry."

"Ha, ha, ha!" rang out Millie's contralto laugh, "we shall have no demure, sodden-faced parson then in our pulpit. Of course he will succeed Dr. Miller, who will ere long be too infirm to continue in charge, I'm sorry to say."

"My comment upon your late remark, Mademoiselle Sommers, will be a striking one," said Tal. "As you have defiantly placed yourself in my course, I shall proceed to eject you summarily from that cosy little place by your wicket, and skill-

fully drive my ball into position." Suiting the action to the word the young man brought the balls together by a neat stroke, and then with another he drove Millie's to a considerable distance, while his own spun off a little to one side, not far from his wicket. Thinking it easy to send the ball through, he struck it half carelessly, but a little too obliquely, for the ball glanced against the wire, and the shot was lost.

"Now, Truman, avenge my cause like a good and noble champion," cried Millie. "Another Don Quixote be taking the part of abused womanhood."

"Yes, my dapper candidate for honors pulpitarian, as you have put yourself in chancery, I must retaliate with the utmost vigor for the damages you have done to my fair partner's cause," said Truman, pouncing with a great show of severity upon his adversary's ball, which had rolled near his own, and with a vigorous croquet he sent it flying across the field.

Millie and those looking on laughed and clapped their hands, while Tal with most amusing show of discomfiture walked slowly after his ball. He picked it up, examined it carefully all around, shook it and held it to his ear, then putting it down exclaimed, "All right!"

"Does it tick?" asked Alfred.

"Oh, I guess it'll go; it only needs a second hand on it now to be all right," he replied, laying his right hand upon it.

"Stupendous joke that!" said Truman. "Now we understand the reason of his minute hand-ling of it."

"Very good, very good!" cried all, laughing heartily.

A few rounds more and the game was concluded.

"A score for your side, Miss Millie, and now we are even," remarked Tal. "Shall we play another?"

"I think we had better go in. They have signaled for us that supper is ready. There's mamma on the piazza now waiting. Come, girls and young gentlemen!"

Tal offered his arm to the young hostess; Lizzie accepted that of Truman; the

others formed in twos and all wended their way to the mansion.

A considerable party had already assembled in the drawing-room, made up chiefly of the younger members of the families living on the Avenue. Millie was twenty-two to-day, and rumor had it that the occasion was not only to celebrate the birthday, but also her engagement. At any rate, it was whispered around that the young and enterprising architect, Mr. Truman Burr, had been closely attentive to the tall and graceful daughter of the retired merchant, and had lately received her father's consent to his request for her hand. The truth of this seemed to be



THE YOUNG FOLKS AT MR. SOMMERS'.

evident from the disposition of the company when called into the supper-room; for Mr. Sommers placed Millie on his right and the young architect on his left hand, and to them the first services were rendered.

"I presume," said Mr. Sommers, in the course of the lively talk which accompanied the eating, "most of you know that our young friend here on my left, is about to go to Australia, having received a very flattering offer from a railway company. He is to plan and superintend the building of depots and storehouses, and will probably be absent a year at least."

"That has been intimated to me," rejoined Horace Manley; "and I most

heartily rejoice in Truman's success. Our 'mutual friend,' Tal Manley, here, has had a good deal to say in the years gone by concerning the ability and prospects of the young gentleman, and I must confess that he has uttered no uncertain sound."

A flush mounted to the cheek of the young man to whom allusion had thus been made, for all eyes were bent upon him admiringly. With a slight tremor in his voice, he said:

"And I must confess, indeed gladly confess, that Truman Burr owes the most, if not all, of his unexpected success thus far in life to that 'mutual friend.' You all know the true and gentle friendship he showed toward me when we attended the Misses Clem's school. He encouraged me to effort when I thought the world had no place but a very low one for such as me. He put me on the track of a pursuit, and suggested many things of great value to my progress. And now he is about to prepare himself for that profession which is essentially one of teaching and counsel with respect to things secular and spiritual. I know he will be noble and great in his ministry whether the world owns it or not."

"Bravo, my boy, a most creditable acknowledgment," responded Mr. Sommers heartily, seizing his hand.

"I should like to ask Tal," said Mrs. Sommers, "what led him to take so deep an interest in Truman?"

"Oh, I could answer that question, I think, at least in regard to his early interest in Truman."

"Well, Edith," cried Millie, "do tell us and save the modesty of yon demure but aspiring young orator. You remember, girls, Sophie, Millie, Lizzie, the day when Truman upset Tal and Deacon Faulkner's fence; and we were so angry with him that we had made up our minds never to have anything more to do with him?"

"Oh, yes, yes," replied the young people, laughing merrily at the recollection.

"Well, that night, when I was telling our folks about it, Tal spoke up and said:

'I don't care what they say about Tru Burr, he's got first-rate stuff in him, and I'm a-going to see if I can't help to bring it out.' Then you know soon afterward there came a lecturer on Phrenology to Mapleville, who visited our school and made quite a sensation. Horace was so interested that he bought a set of books and instruments, and studied the science. Tal studied it too, and between them they were able before long to make a very respectable examination of a person's head. One evening Truman was at the house and was talking about Stephenson and Whitney and Howe and other great inventors, when Tal turned to Horace, who was reading at the table, and said: 'Horry, I wish that you'd look at Tru's head; I think he'll make a first-rate architect or engineer. He says he's going to learn wood-carving, as soon as he leaves school next spring.' Horry looked up and said: 'Truman has excellent mechanical organs, certainly, and with his large Form, Size, Weight, and other perceptive faculties, he ought to make a very good draughtsman and architect. He can learn wood-carving, and while he is making a living at that, study architecture, and in course of time he may get a good position. 'There,' said Tal, 'now you see how two doctors agree, Tru. You be an architect and I'll be a minister, because I don't know what else to do with my large Veneration and tongue.' Truman looked at Horry and Tal silently for a moment, and then said slowly, as if he had been fully persuaded what to do: 'I guess I'll do just that.'"

"And that bit of talk shaped my course, Miss Edith. You are right in the recollection," said Truman, bowing courteously.

"And now at twenty-four let me add," said Mr. Sommers, "our young architect, and I may add, artist—for a skillful wood-carver is an artist—is a representative example of what science, diligence, and pluck will accomplish in comparatively few years. I expect, my young friends, that he will at a future time, not so very far off, become a member of my family.

And I know that you will all heartily join me in wishing him God-speed in his journey to the distant land which is to be his field of work for a time, and a safe return when his engagement is ended."

Hands were stretched toward the young man from all sides in warm congratula-

tion, but when that of Tal was clasped in Truman's, there was a pause, and the two young men gazed long and with humid eyes at each other, while from all around rose exclamations of pleasure and approval.

H. S. D.

THE END.

DARK'S THE WINTER NIGHT AN' DREAR.

DARK's the winter night an' drear,
Yet I naething hae to fear,
My gude-man will soon be here,
To keep me light and cheery.

Loud the wind is soughin' by,
Snell the drift drives through the sky;
Haste ye hame, my love, for I
Am grown dull an' eerie.

Oh, when he comes smiling in,
How the blithsome bairnies rin,
Fondly kiss him cheek an' chin,
An' ca' him dad an' deary.

Then wi' ane upon ilk knee,
Aft he sings sae merrilie,

That tears o' gladness fill my e'e
While gazing on my deary.

What care I for world's gear,
While belov'd by ane sae dear,
Poortith's frown I dinna fear,
Gin my jo be near me.

A' my greatest bliss has been,
Aye to keep him trig an' clean,
In his arms to lie at e'en,
An' be his bosom deary.

Hark, I hear him on the stair—
Meg, draw in the muckle chair,
Welcome, Willie, hame ance mair.
Come sit ye down, my deary.

WILLIAM WILSON.

TOMMY'S ARITHMETIC.

TOMMY was poring over his mental arithmetic. It was a new study to him, and he found it interesting. When Tommy undertook anything he went about it with heart, head, and hand.

He was such a tiny fellow, scarcely large enough to hold the book, much less to study and calculate. But he could do both, as you shall see.

Tommy's father had been speaking to his mother; and Tommy had been so intent on his book that he had not heard a word; but as he leaned back in his high chair to rest a moment, he heard his father say, "Dean got beastly drunk last night, drank ten glasses of wine; I was disgusted with him."

Tommy looked up with bright eyes. "How many did you drink, father?"

"I drank but one, my son," said the father, smiling down upon his little boy.

"Then you were only one-tenth part drunk," said Tommy, reflectively.

"Tom," cried his parent, sternly, in a breath; but Tommy continued, with a studious air:

"Why, yes, if ten glasses of wine make a man beastly drunk, one glass will make him one-tenth part drunk, and"—

"There, there!" interrupted the father, biting his lip to hide the smile that would come; "I guess it is bed-time for you; we will have no more arithmetic to-night."

So Tommy was tucked away in bed, and went sound asleep turning the problem over and over to see if he were wrong. And just before he had lost himself in slumber he had thought: "One thing is sure; if Dean hadn't taken that one glass he wouldn't have been drunk; and if father had taken nine more, he would have been drunk. So it's the safest way not to take any; and I never will."

And the next thing he was snoring, while Tommy's father was thinking

"There is something in Tommy's calculation, after all. It is not safe to take one glass, and I will ask Dean to sign a total abstinence pledge with me to-mor-

row;" and he did so, and they both kept it. So great things grew out of Tommy's studying mental arithmetic, you see.

THE FEEDER OF THE SWANS.

The trailing robe of summer, looped
With autumn burr and aster,
Swept softly near the pond where stooped
White swan and unknown master.
The baby hands, with verdure filled,
Outstretched, the swans were feeding;
Above the breeze and wood-bird trilled
A lay of faith exceeding.

We missed our darling as we gazed
Upon a strange, wild river,
And turned our hungry eyes amazed
To greet him bounty giver.
As floating snow about him grouped,
The swans with beaks of amber,
Drift to meet drift, he smiled and stooped
Where water-lichens clamber.

S. L. OBERHOLTZER.

DUST ON YOUR GLASSES.

I DON'T often put on my glasses to examine Katy's work; but one morning, not long since, I did so upon entering a room she had been sweeping.

"Did you forget to open the windows when you swept, Katy?" I inquired; "this room is very dusty."

"I think there is dust on your eye-glasses, ma'am," she said, modestly.

And sure enough, the eye-glasses were at fault, and not Katy. I rubbed them off, and everything looked bright and clean, the carpet like new, and Katy's face said:

"I am glad it was the glasses, and not me this time."

This has taught me a good lesson, I said to myself, upon leaving the room, and one I shall remember through life.

In the evening Katy came to me with some kitchen trouble. The cook had done so-and-so, and she had said so-and-so. When her story was finished, I said, smilingly:

"There is dust on your glasses, Katy; rub them off, you will see better."

She understood me, and left the room.

I told the incident to the children, and it is quite common to hear them say to each other:

"Oh, there is dust on your glasses."

Sometimes I am referred to.

"Mamma, Harry has dust on his glasses; can't he rub it off?"

When I hear a person criticising another, condemning, perhaps, a course of action he knows nothing about, drawing inferences prejudicial to the person or persons, I think, "There's dust on your glasses; rub it off." The truth is, everybody wears these very same glasses.

I said this to John one day, some little matter coming up that called forth the remark: "There are some people I wish would begin to rub, then," said he. "There is Mr. So-and-So, and Mrs. So-and-So, they are always ready to pick at some one, to slur, to hint; I don't know, I don't like them."

"I think my son John has a wee bit on his glasses just now."

He laughed, and asked:

"What is a boy to do?"

"Keep your own well rubbed up, and you will not know whether others need it or not."

"I will," he replied.

I think, as a family, we are all profiting by that little incident, and through life will never forget the meaning of "There is dust on your glasses."—*Observer*.



HYPNOTISM.

HYPNOTISM is a phenomenon that is exciting thinking minds at the present time, and destined, without any doubt, to become in the near future a *science* of great general utility.

The recent discovery made by Prof. Heidenhane in what he calls his "telephone experiment" is another grand conquest. This is done by placing one hand upon the left side of the forehead and the other upon the occiput of a hypnotised subject, when it is found that the subject thus influenced will repeat words expressed by the observer.

The circumstance worthy of notice in this connection is, that if the hand be not placed on the *left side* there is no repetition of the words so expressed. Evidently the left side of the brain holds some relation to the faculty of speech. This leads us to consider the subject of *Aphasia*, as related to hypnotism. The term, *Aphasia*, in its broadest etymological sense includes the inability to express the proper idea, but not an inability to express words. There are two varieties of aphasia, viz: that known as *ataxic*, where the person has a proper conception of the words requisite to express the idea, but is unable to articulate them, though he may articulate other words which are quite irrelevant to the idea. The other variety is known as *amnesic*. In this form the person has lost the memory of words. In the *ataxic* variety of aphasia the muscles involved in articulation are not with-

drawn from the influence of the will, but the power of co-ordinating their movements with reference to speech is lost. Persons thus affected have the ability to read and write or to express ideas by signs. The only difficulty seems to be in an inability to strike the key-note, as it were.

This may be better illustrated by the experiment known as the "*Harmonica chemica*," and familiar to every student of chemistry. Upon introducing the flame within the tube a sound is at once produced, but, if we wish an *ideal* sound then by giving the key-note, it is at once taken up for the one it previously held.

Let us now consider what relation exists between this condition of aphasia and hypnotism.

According to Prof. Charcot, hypnotism is but another condition related to somnambulism, hysterical lethargy or catalepsy—an *automatic state*. These different states are so related that it is easy to bring a person from the one to the other.

Let us take a person who is easily hypnotised or subject to somnambulism and direct him to fix his attention upon a given object, and we notice in a few minutes that the head inclines to one side, the eyes are wholly or partly closed, the breathing is short and rapid, and deglutition is difficult. This is not a cataleptic state, for the limbs are limp and immovable, and yet if the skin be irritated then there is a mechanical or automatic move-

ment. The entire surface is over-susceptible to any irritation, and any movement may be directed at pleasure. If now we command him to speak without, however, first giving the *idea* there is no response, but indicate it and at once the person speaks. Here we have the correspondence to the "Harmonica chemica" experiment. He will answer questions, count, recite verses, sing, and even calculate and write when so directed. In fact, a person so influenced may be made to do anything that he could do when not so influenced, but automatically.

Now let us pass this person into the cataleptic state, which is done by simply opening the eyes and allowing the light to enter upon the retina of the eye, and we now find all speech gone and the hyperæsthesia of the surface also relieved; in fact, we have an amnesic variety of aphasia, while in the former state we had the ataxic variety. There is evidently some close relation between the amnesic variety of aphasia and catalepsy, and between the ataxic variety and hypnotism.

We see, therefore, that there is a very marked difference between the two states. In the first we find language intact, while in the second it seems obliterated. Now the question arises, would it be possible to excite on the one side a different state from that of the other side: that is to say, produce on one side a hypnotised state and at the same time have the other in a cataleptic state? Prof Charcot thinks he has succeeded, and states that by taking a person in the hypnotised state and opening the right eye, as is done to produce a cataleptic from a hypnotised state, that the conditions found in the cataleptic state are all present on the left side, remembering that the nerves cross over from the right eye to the left side of the brain.

We observe that in a hypnotised person the respiration and movements of deglutition are characteristic, and that the sleep is real.

If we request him to speak, sing, or write he obeys. If now the left eye be

opened in order to produce a state of catalepsy of the right side we find that no effect is produced; but, on the other hand, if instead of the left eye, the right one is opened, we have all the conditions characteristic to the cataleptic state upon the right side, which goes far to locate a seat of speech upon the left side and near the origin to the optic nerve.

Now, we may carry our experiments still farther, when they become still more interesting; for if we convert a person to the hypnotised state and direct him to count, beginning with one and upwards, we may arrest this automatic enumeration by opening the right eye and allow it to proceed by closing it again, when the counting is always commenced at the next number above the one last pronounced. So exact is this process that a syllable partly pronounced will be finished on coming out of the cataleptic state and returning to the hypnotised.

The experiments of Professor Hammond upon this subject have been most interesting; but when he states that any one can do what he did, or that *any one* could pass involuntarily into this condition of hypnotism, it seems to us a statement not founded on facts. It would be quite as correct to state that any one may be a somnambulist or become cataleptic. There are great differences in the nature of individuals, and among those differences we find some more easily influenced under a given condition than others.

Another error which we think Dr. Hammond has fallen into is his want of discrimination between an automatic state under general principles and an automatic state under specific principles.

In his recent lecture before the Medico-Legal Society of New York he makes this statement: "When a person thinking intently upon some serious subject, and at the same time endeavoring to read a book, turns over leaf after leaf, his eye having carefully perused every line upon the pages and suddenly comes to himself . . . his act is automatic."

We think not. If the eye is "*carefully* perusing" while the mind is "*intent upon*

some serious subject," there is nothing automatic about this. It is simply that the mind reverts first to the one, then to the other, so rapidly that memory does not seize upon it to bring it before the mind afterward. This may be illustrated by watching a rapidly revolving wheel whose spokes are apparently transparent, by the circle of light made by rapidly revolving an illuminated point.

The automatic movements of a somnambulist differ very much from the *apparent* automatic movements of a person walking along the streets while intently conversing with another. For, while the mind of the somnambulist is intently directed to his movements, that of the other is not. The person in a somnambulist state or in the hypnotised form is not able to perform any act which he has not at one time or another previously done or said. He may read, but can

not read words which are not familiar; he may sing, but he can not sing that which he has not at one time or another sung. He can not sing from the notes of a book, nor can he write out a word whose orthography he is not familiar with. Nevertheless, the subject of hypnotism is one so replete with interest that metaphysicians have strong grounds for encouragement to continue their researches.

A subject, first brought to light by Gall, who desired to establish the fact that the organ of speech had a definite position in the brain; then later by Marc Dax, and Bouillaud; and still later by Broca, and many other distinguished observers, has now come forward to brush away the mysteries of spiritualism and its pretended relations to psychology under the name of "hypnotism."

E. E. RIOPEL, M.D., M.A.

THE PHILOSOPHY OF RURALISM.

THIS is the season in which the denizens of our great cities begin to realize the fact that a little fresh country air and country relaxation may be worth more than a whole medicine chest; and the question is daily and hourly asked and answered, "Where are you going to spend the heated term?"

When this "heated term" is over, and, perchance, the chilly dawns and eventides of autumn have warned them to return to the realm of "bricks and mortar," they meet to compare notes, and to give their experiences of rustic life.

Mr. Jones has "been to the sea-shore," where he expected hygienic wonders and miracles of strength and health attainment for self and family; "but," says Jones, we "returned" nothing bettered, but rather the worse "than when we started. My good wife is tired to death; my daughter looks thinner, and feels weaker than before we left home; and I've got the 'dyspepsy' for my share of the blessings of sea-air and sea-bathing,

salt-water and sand-flies. It's all a humbug, in my opinion."

"Well," replies Mr. Smith, "misery loves company. We fared no better. I tried living at a 'quiet farm-house' in Tanglewood County, and most terribly 'quiet' I found it. We wandered about the fields and woods, went fishing and boating, and lived on 'presarves,' as our landlady called her stewed apples, and on greasy pork and leathern beef; with pies, whose crust was like the walls of a fortification; got bitten by the mosquitoes, and dug into by the blackberry ticks, till Matilda got the ague, and Johnny took the nettle-rash, while I got the blue-devils, and a torpid and dried-up liver. But here's Brown! he's been more lucky: he's been amid the pure mountain air up in 'the Ridge'—where, as the poet says, there is

"'Health on the breeze, and music in—'

Well! I forget what it was in."

"I guess it was the screech-owls," in-

terposed Mr. Brown, gruffly, yet cynically—"that's the only music *I* heard there, at all events. Oh! there's glorious sport in the mountains! You get out of your bed at four o'clock in the morning to be ready to enjoy a view of the sunrise, and you are initiated into the knowledge of the fact that you can get chilled through in the middle of summer by the glorious cold mountain breezes, which feel like the spirits of defunct icicles come to haunt your marrow. You climb one of those 'glorious mountains' to get a splendid view of the scenery, and you get tangled up in mountain laurel bushes, and mountain briars, and you fall down a twenty-feet precipice, and get jammed between two big boulders, and at last you reach the top too tired and blown to care whether the scenery is grand or grizzly; and when you get down again you're weak, and savage, and hungry as a mountain bear; and so you eat like a mountaineer, and suffer like a martyr, from the indigestion caused by mountain beef and mountain short-cakes, furnished by your mountain host. Well! I'm home again, what's left of me, and I feel as if I'd been put through a bark-mill, and shot through a coal shute. I tell you, the 'glorious mountains' are entirely too moun-ta-neous for me; and my better half says she never wants to see even a hill again. We go in for a dead level, you bet!"

Now, what's the reason that these gentlemen and their families got no good results from their summer sojourn? The sea-side is said to be "bracing"; the country farm-house is a healthy place, generally; the mountains are the abode of health, and Hygeia sits enthroned amid their rugged fastnesses. Why, then, did Messrs. Jones, Smith, and Brown, and why do thousands of other people, with more euphonious and less familiar cognomens, come home disappointed, unrefreshed, and uninvigorated from these places of summer resort? Because the laws of health are the same, and human beings are the same, whether in the crowded city or by the murmuring sea, amid the sweet scenes of pastoral life, or

among the wild, free solitudes and wondrous vistas that lie beneath the shadows of the mountain-tops. Jones had stayed up too late and too often, at the sea-side "hops." He had, perhaps, imbibed some *liquefied* hops—he had eaten too much hotel fare, and had indulged in "suppers," which, as Byron observed to Tom Moore, are "the devil to those who swallow dinners"; he had used too little regular exercise; carried his bad habits, as well as his trunks and carpet-bag, to the brink of old ocean with him.

Smith had idled and sweltered too much in his farm-house retreat; he had got up too late, walked too much in the hot sun of the reeking, noonday fields; had eaten too many pies with oyster-shell crusts, had drunk too much sour butter-milk, and eaten too many sour apples. He had become perplexed and plethoric.

Brown had too much both of exercise and of food. He had come home to his mountain house from a climb which would have wearied a day-laborer; and, thus tired out, had imposed upon himself the further labor of devouring and digesting the rations of a stevedore.

Had these gentlemen, and thousands of others like them, sought out some well-conducted Health Resort, or at least had observed for themselves the simple rules of living hygienically, "which he who runs may read," in these enlightened days of sanitary knowledge—had they, while they enjoyed the pure air, and bright skies, and green meadows, and waving woods, and limpid waters of Nature's own domains, and while gazing upon the rolling billows, the fair hills and vales in their summer-tide loveliness, or the majestic scenes amid the towering crests of the mountain lands—had they lived simply, risen and retired early, abstained from excess in eating, exercise, and all other of the many things of life, which, good in themselves, we are, nevertheless, so prone to abuse, they would have returned to their city homes with the glow of health upon their cheeks, the vigor and stimulus of health in their frames, and the serenity and cheerfulness

of health in their souls—for this is the "philosophy of ruralism."

As observed above, the laws of health are identical in all localities: men do not change their anatomical and physiological structure and function when they make change of place or surroundings. What is hurtful in the city is inimical to well-being in the country: no mountain is too high for bad habits to climb; no ocean so wide but indigestion and gastric distress can pursue him who observes not temperance; no sequestered country nook so quiet and secluded that the avenger can not find out him who breaks the laws of Nature amid its solitudes.

Fresh air and change of scene may work wonders, if properly sought and enjoyed; but without plain and simple food, temperance in eating and drinking, abstinence from luxurious living, early rising, cleanliness, and the proper regulation and amendment of all the habits of life, it is vain to expect benefit from a visit either to mountain, sea, or sylvan glade.

To him only who observes the laws of his being, and obeys the commandments of Nature do the genii of flood and fell; of valley, hill, mountain, forest, and "seaboard shore" reveal the mystic loveliness

of their environment; on him alone their salubrious influences are breathed; by him alone is heard the sweet music that floats to the spirit amid the shadowed labyrinths of the woodland glades, in the fresh, green meadows, or beside the babbling brook or sounding shore of ocean. He only can feel that

"There is a pleasure in the pathless woods;
There is rapture by the lonely shore;
There is society, where none intrudes,
By the deep sea, and music in its roar."

We must be purged of those grosser elements with which repletion and disease have clogged our systems ere Nature will reveal to us the beauties and the glories of her mighty temple; else, gazing on the loveliness of the earth, or the majestic glory of the sky, we can only sing the sad cadence of the poet—

"There's not the smallest star of all those orbs,
But to his fellows like an angel sings:
But, while this muddy vesture of decay
Doth grossly close us in, we can not hear them—"

and a diseased body is but a decaying garment, shutting in like a veil, and shrouding the soul from the music, and the beauty, and the glory of the Universe around it.

B. FRANK TAYLOR.

Rest-Haven, Collegeville, Pa.

GOOD PHYSICIANS.

THE satirical remark quoted by Mr. Francis Galton in his "Art of Travel," to the effect that there is a great difference between a good physician and a bad one, but very much less between a good physician and none at all, is founded upon a great truth, and one to which human nature is very averse to accepting. The demand is universal that something shall always be done, whenever the customary ease of our life-processes gives place to disease, that shall appear to be powerful to restore health again. Equally universal is the expectation that physicians should be able at once to thoroughly divine the exact nature of any trouble that shall be brought to their notice, and

that they ought always to be ready on the instant to tell what the matter is, and what is the very best thing to do for it. The result of this is that, whenever a physician is called to the sick, he is compelled to do something; the more skillful he is, the more comprehensive his knowledge of the infinite variety of manifestations of the same disease, or of the many different diseases which may have common symptoms, the less likely is he to be positive at first in his opinion as to the exact nature of the trouble with which he has to deal, and the less likely is he to resort immediately to active medication; the more ignorant he is, the more restricted his medical horizon, the more

quickly and positively does he form an opinion, and the more actively does he proceed to attack the trouble which he believes to exist. During the last hundred years physicians have been particularly interested in studying what is termed the natural history of diseases, that is, the course which diseases take when left to themselves without medical treatment. The result of this study has been to demonstrate that in most cases the powers of nature are quite sufficient to effect a cure, if only nature is left alone; modern observation thus giving added force to the maxim of Hippocrates, uttered over two thousand three hundred years ago, that the first care of a physician should be to "*Do no harm.*" We see now how it is that often the wisest physician may be he who does the least, and so exemplifies that it is true that in some cases there is very little difference between a good physician and none at all; beyond the power which the physician may have to save his patient from the officiousness of friends, ever ready to advise and suggest in matters of which they know the least. The necessity which is imposed upon the doctors to give an opinion at sight often develops in them an ability in the line of evasive oracularity which would have made their fortunes in the days of the soothsayers and priests of the oracles among the ancients. To seem to know everything while one is certain of nothing, and to seem to be doing something while in reality convinced of the propriety of doing nothing, are some of the absurdities which are yet required of their physicians by a credulous and exacting public.

In the golden age of the future it may be that pretense to supernatural knowledge of disease will be esteemed a proof of an impostor, that an acknowledgment of uncertainty and a desire to wait for more distinct symptoms to develop before hazarding an opinion will be esteemed as a proof of wisdom, and that resort to medicine of some kind for every derangement of bodily function will be esteemed a proof of dementia.

WANTED—GOOD DOCTORS.

Too many Doctors have we, some oft say.
These words are true—but in another way.
Of poor ones, truly, is the number great,
But for better ones we often vainly wait.

Mullein stalks we do not want, but timber.
Men without bones, or bones so very limber
That ev'ry wind may move them to and fro:
Such limber men we do not want to know,
But earnest, active men, all very true;
We want such men, like David strong and true.
For earnest men there is much work to do.
Men with backbones are we trying now to find,
Such men as never can be left behind;
That always in the battle foremost stand,
Ever ready to extend a helping hand,
We want such men—we want them even now.
To quickly find them will you tell us how?
For sleepy men we never have a call,
We need live men, if men we need at all.

M. P. GREENSWORD, M.D.

SICKNESS A DISGRACE.—That inveterate friend of hygienic reform, Dr. F. L. Oswald, uses strong language in a late discussion on popular medicine. He says:

"All bodily ailments are more or less urgent appeals for help; nor can we doubt in what that help should consist. The more fully we understand the nature of any disease, the more clearly we see that the discovery of the cause means the discovery of the cure. Many sicknesses are caused by poisons, foisted upon the system under the name of tonic beverages or remedial drugs; the only cure is to eschew the poison. Others, by habits more or less at variance with the health laws of Nature; to cure such we have to reform their habits. There is nothing accidental, and rarely anything inevitable, about a disease; we can safely assume that nine out of ten complaints have been caused and can be cured by the sufferers (or their nurses) themselves. 'God made man upright'; every prostrating malady is a deviation from the state of Nature. The infant, 'mewling and puking in its nurse's arms,' is an abnormal phenomenon. Infancy should be a period of exceptional health; the young of other creatures are healthier, as well as prettier,

purser, and merrier, than the adults, yet the childhood years of the human animal are the years of sorest sickness; statistics show that among the Caucasian races men of thirty have more hope to reach a good old age than a new-born child has to reach the end of its second year. The reason is this: the health theories of the average Christian man and woman are so egregiously wrong, that only the opposition of their better instincts helps them—against their conscience, as it were—to

maintain the struggle for a tolerable existence with anything like success, while the helpless infant has to conform to those theories—with the above results.

“‘I have long ceased to doubt,’ says Dr. Schrodtt, ‘that, apart from the effects of wounds, the chances of health or disease are in our own hands; and, if people knew only half the facts pointing that way, they would feel *ashamed* to be sick, or to have sick children.’”—*Popular Science Monthly*.

HOW THE SWEDES WARM THEIR HOUSES.

VISITORS to the Centennial Exposition at Philadelphia must remember the great porcelain-covered stoves which formed part of the Norway and Sweden exhibits. They attracted not a little attention, and should have taught our enterprising stove-manufacturers a practical lesson. It would appear, however, that they were regarded mainly as curiosities, and quite incompatible with our American spirit of enterprise. These stoves are called *kakelungs*, and their economy is so much above our methods of heating that we feel constrained to say a word about them now, or rather to print what a traveler in Northern Europe has to say concerning them, as follows:

“To begin with facts, I will mention that we are now living in two rooms of a hotel, one 20 by 20 feet, the other 20 by 15 feet, the ceiling 12 feet high. Opening into these rooms is one common entrance door and a pair of huge folding doors.

“The weather during March was cold, even colder than in Philadelphia or New York, and during this month the number of fires used were about four in a week, each fire consisting of from eight to ten billets of wood twelve inches long, or about enough to start two coal fires in America. The rooms were thoroughly warmed, and the temperature, night and day, never varied five grades or degrees.

The quantity of fuel consumed I will place at one-twentieth part of what would, under similar circumstances, have been required to warm the same rooms in America, and yet we pride ourselves on ‘what we know about house-warming.’

“I may mention that my son has been here during eight months past, occupying two rooms even larger than those of which the dimensions are given. He purchased last fall one ‘Fam,’ about 200 cubic feet of wood, of which on the 1st of March one-fourth was left, after firing all winter. The warming is done with a kind of stove called a ‘*kakelung*,’ and so far as your correspondent can judge, on principles that are more scientific than those of our many patent contrivances, whose double function seems to be to consume fuel and stifle the inmates of our dwellings. This last is, I know, a strong proposition; but it is based upon personal experience, at the end of three months spent in a first-class dwelling (with modern improvements) in Philadelphia, last fall. A sense of relief was felt when we escaped again to old foggy England, where patent heaters are unknown.

“The fact is, that the American people are oblivious to the frightful effects that come from their system of heating, and only become aware of its discomforts and dangers after passing a winter with English grates or the ‘*kakelung*.’ To

return to the last-named system, a 'kake-lung' is simply a great stove of masonry, covered with porcelain plates, having usually five flues, through which the gases of combustion must pass up and down, a distance of 30 to 50, or even 60 feet, before escaping into the air. The general principle of their operation is to provide enough material to absorb all the heat from the fire—to conduct the gases through these long flues until their temperature has fallen to a point that no longer gives off heat. The quantity of the material in the 'kake-lung' is so great that the temperature from one firing (which is always enough) will not raise the temperature of any part so much that the hands can not be held upon the outside.

"Two hours after a fire is made, and after the wood has burned up and the flue been closed, the 'kake-lung' begins to get warm on the outside, the light porcelain plates give off their moderate warmth to the atmosphere in the room, and ten hours later there will not be much difference in the temperature of the stove or of the room.

"A 'kake-lung' instead of being an unsightly obstruction, is so constructed as to constitute an ornamental piece of furniture. Doors open into them in front, where, in a kind of closet, with iron shelves, food can be kept warm or warmed. Baking can be done in the furnace for hours after the fire has been burned out.

"Now this result in heating which has been described, is in a great measure due to double windows. The conducting power of a thin pane of glass interposed between the external air and that of a warm room, is never imagined until an experiment is tried. Such cooling does no good; it simply costs money, and answers no purpose of ventilation; and, speaking from actual experience, I would rather live in a room hermetically sealed and warmed by a 'kake-lung' than in any room into which burned air is conducted from one of our American furnaces. I am well aware of the scientific arguments and explanations that have been put forth in reference to American house-heating.

They are good on paper; the practice is what I refer to, and it is without fear of making a mistake that I assert that any house can be warmed with one-fourth the amount of fuel, and with twice the comfort, by means of kake-lungs, as with furnaces—if other conditions peculiar to heating here are at the same time observed."

THE COST OF DRINK.—The *New York Sun* mentions that the Commissioners of Charities and Corrections of New York have the care and control of "a population of 11,000 lunatics, drunkards, criminals, infants, blind, aged and sick," and that "they have charge this year of the disbursement of \$1,348,383.34 for the maintenance of these unfortunate creatures." It is safe to conclude, in the face of the past reports of the Commissioners themselves, that at least three-fourths of the 11,000 are dependent upon the public charity, either directly or indirectly, through the agency of strong drink, and that fully three-quarters of a million dollars for their support, which will be exacted of the tax-payers of this city, will be paid because of the drink-traffic. How long, the *Sanitarian* asks, will the tax-payers and the good citizens of this metropolis allow this waste of their substance and this dreadful work of ruin among men, women, and children to exist and be perpetuated under the forms of law? In plainer words, how long will the tax-payers allow the rum-seller to make criminals, and lunatics, and paupers by the thousand, openly and defiantly, and under our very noses?

FATAL TOBACCO.—Recently in Paris a porter cut his finger with a knife with which he had been clearing out his pipe. The next day the finger swelled, and the arm became inflamed, while tumors 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.

NOTES IN SCIENCE AND AGRICULTURE.

Why Bees Work in Darkness.—

Every one knows what honey fresh from the comb is like. It is a clear yellow syrup, without a trace of solid sugar in it. Upon straining, however, it gradually assumes a crystalline appearance—it candies, as the saying is, and ultimately becomes a solid lump of sugar. It has not been suspected that this change was due to a photographic action; that the agent which alters the molecular arrangement of the iodine of silver on the excited collodion plate, and determines the formation of camphor and iodine crystals in a bottle, causes the syrup honey to assume a crystalline form. This, however, is the case. Mr. Scheibler has inclosed honey in stoppered flasks, some of which he has kept in perfect darkness; while others have been exposed to the light. The invariable results have been that the sunned portion rapidly crystallized, while that kept in the dark has remained perfectly liquid. We now see why bees work in perfect darkness, and why they are so careful to obscure the glass windows which are sometimes placed in their hives. The existence of their young depends on the liquidity of saccharine food presented to them; and if the light were allowed access to the syrup it would gradually acquire a more or less solid consistency; it would seal up the cells, and in all probability prove fatal to the inmates of the hive.

Mortality of Brakemen.—

The brakemen on our railroads find it quite difficult to get their lives insured. It is estimated that there are ten brakemen killed throughout the country every day while coupling cars and making up trains, or are knocked from the top of the cars by bridges, or slip, or fall, or are injured or killed in collisions. Then there must be at least three times as many injured as are killed, of whom the public get no account. If 10 brakemen are killed every day, that would be equivalent to 3,650 during the year, which, added to the number injured in various ways while on duty, would give the sum total of deaths and injuries about 14,600 a year. These are frightful figures of a fatality, a loss of life, or injury to the body. The public has no idea of the number of accidents that occur on the various railroads throughout the country every day. There is no vocation so fraught with danger to life and limb as that of the brakemen on our railroads, particularly on freight trains. Indeed the life of a brakeman is a precarious one. Some insurance agents in some parts of the country do not take risks on employes on freight trains; but conductors and brakemen on passenger trains, where there is less danger, are insured by their paying an extra per cent. Railroad men say that only about 25 per cent. of the brakemen of freight trains die a natural death; also, that the average life of the brakeman, after he goes on the road, is about 10 years.

Composite Portraits.—

At the last meeting of the Photographic Society of Great Britain, Mr. Francis Galton, F.R.S., read a paper on "Composite Portraiture," in which he stated that his attention was first directed to the subject some years ago, when he found that by taking two or more portraits of different individuals under exactly the same conditions, and superimposing them, the features, if not absolutely dissimilar, blended together and formed an idealized portrait which could be well seen when the image was thrown upon a magic-lantern screen. The register he adopted, so that the features should be identically superimposed, was by drawing a horizontal line through the eyes, another parallel to this through the mouth, and a third perpendicular to and bisecting these horizontal lines through the nose. The point of bisection between the eyes was that which he was especially careful to maintain in the same position in each portrait. Mr. Galton's first method of producing composite portraits was by means of a copying camera, paper positives being used. He now, however, used transparencies, and he exhibited and described the apparatus which he had adopted for the purpose. One purpose for which he believed composite portraits would be valuable was that of producing a standard physiognomy of disease. With this object he had taken the portraits of a number of consumptive persons, male and female, and had combined them; and it was remarkable how a certain average of faces was found to be almost identical. Mr. Galton also exhibited a number of what he called typical portraits. One was the face of an idealized criminal, formed from a combination of seven portraits of criminals, others were the faces of consumptive patients, and a third series was that of the portraits of officers and men of the Royal Engineers. In one case he had combined the portraits of twelve officers, in another the portraits of eleven privates, and in a third he had combined the portraits of officers and privates. In each instance Mr. Galton said the individuality marking each class was strongly brought out and idealized. He also pointed out how, in every case, the idealized portrait was better-looking than the faces from which it was made.

In conclusion, Mr. Galton referred to the use which photographers might make of composite portraits. He thought the process could be turned to a most interesting account in the production of family likenesses. Artistic excellence was of no consequence in the negatives, and all that was necessary was that the portraits should be taken under the same aspect, either as a perfect profile or a perfect full face, and under the same conditions of light and shade. The result of the combination of a number of faces of the same family was often very curious, not the least singular point being the circumstance that there was often a difference of opinion as to

whom the idealized portrait was most like. Mr. Warnerke said, that when Mr. Galton first described his method, some years ago, he had tried the production of composite portraits, and found the result exceedingly interesting. Captain Abney expressed surprise at the result of an experiment which Mr. Galton had made to show that repeated exposures on the same plate made no difference in the result. Had not Mr. Galton proved that he was right, he should have expected some difference. After a remark from Col. Wortley, Mr. Galton observed that one curious result he had noticed was in the case of a combination portrait of two criminal boys. This portrait was given to an artist to copy, and, singularly enough, although the artist had never seen either of the boys, the picture he drew was a portrait of one of them rather than a copy of the composite.

How to Boil Rice.—Few cooks seem to know how to prepare this article of food properly, so a hint or two will not be out of place here. The rice must be carefully picked over, and then washed in cold water until it is free from all the loose starch which may adhere to it, or until the water looks clear. Then dry it. It can be put in a flour sieve for this purpose. In placing it over the fire, use three pints of water to a cup of rice and a teaspoonful of salt. The water must be boiling before the rice is added. Boil precisely 12 minutes, and then pour off the water. Then place the sauce-pan with the rice, on the back part of the stove, where it will be kept warm without burning, for ten minutes longer with the cover partly removed. In this way it is not soggy, or too soft, and every grain is cooked separately by itself. After being cooked, if left covered, it will soften and the grains will burst open, in their delicate tenderness.

Education and Brain Development.—According to the *Gazette des Hôpitaux*, MM. Lacassagne and Cliquet have examined, by the aid of the *conformateur*, the heads of 190 doctors of medicine, 133 rudimentarily educated, 90 illiterate, and 91 prisoner soldiers, with the following results expressed in centimeters:

Diameters.	Drs.	Soldiers.	
		Educated.	Uneducated.
Longitud'l.	85.29	81.97	79.13
Frontal.	48.91	43.65	42.35
Parietal.	52.58	49.66	50.27
			49.90

There is thus a considerable difference in favor of the doctors, a class chosen to represent those whose professional work is entirely mental, and this is especially marked in the frontal measurements. Moreover, the two sides of the head are not symmetrical—in the educated the frontal region is more developed to the left, in the uneducated the occipital region is more developed to the right. The head is larger (more developed) in the case of the educated than in those of inactive intelligence. Among the educated the frontal region is more developed in proportion

than the occipital; and if the difference is greater in the occipital it is very trifling, while among the illiterate it is considerable.

Training Tomatoes.—VIRGINIA E. B. writes to the *Country Gentleman*:—"The season for planting tomatoes is nearly at hand, and I fear that all lovers of this delicious fruit do not know how to grow them successfully. When the plants are ready for the garden, make a considerable hill of good compost. Chip manure is excellent, and a quantity of chicken manure is good. After the hill is made, drive a long stake through it. This may be six feet high. Set the plant near it. The training will require attention. The plant will immediately begin to sucker, or throw out side shoots, just above each leaf. These must be cut off, and then the plant will run up vigorously. Tie it to the stake, and do not be afraid to use the knife. Keep on cutting each stem that appears in the axil of a leaf, and keep on tying. The first bearing branches come directly from the body of the plant. Remember that this trimming must be continued as long as the plant bears. Thus trained, the fruit is superior in size, quantity, and flavor, besides being less liable to rot or drop off.

The Cross Tau.—In the *Antiquary* for March last is an article by Llewellyn Jewett, F.S.A., on the cross tau. This cross, called Crux Ansata and St. Anthony's Cross, is a three-limbed cross in the form of the letter T. It is identical with the Egyptian emblem of life or key of the Nile, and is sometimes used as a phallic symbol. It is found on the sculptures of Khorsabad, the ivories from Nimroud, and on Assyrian cylinders. It is stated by Lucan to have been a symbol of the gods among the Druids. It is found among the Gnostic and Hebrew charms. It is also found with other forms of the cross on sculptures at Copan and at Palenque, in Central America. It occurs in Norman and Saxon sculptures, in Canterbury Cathedral and on London Tower. The cross of the heathen world was derived from primeval religion. Thus the tau or the crutch, the emblem of life, becomes an emblem of the cross upon which we are taught to lean, and which reconciles God with man.

Pellagra is the name given to a disease which of late has become unusually prevalent in some parts of Italy, especially in the provinces of Brescia, Padua, Piacenza, and Ferrara, the ratio of those afflicted in Brescia being about eight per cent. of the population. Sardinia and Sicily are exempt from it, and it seems to have been unknown before the middle of last century. Even now its ravages are confined to those of the rural laboring population, who are ill-fed and over-tasked—people morally reduced to the level of brutes and physically ruined by the inhuman severity of their labor, the infamous quality of their food, and the utter wretchedness of their lodgings. The earliest symptoms of the dis-

case are an itching and redness of the hands and feet, and a scaliness of the skin. The body gradually wastes away and dries up until the patient becomes a mere listless, insentient mummy. Great efforts have been made to discover the cause of the evil, which has been assigned mainly to poor food. Its unusual ravages of late having aroused the attention of the Government and of the municipal authorities of some of the chief cities, further investigations as to its origin have been made, which have resulted in what is considered a solution of the mystery. Indian corn meal, or maize flour, is the staple food of the smitten peasants, who rarely use it in a wholesome state, but when more or less fermented make it into bread which even the pigs would refuse. This is washed down with unwholesome water, and is now considered the main cause of pellagra.

The Candle-Nut Tree.—A traveller writing in the *Leisure Hour* says of this extraordinary production of the South Pacific that it is one of the most graceful trees of the islands. When ripe, the fruit is of an olive color. In each cell is one seed, encased in a very hard shell. These kernels, when ripe, furnish the islanders with light, indeed the only light of the past in the Hervey group. From time immemorial it has been woman's work to go to the forest to collect the ripe fallen fruits. The thick outer covering is removed by hand on the spot; at home the nuts are half-cooked, or steamed in an oven; when taken out, the slightest tap of a stone cracks the hard shell, and the kernel comes out entire. It is almost impossible to get the kernel out uninjured without the application of heat. The mid-rib of a cocoanut frond is used to skewer some 25 or 30 of these kernels; two or three skewerfuls tied together with a strip of *hibiscus*-bark give a capital light. It is woman's work to hold the torch, and carefully tend it by knocking off, from time to time, the burnt black kernel. The smell of this torch is most disagreeable. The native name of the tree and fruit—*tuitui*—means "sewn-sewn," in allusion to the piercing of the baked kernel with the mid-rib of the cocoanut frond for a torch. From the heavy fumes of the burning kernel is collected in a broken calabash held over the torch the fine lampblack used in tattooing. The oily nut was often used as food in seasons of extreme scarcity. This unwholesome diet invariably produces a black ring round the eyes. Spending a week at Tauan, on the southern coast of New Guinea, in 1872, we had at first no evening light. I luckily, however, discovered two candle-nut trees laden with ripe nuts, which we at once utilized. The savage Papuans, who previously had no idea of the value of this tree, were not slow in imitating our example.

To Clean Smoky Walls.—Brush them with a broom, then wash them over with strong pearlash water, and immediately rinse them with clean water before the pearl-

ash is dry. When dry, give the walls a thin coat of freshly-slacked lime, containing a liberal proportion of alum dissolved in hot water. Finish with whiting and good size. Be careful not to apply the size distemper till the lime-wash is dry, as the latter will destroy the strength of the size, if the two come in contact while wet.

A Mean Swindling Device.—This is one of the ways in which farmers have been robbed West by confidence men who employ the popular swindle of obtaining the signatures of well-to-do farmers to a very innocent-looking contract, a portion of which is subsequently detached, leaving a plain note of hand, which is then disposed of to some note-shaver. The latest instance which has come to our knowledge is that of a gang of scamps in Indiana, who are traveling around the country selling a seeding machine. We give a copy of the "contract" used by these harpies, so that farmers may be the more on their guard, and more easily detect the fraud. It is as follows:

<p>(Date line)..... 1881.</p> <p>One year after date I promise to pay to John Smith or order, Three Hundred and Twenty-five Dollars, for value received, at six per cent. per annum, payable at Indianapolis, Ind.</p>	<p>bearer, Thirty Dollars, when I sell by word of Patent Seeding Machines, said Thirty Dollars when due, to be</p> <p>Sole Agent for..... Company.</p>
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An Indianapolis dispatch to a Cincinnati paper says, a gang, in Indiana, when last heard from, were operating in Bartholomew county. The mode of operation is to go to a well-to-do farmer, and tell him he has been

recommended as a good man to sell their machines, and ask him to become their agent. He is persuaded that they sell rapidly, and that he can make a large per cent. profit. He is told that he will not be expected to risk any money or pay anything until he has sold \$325 worth of the machines. He is induced to sign the contract above given, which, it will be seen, sets forth this agreement when read straight across. It looks fair and innocent enough, and soon the farmer, typified in the foregoing document as John Smith, puts his name in the blank space just before the words "Sole Agent for ——— Company." Afterwards the scamps easily change the document from a contract to sell into a promissory note by tearing off that part to the right of the line drawn through the agreement as printed. In the original presented to the farmers, of course, no line appears; and it is given simply to show where the division takes place, and the separation at which point so radically changes the nature of the document. Look out for the swindlers, for after the farmer's notes get into the hands of a third party, or an "innocent" purchaser, there is no alternative but to pay them.

Growth of Silk Industry in the UNITED STATES.—There were imported into the United States last year \$33,305,460 worth of silk goods of foreign manufacture. This is an increase of nearly \$8,000,000 over 1879, and \$13,000,000 more than in 1878. It is desirable that the United States should import none but raw silk, if indeed it prove impossible to raise our own silk-worms, and the duties have been maintained at their present excessive rates mainly with the view to protect the domestic manufacture. This is conducted chiefly in Connecticut, New York, Massachusetts, Pennsylvania, and New Jersey, and has proved very successful as regards certain classes of goods.

A silk manufactory on quite a large scale was established here in Baltimore about 1870, but it did not prosper, and the enterprise was abandoned. Our present silk manufacture, as will be seen below, is very small. Gen. McClellan, while Governor of New Jersey, in adverting to the valuable work of the State Bureau of Labor and Industries, said that the State consumed more than sixty per cent. of the raw silk imported into the United States, and that it was eminently desirable to have some action taken upon the recommendation of that bureau in favor of extending special encouragement to the culture of the silk-worm. The New Jersey silk mills give employment to 13,932 hands, to whom they pay wages to the extent of \$1,047,745—\$300 per capita, which is considered nominally good wages, considering that a good many of the employés are women and children.

The gross value of the manufactured silk products in the United States for the census year 1880 was \$40,975,285; the gross value

of materials and supplies for this manufacture was \$22,371,300; the net value of finished goods was \$34,410,463; the number of silk factories in the country was 383; the capital, real and personal, invested in this industry was \$18,899,500; the number of looms at work was 8,467; the maximum number of hands employed during the year was 34,440 (including 9,350 males over sixteen years of age, 16,344 females over fifteen years old, and 5,605 children and youth), who received \$9,107,835 in wages, equal to \$264 per capita.

A Pretty Experiment.—Roll up a pamphlet, to make a tube about nine to twelve inches long and an inch or so across. Put this tube to your right eye, and look through at some object, attentively keeping both eyes open. Now, hold up your left hand with its back toward you, and bring it near the lower end of the tube, looking at your hand with the left eye, while your right eye is fixed on something through the tube. If you hit the right position, which you can do, putting the edge of the hand against, not over, the lower end of the tube, you will be surprised to see very clearly the things beyond. It is a very easy, but most surprising little experiment, and will please old as well as young people. You will, of course, wish to know why this is so—why there seems to be a hole where there is none. We usually look at the same thing with two eyes, and the two images make one in our mind. Here we separate the two eyes in an unusual manner, and the mind brings together the circle made by the tube for one eye and the hand seen by the other, and make one of them. You can vary this in several ways. If, when looking through the hole in the hand, you stretch out the left thumb, so that it will be seen by the right eye through the tube, the thumb will appear to be directly across the hole in your hand. Instead of looking at your hand, use a card; make a black spot in the card as big as a half dime, and look at it as before; the black spot will appear to be floating in the center of the hole, with nothing to hold it there. Another variation is to make a round hole in the card of the size of the half dime; look at this hole with the left eye, so that the real hole will be within the imaginary hole; the hole will appear exceedingly bright, and surrounded by a ring of shadow.

Wormwood as an Insectifuge.—M. Poyrot having observed that the immense tracts of wormwood (sagebrush), upon the American plains are free from insects of every description, is experimenting with the plant as a preventive of phylloxera. He finds no difficulty in cultivating the wormwood, and he proposes to mix the stalks with manure, or simply bury them in the ground in the neighborhood of the vines. His suggestions have been sent to the Phylloxera Committee of the French Academy.



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THE BETTER WAY TO WORK REFORM.

EVERY new invention or discovery of high importance has been met with opposition and ridicule. This appears to be a sort of natural law, whose operation looks to the thorough trial and complete demonstration of the new. But conservatism, as it is commonly termed, is not altogether responsible for the sharp conflicts which have been waged between the partisans of new systems and the defenders of old. In some cases the bitterness and duration of the struggle have been due more to the advocates of the new, who appeared to rejoice in their power to point out the defects and berate the weaknesses of time-honored yet decadent practices. Modern hygiene offers an apt illustration of this; many of its young and enthusiastic advocates rejoicing in their emancipation from the dogmas of the old schools have been too prone to use harsh terms in their allusions to the principles and practices of that system of medication to which they once bowed in humble reverence. It is interesting, especially for one who possesses a bellicose temper, to look over

the pages of the old Water-Cure treatises and periodicals, and to mark the sharpness of the criticism which analyzes the inconsistencies, blunders, and harm of drugs. The learned faculty that dates its history from Hippocrates is manipulated without gloves, and held up to public obloquy as not only holding firmly to doctrines of preposterous fallacy, but also impairing, by statutory allowance, the health of the community and spreading disease far and wide. Even men to whom the lay hygienist feels deeply grateful for heroic courage in proclaiming the great laws of nature, and for their zeal in illustrating the simple truths of healthful living—such men as Graham, Jennings, Trall—in the strength of their indignation that error should have been so long protected by the shield of conservatism, hurled bitter invectives against the men who bear that shield.

But has this method of setting up a reform been wise? We think not. Hygiene and the methods of Hydropathy, which have been associated with hygiene, as an active system of treating disease, have made some progress since their introduction in this country; but had the spirit of conflict been less pronounced, we think that their triumph would have been earlier, easier, far greater, and more commensurate with the herculean efforts of their apostles. Homœopathy to-day disputes with Allopathy the meed of public favor in some of our older communities. It is less than half a century since Homœopathy was brought to the notice of the American public, yet its growth has been marvelous. Has it been belligerent? No. The fight against it has been on the Allopathic side almost entirely. Its course has been in accordance with its *shibboleth*: "The mild power

subdues"; and it has won its way by its gentleness.

But we beg pardon, Hydropathy claims one pioneer who was not militant. Priessnitz, when he commenced his distinguished career, and made Graefenberg forever famous, went quietly, unostentatiously to work. Believing with the faith of a little child in the potency of water, he applied his *umschlags* (bandages), *douches*, *switzens* (sweatings), *wannen bads* (tub-baths), *leintuchs* (wet sheets), sponges, etc., to the many who came to his Cure, giving no heed to the calumny of his enemies. And when the enraged doctors compelled him to go before the tribunals, his answer to their accusations was given in the testimony of men and women who gratefully acknowledged the saving effect of his treatment.

It is a little amusing to one who is acquainted with the history of medicine to note the incongruity of the conduct of dispensers of decoctions, triturations, and extracts in decrying practices which to a considerable extent were earnestly recommended by that ancient physician in whose line of descent they claim to be. The old Greek certainly knew the virtues of water, and was careful to record specific directions for its use in his treatise on air and water, a considerable part of which is extant. We have reason, indeed, to think that in ancient times hygiene and water were important agents of the physician. Apollo was the deity who presided over medicine, and his priests were, for the most part, the physicians, and his temples were always situated close to a stream or fountain. The habits of these priests were simple. they ministered at the altar, kept gardens, and were practical vegetarians. Hygeia, whom all respectable disciples of

reformed medicine and proper living adore, was the daughter of Æsculapius, that great physician of antiquity who commanded the esteem of the world by his wonderful cures, and she was the favorite of Apollo. We rather suspect that Hygeia is simply typical of the Æsculapian system of treatment, which appears, from all that is handed down concerning it, to have been an accommodation of the patient to what was known of natural principles in connection with the every-day life of man. Æsculapius probably used a few herbal preparations to please those of his patients who insisted upon "taking something." It seems a little strange at first that the modern conservative who calls Hippocrates his ancient predecessor with so much fervor, should not have preferred the more remote Æsculapius as his ancestral representative in the dim past. But it may be that fine old gentleman's close relationship to Hygeia furnished a pretext for disclaiming him. Then, Hippocrates knew something about bleeding, cauterization, and purgatives, and thus introduced some *active* phenomena into his treatment, which showed his patients at once that he could "do something" for them.

We have intimated that the principles of water-treatment and hygiene have won upon the attention of people, notwithstanding the controversial spirit of the early pioneers in this country. The truth could not fail to win respect, and the results of its proclamation are visible in the many Cures which have been established among us, nearly every State in the Union having one or more, where the application of water, according to a system and a corrected diet, are the prominent features. In some of the older

States—notably Pennsylvania and New York—there are several institutions of the kind, which have a large support; and in these States every year witnesses the opening of fresh “Homes,” as they are commonly named. The success of Hydropathy has compelled some of the leading physicians of the old school to adopt certain of its simpler processes; but the public at large do not often hear of their effects, because it is chiefly in hospital practice that they *experiment* with them. Ask one of our allopathic friends why he does not use water more, and if a gentleman of broad intelligence, he will probably reply: “These things wouldn’t do, you know, in private practice, because they involve so much inconvenience to both the patient and his physician. Besides, it’s altogether out of the question; we haven’t the time to attend to the details. Bless your heart, it would take us all day to look after half a dozen patients, and that wouldn’t give us bread-and-butter!” There’s some reason in this.

The hospital experiments occasionally drop into the medical reports, and there we find them noted usually with favorable results. Here is a recent example which is reported in two medical periodicals. The friends of water-cure must smile at the *freshness* of the first statement of the New York surgeon, who is represented as lecturing to a large audience of students:

THE TREATMENT OF PNEUMONIC FEVER (ACUTE LOBAR PNEUMONIA) BY THE EMPLOYMENT OF THE WET SHEET. —Prof. Flint, in a clinical lecture on this subject, says that the treatment is as yet novel in this country, and, being desirous of investigating it, he selected for experiment cases of pneumonic fever where the disease was in an early stage, the patients apparently robust, the pyrexia

considerable or high, and no complications existing. The directions were to employ the wet sheet whenever the axillary temperature exceeded 103° Fahr. The patient was wrapped in a sheet saturated with water at a temperature of about 80° Fahr., the bed being protected by an India-rubber covering. Sprinkling with water of about the same temperature was repeated every fifteen or twenty minutes. If the patient complained of chilliness, he was covered with a light woollen blanket, which was removed when the chilly sensation had disappeared. In none of the cases was the blanket used much of the time while the patient was wrapped in the wet sheet. The patient remained in the sheet until the temperature in the mouth fell to 102° or lower, care being taken to watch the pulse and other symptoms. When the temperature was reduced, the wet sheet was removed, and resumed if the temperature again exceeded 103° Fahr.

The reporter of this experiment goes on to say:

Prof. Flint’s conclusions, drawn from the four cases, full notes of which he gives, indicate that in his opinion the treatment is not only not hurtful, but the history of these cases renders probable the inference that the disease was controlled and brought speedily to a favorable termination by the treatment.

If the writer of the above had taken the trouble to examine the files of the *New York Medical Journal* and the *Medical Record* for the last two years, he would have discovered notes relating to several trials of water in different hospitals—particularly those of Prof. T. G. Clark in the Women’s Hospital of New York, in which the Kibbee cot played a prominent part. The treatment in this case was simply the local application of tepid water by pouring, the cot being an arrangement for convenient drainage.

Generally, when an organ of old-school

medicine publishes an account of water treatment with favorable results, the method is spoken of as if it were a novelty, and the details of its application would appear awkward enough to the skilled employé of an average water-cure. Why do not the doctors read the literature of the subject? or why do they not visit the hydropathic establishments and study their well-adjusted system, and make the proper acknowledgment of their value as a therapeutic system? may be asked.

Loyalty to school or class, professional ethics, and professional honor emphatically forbid. They must re-discover the old principles and practices for themselves, and they are doing it in their slow, conservative manner. Help them, you who know the virtues of nature's therapeutics, by occasional suggestions, by kind and well-timed hints, but forbear the carping, belligerent spirit of the old time.

CANONIZATION OF WRONG.

THE writers of obituary notices in our newspapers appear to be governed by that exceedingly charitable precept *de mortuis nil nisi bonum*—of the dead nothing but good. Every person who has gained the attention of the public when he "pays the debt of nature," becomes the property of the editor or reporter, and if he have amassed wealth, or played a conspicuous part in politics, considerable space is given to an account of his career, in which panegyric forms the leading element. It matters not what a man's private life and personal character may have been, however loose and disreputable his habits, these are left out of the reckoning, and we are treated only

to a glowing description of his skill, tact, and foresight in acquiring and salting-down dollars, or of his sagacity, cunning, and boldness in manipulating primaries or forcing caucuses.

A short while ago a man died who had for many years conducted an extensive business. He had at one time the appearance of great wealth, his summer-house and his city mansion being elegantly appointed, and his expenditures for articles of taste and ornament being profuse. In private life his morality was very low, and in the circle in which he moved his indifference to domestic obligation was notorious. Besides, he was a tyrannical and harsh parent, and at open variance with some of his grown-up children. Of this not a whisper appeared in the plethoric obituaries which newspaper men hastened to print immediately upon the announcement of his demise. And even the clergyman who officiated at his funeral was infected by the disposition to varnish immorality, as his discourse over the body of the aged *roué* was one of fulsome praise.

Recently, too, a man, conspicuous in porter-house politics, and the holder of official sinecures because of his control of votes, died, and there was much laudation poured out for him by the ready pens of journalism. Yet, all who knew the man personally would be likely to acknowledge, in familiar talk, that he was coarse, brutal, intemperate, and vicious. He was all these in his very appearance.

Within a few days we have seen a good deal of praise bestowed upon a man, who had a prominent connection with the origin and maintenance of certain large benevolent institutions in the State of New York. We are told in fervid terms

of the great good which this man has wrought, and how grateful society should feel toward him for the employment of so much of his surplus money in noble charities. But, we are not pointed to the manner in which his wealth was acquired, although that is notorious, and candor and virtue designate it as totally opposed to the spirit of Christian philanthropy. Is it not fairly ludicrous for one who has gained his fortune by selling large quantities of tobacco or wine or beer to appropriate a part of his money to some benevolent undertaking? Yet, to such a man the world is somehow inclined to bow in admiration, and to speak of him as a *humanitarian*!

It seemeth to us that in these matters there is a large degree of sentimental muddlement; and we literary and journalistic folks have not helped much to clarify it.

A NEW BABY-SCIENCE.

THE savant has found a new field of observation, and the announcement of his first conclusions has stirred up a deal of interest. A German father of a scientific turn, gives a little time every day to watching the mental development of a fresh addition to his family. He makes notes of this and that infantile expression, its methods of indicating its wants, its grimaces, cries, struggles, etc., and after some months have passed, and the baby can articulate some phrases which show his possession of a degree of conscious responsibility, a *résumé* of the notes is published, and comments there-with upon the psychological evolution which a dawning intelligence has exhibited. An English father follows suit, and makes the nursery a place of study,

and carefully scrutinizes the conduct of his lately born heir from day to day, until he too has accumulated a mass of jottings, which are worked into a grave treatise on the dawn and growth of baby intelligence. Ere long a large accumulation of data of the kind we have mentioned will come under the eye of some profound generalizer, who will use it as the basis of a new organon of infant psychology.

Now, if these leisurely gentlemen of a scientific turn would take minute measurements of their babies' heads from week to week, would note the growth of different regions—frontal, parietal, coronal, etc.—and observe the relation, if any, between the physical growth of parts to the phenomena of conduct, we think that their data would possess a higher value. To be sure, they know the function of brain, and they perceive its general increase in volume, and attribute the intellectual development of the infant mainly to the rapid enlargement of the anterior lobes after birth, but they do not discriminate closely with reference to the growth of particular regions. By noting the comparative increase of the cranial parts, they would associate mental phenomena with a physiological basis, and render the purpose of their observations more definite and easier of attainment.

INDUSTRY AND PROSPERITY.

OUR country has entered upon a new period of industrial activity, or we mistake the signs which are apparent in our own city, particularly in the one respect of the demand for labor. Immigrants have been pouring in upon us; every steamer from British or German ports bringing its hundreds, yet there has

been an increasing demand during the past six months for helpers in the factory and shop, in the house and in the field. It is said that from January 1st to June 30th, 24,000 men and women had been sent by the Labor Bureau of Castle Garden to different parts of the United States, and fresh demands are still pouring in from the South and West which can not be supplied. This is a most encouraging state of affairs, and promises much for the development of new sections of country. In the South especially, the field of industrial enterprise must widen rapidly, so manifold are its resources and so numerous the industrial needs of the Southern people themselves.

We think that we can look with hearty satisfaction upon these evidences of growing prosperity, for the reason that the demand for help is made chiefly upon those who can produce something of utility, and not upon those who are content to accept places at the desks of the traders in public credit. In other words, the labor generally wanted is that which contributes practical and economical results, and can not easily be made the subject of speculative manipulation. The three or four years of depression through which our people have lately passed, have been replete with teaching on the follies of extravagance, and society has been compelled to relearn the virtues of old-time economy and frugality. It is mainly by the practice of these that this opening era of activity has been brought about, gradually and almost imperceptibly, yet so much the more substantially. We have but to continue in the same good way, each man calmly and diligently pursuing an even course, using

quietly the opportunities which offer to increase our usefulness, and avoiding any tendency to overdo, to make the era of lasting duration.

THE INSTITUTE CLASS OF 1881.

THE present indications are that the Session of the AMERICAN INSTITUTE OF PHRENOLOGY for this year will open on the first Tuesday of October with every prospect of success, a good number of students having expressed intention to be with us.

The study of man, in his threefold character, Intellectual, Moral, and Animal, is at once the highest type of inquiry, and the one which best repays investigation. It is usual for men to study away from themselves—to learn the lore of matter and of money-making, and leave a knowledge of their inner life, and that of their necessary associates, but little considered. A clergyman who had the opportunity of listening to forty or fifty of our lectures on Man as revealed by Phrenology and Physiology, said to us recently, that he regarded what he learned of human nature in those lectures as being quite as great an aid to him in his work of the ministry as that which was taught him in the Seminary.

Young lawyers, physicians, and teachers who attend the Course at the INSTITUTE OF PHRENOLOGY, like those devoted to the ministry, double their power in their special sphere of duty. It is not alone those who wish to make Phrenology a profession that are found eager students in the INSTITUTE. There is no line of important duty which brings man in contact with man, and imposes the necessity of influencing and being influenced by others, in regard to which this modern science of first principles has not valuable information and aid to give.

The "Institute Supplement" which we forward by mail on application will explain the subjects of instruction, and give details as to time, terms, etc.

THE FAIR OF THE AMERICAN INSTITUTE, which opened on September 14th, is one of the best for many years. The managers have made special efforts to give the exhibition a character worthy of the city and the time. Products of the farm and the garden vie with those of the factory, the shop, and with the apparatus of scientific discovery for the attention of visitors. The entrance to the building in which the Fair is held is on Third Avenue, near Sixty-third Street.

HE STILL LIVES.—Just before closing our forms the President is reported to show some improvement following his transfer from the White House to Long Branch. He bore the journey with less exhaustion than was expected, and the change of air is doubtless the cause of his seeming improvement. We, like others, are glad to find an occasion for hope in every little sign which may be interpreted in Mr. Garfield's favor.



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.

TO OUR CONTRIBUTORS.—It will greatly aid the editor, and facilitate the work of the printer, if our contributors generally should observe the following rules when writing articles or communications intended for publication:

1. Write on one side of the sheet only. It is often necessary to cut the page into "takes" for compositors, and this can not be done when both sides are written upon.
2. Write clearly and distinctly, being particularly careful in the matter of proper names and quotations.
3. Don't write in a microscopic hand, as the compositor has to read it across his case, a distance of nearly two feet, and the editor often wants to make changes and additions.
4. Never roll your manuscript or paste the sheets together.
5. Be brief. People don't like to read long stories. A half-column article is read by four times as many people as one of double that length.
6. Always write your full name and address plainly at the end of your letter. If you use a pseudonym or initials, write your full name and address below it.

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.

ANTE-MIDNIGHT SLEEP.—*Question:* Why do people seem to believe that one hour's sleep before midnight is worth two after midnight?

Answer: The night was made for sleep, hence it is but natural that when the shades settle down we should think of preparing for repose. If we prolong our activities far into the night, a condition of nervous excitability is induced which prevents sound refreshing slumber. One who goes to bed early may get into the habit of remaining awake until very late, but such cases are rare; and as a rule, it is found that those who do not get their sleep regularly at night have poor health. The bakers you speak of furnish some excellent kinds of food.

HUMAN NATURE.—C. L. R.—You can improve the action of the organ of Human Nature by mingling with people and studying closely their dispositions, habits, etc. Of course, you will take into account during such study their peculiarities of physiognomy, conduct, etc.

ONE-SIDED GROWTH.—*Question:* Please state cause of greater development on one side of some heads than the other.

R. H. B.

Answer: A well-nourished brain differs very slightly in contour and volume hemispherically; so, as a general rule, those persons whose heads show a decided inequality, were sickly and ill-conditioned in childhood. It is probable that if the body be in a feeble condition, so that the supply of nutriment is insufficient to sustain the nervous development, one side will be exercised in the mental operations more than the other, and its consequent activity will absorb the lion's share of nourishment and it will grow more rapidly. The firm you mention is, so far as we know, sound.

BODILY TEMPERATURE.—H. R. O.—

You can obtain at any well-appointed drug-store thermometers for the purpose of ascertaining the temperature of the body; they are made expressly, and are applied at different parts—for instance, under the tongue, in the axilla, or arm-pit, rectum, etc.

SALT IN FOOD.—E. D. S.—Authorities differ on this subject, some claiming that salt is absolutely essential to the healthful conversion of food, others insisting that salt is a mineral substance, and totally out of harmony with the vital process; hygienists to the greater extent claim, with a good deal of reason, that salt is a caustic substance, and so interferes with digestion, and produces nervous irritability. Those who have been fed from childhood with unsalted food, say that they relish the taste and quality of what they eat more than those who must have their food seasoned.

CEREBRO-SPINAL MENINGITIS.—Question: Is it true, as our physicians say, that no hygienic conditions have anything to do with keeping this disease away? T. M. C.

Answer: We should consider him a very bold physician who would publicly announce such a doctrine, notwithstanding the obscurity of the disease. We feel warranted in saying that informed and experienced medicists believe that hygienic conditions have much to do with the prevention of a disease in itself; it indicates a low nervous tone, in fact a very low state of debility, and in the majority of cases in which it occurs there are found to be conditions of insufficient and poor food, unclean surroundings, and a vitiated atmosphere. The treatment best suited is hygienic and hydropathic.

SIZE OF ORGANS.—Question: How do you tell when an organ is full or large—say Combativeness—or to what degree they are developed? J. M.

Answer: The size of an organ is related or referred to the size of the brain. A large brain uniformly organized would contain large organs mainly; a small brain small organs. In the text-books on Phrenology you will find that a scale of seven degrees has been applied to brain measurement. Large, is placed at the sixth degree, Very Large, at the seventh. Taking, now, a brain which, by its superficial measurements, horizontal, perpendicular, etc., is large, when an organ is developed to an extent commensurate with the general size it is marked large; if its development doesn't reach that point it is marked full, or average, or small, as it is estimated by the examiner. This subject is fully treated in the text-books, and if you wish to make a practical use of phrenological principles it would be well for you to study them.



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 CORRESPONDENT residing in Northumberland Co., Penn., writes: "Lately I have become much attached to the science of Phrenology. I am just beginning to see the incalculable amount of good that can be derived from it. About seven years ago I happened to send to you for a copy of THE PHRENOLOGICAL JOURNAL, which gave me the first idea of the science, but I was too young to appreciate it; and, besides this, several quacks traveled through our country and rather made the science unpopular. It is only within the past two years that I have become deeply interested in it. If my business would allow, I should like to devote my whole time to the study, and especially would I like to attend a course of lectures at the 'American Institute' on Phrenology. I consider a knowledge of the subject almost indispensable to every Christian man and woman. J. R. D."

A CORRECTION.—*Dear Editor:* Permit me to call your attention to an error in "personal notices," page 163, Sept. No., just received. General Benjamin Harrison, Senator-elect from Indiana, is not a son, but a grandson of President Harrison. John Scott Harrison, who died at North Bend, or in that vicinity, not long since, was his father. He is a graduate of Miami University, Ohio, and merits all you say in his favor professionally, personally, and politically.

Yours truly,

Hazlewood, O.

J. S. GALLOWAY, M.D.

PERSONAL.

MR. THOMAS A. SCOTT, very eminent as a railway manager, died May 21st, at his country home in Delaware Co., Pa. After sinking rapidly during the afternoon, he fell into a state of total unconsciousness at seven o'clock, and remained so until death. He was in his fifty-eighth year only. The Pennsylvania Railroad largely owes its growth and importance to Mr. Scott, who was connected with it in different official capacities for nearly thirty years.

HENRY TODD is the wealthiest colored man in Georgia, and lives at Darien a prosperous farmer, worth \$100,000.

GEORGE BORROW has lately died. He acquired the Romany language from some gypsies camped near Norwich; he was twice imprisoned in Spain for circulating the Bible there, which he translated into the Gypsy, the Spanish, and the Chinese tongues.

LITTRÉ,—the man of memory and facts—the lexicographer, had a low and bulging forehead, covered with a mass of tangled locks, and thick good-humored looking lips. His eyes, “quick and brilliant, like a sword-flash, and gleaming from under the stubby brows, their weird light would be unpleasant but for the long, pendant, deeply-wrinkled cheeks, which soften down the whole expression of the face.”

GENERAL JOSEPH LANE's death leaves only two surviving generals of the Mexican War, General Robert Patterson, of Philadelphia, 90 years old, and General Harney, 81 years old.

GENERAL GRANT is reported to receive from his son's firm, where he is a silent partner, an annual income of about fifty thousand dollars. Yet we were told by the *New York Times* that he needed \$250,000 to enable him to live respectably.

WISDOM.

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

A FLOW of words is no proof of wisdom.

It is not death that makes the martyr, but the cause.—CANON DALE.

EVERY man desires to live long, but no man would be old.

SYMPATHY is the key to truth; we must love in order to appreciate.—LINDSAY.

THERE is no courage but in innocence.—SOUTHERN.

HE that wrestles with us strengthens our nerves and sharpens our skill.—BURKE.

REFINED policy has been the parent of confusion, and ever will be as long as the world stands.

HE who cherishes his old knowledge, so as continually to acquire new, he may be a teacher of others.—CONFUCIUS.

A MAN who has learned little grows old like an ox; his flesh grows, but his knowledge does not grow.—BUDDHA.

MEN are apt to mistake the strength of their feeling for the strength of their argument. The heated mind resents the chill touch and relentless scrutiny of logic.—GLADSTONE.

I HAVE read the Bible through many times. It is a book of all others for lawyers, and I pity the man who can not find in it a rich supply of thought and rule for conduct.—WEBSTER.

“SEE,” said an ecclesiastic, holding out a bowl of money before Thomas Aquinas, “the Church has no longer to say, ‘Silver and gold have I none.’” “True,” replied the stern ascetic, “and no longer is she able to say to the lame man, ‘Stand up and walk.’”

A DISTINGUISHED physician in the United States, who came over to the Church, was reproached for having turned his coat. “It is true,” said he, “for I find I have been wearing it wrong side out for seventy years.”

PERSECUTION produces no sincere conviction, nor any real change of opinion. On the contrary, it vitiates the public morals by driving men to prevarication, and commonly ends in a general, though secret, infidelity, by imposing under the name of revealed religion, systems of doctrine which men can not believe and dare not examine.—ARCHDEACON PALEY.

MIRTH.

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

NATUR luvv phun; if she doesn't she never would have made a monkey.—BILLINGS.

A COUNTRY Doctor being asked what was the best way to cure a ham, remarked before answering that question he should want to know what allied the ham.

THINGS are not exactly right. A careful political economist closely calculates that women in this country might annually save \$14,500.00 in ribbons which the men might spend in cigars.

YOUNG Fred, a bashful yet persistent swain, Was very much in love with Mary Jane.

One night she told him, in her tenderest tone, “It is not good for man to be alone.”

Said Fred, “Just so, you darling little elf; I've often thought of that same thing myself.”

Then said the lass, while Fred was all agog, “You ought to buy yourself a terrier dog.”

“SAM, you are not honest. Why do you put all the good peaches on the top of the measure and the little ones below?” “Same reason, sah, dat makes de front of your house marble and de back gate chiefly slop bar'l, sah.”

“OH, give me anything made of beans,” exclaimed a Boston man taken sick in the West, when asked what he would have to eat. They obeyed his request. They gave him castor oil.

A PHILADELPHIA candy factory uses seven tons of clay per month in manufacturing sweets, and every fence within fifty miles of that town has a sign of some one's dyspepsia cure.—*Free Press*.

“Won't you please pay us something, Miss Hammerandbang?” asked Fogg. “I should like to ever so much,” she said, looking at her watch; “but really I have no time.” “So I have heard,” said Fogg; “but we will overlook that, you know.”

Two countrymen went into a hatter's to buy one of them a hat. They were delighted with the

sample, inside the crown of which was inserted a looking-glass. "What is the glass for?" said one of the men. The other, impatient at such a display of rural ignorance, exclaimed, "What for? why, for the man who buys the hat to see how it fits."

WHEN a man and a woman are made one, the question, "Which one?" is a bothersome one until it is settled.

A MAN was just starting from home one evening for the "Pig and Whistle" (tavern), when his son, a right little fellow, said, "I know why they call the public-house the 'Pig and Whistle!'" "Do you?" asked the father. "Why?" "Because," replied the child, "you feed the landlord's pig, and leave us to whistle for bacon."

"Is your wife a democrat or republican?" asked one Rockland citizen of another, in a store this morning. "She's neither," was the prompt response; then glancing cautiously around and sinking his voice to a hoarse whisper, he explained, "she's a home ruler."—*Rockland Courier*.

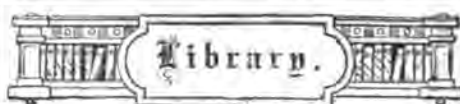
THEY were discussing how to pronounce "oleomargarine." Fogg gave the "g" soft, while Jones declared it should be hard. Said he, "The 'oleo' comes from the Latin, and 'margarine' from the early English." "You are wrong there," said Fogg, who is given to levity, "everybody knows it all comes from grease."

"WHEN I goes a-shopping," said an old lady, "I allers ask for what I wants; and if they have it, and it is suitable, and I feel inclined to buy it, and it is cheap, and can't be got for less, I most allers takes it without clapping all day about it, as some people do."

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 lether, 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 shtreets all day, so I am."

MILKMAN (to small boy): "Tell your mother she'll have to pay ready money for milk after this. I ain't going to chalk up any more." Small Boy: "What are you going to use instead of chalk, Mr. Granger?"

"Orr, Angelina," said Agnes, "Miss Gentian, on meeting Mr. Thorn, with whom she had a quarrel last week, turned as red as fire, and wouldn't even look at him. What do you think of that?" "I think it was a clear case of hate-red."



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.

POEMS BY WILLIAM WILSON. Edited by Benson J. Lossing. Third Edition. 18mo, pp. 224. Poughkeepsie: Archibald Wilson.

Among the "minor" poets of America there are many of whom the reading public rarely hears; some, indeed, remain entirely unknown, and yet one here and one there could be named who has written sweet and beautiful lines which are fit to live. The older readers of the PHRENOLOGICAL JOURNAL must remember certain noteworthy verses which have appeared in its columns from a source totally unknown to fame. Generally, to be sure, these writers live in obscure, out-of-the-way neighborhoods, and may have a little notoriety there, but as a rule no adequate appreciation. This can not be said, it is true, of the poet whose name is on the title-page of the volume now before us; but we will warrant that not one in fifty of our readers ever heard of him. This collection is made up of flowers—"wild-flowers of the spirit—sweet, modest, and unpretending," as Dr. Lossing very appropriately terms them, which were gathered and preserved with others, by the hand of a son. We opine no one pretending to be appreciative of real soulful verse, could read without deep feeling, "The Rare Old Friends," "Mary," "Epistle to Lizzie Lee," and "Dark's the winter night, an' drear." Mr. Wilson was of Scottish birth, and many of his best poems are in the dialect of his childhood home at the foot of the Grampian hills. Elsewhere in this Number, the reader has already read one of those just mentioned.

TURKISH BATH HANDBOOK. Edited and compiled by Geo. F. Adams, M.D., St. Louis, Mo. 12mo, pp. 242. Price 30 cents, Little & Baker, St. Louis.

The Turkish bath has become an institution in this country. Twenty-five years ago its fame only trickled through the lines of newspaper correspondents who were traveling in Europe, and were occasionally persuaded to try its virtues as a depurant and tonic. Now every city worthy of the name has its "hammam" in one form or another of appointment. The Phrenological house in New York did not a little toward the introduction of the Oriental system of ablution, and met with severe criticism from the rank

and file of the faculty, for advocating a form of hydropathic treatment which could not be otherwise than "most exhaustive." Now the best of that faculty approve it as one of the best antispasmodics, and helpful in inflammatory diseases of the skin, congestions, etc. Dr. Adams' Manual tells what the Turkish bath is and its therapeutical qualities, and supplies a deal of excellent counsel on its employment.

BRITISH THOUGHT AND THINKERS: Introductory Studies, Critical, Biographical, and Philosophical. By George S. Morris, A.M., Lecturer on Philosophy in the Johns Hopkins University, etc. 12mo, pp. 388. Published by S. C. Griggs & Company, Chicago.

American life is assuming a character of its own, especially in the older settled States, and that character is expressive of the growth of abstract, philosophical thought among the people. Twenty-five or thirty years ago, the struggle of community and nation making was still going on, and political and social measures occupied the best attention of the great majority of the best minds. Now, however, a large proportion in educated circles are interested in the questions touching the nature of mind, matter, and life, and such a book as Prof. Morris has prepared is a welcome contribution to their reading and study.

The work covers a broad reach of English abstract thought, but it will be found to supply valuable aid to correctness of view respecting the essential nature of that thought. From the schoolmen of early English history to Herbert Spencer there has flowed currents of speculation, more or less founded on premises of vital solidity, and it has been Prof. Morris' aim to present in a well-digested shape their import and bearing. "On the whole," he says, "both in religion and in science, I think we may say with obvious truth that the characteristic disposition of the English mind is to lay hold upon alleged revealed or natural laws of fact in their immediate, practical relation to the life and interests of men, and as narrowly observable in detail with the microscopic vision of sense." He is a close scrutinizer of the tendencies of the late development of liberal philosophy, and we think is rightly critical of its nature when he says in connection with the summarized conclusion just quoted, "With this goes a tendency to neglect that more comprehensive and penetrative mental labor which traces the rational connection of all law with its birthplace in the mind and will of an absolute spirit." This statement furnishes our reader with a clue to the earnest spirit with which our author considers the great topics of life and mind. Special discussions occupy the bulk of the volume concerning the life and philosophical records of Shakespeare, Bacon, Hobbes, Locke, Berkeley, Hume, Hamilton, John Stuart Mill,

and Herbert Spencer, and the candid spirit of these discussions must impress every reader that the learned writer has sought to give each one of these great minds a fair representation, and to assign their proper places in the grand structure of English philosophy.

CONSECRATED. By Ernst Gilmore, author of "White Hands and White Hearts." 16mo, pp. 433. Price \$1.50. Published by the National Temperance Society, New York.

The author makes an effort to picture the life of a Christian as it should be, and with tolerable success. He weaves in considerable information of one kind and another—now a description of some far-off land, now a glimpse of some treasury of art, now a half scientific allusion to matters botanical or zoological or archaeological. Uncle Hugh appears to be a cyclopedia of art, science, history, theology, etc., etc., but contributes vastly to the interest of the story. The character of Madge is wrought out with a happy earnestness, and should prove instructive and helpful to the young reader of the book. The author has written with much feeling, and if an occasional chapter trend upon the sensational, we think its influence can scarcely be other than healthful. There are depths of passion in the religious experience of strong natures which may exceed mere romantic ecstasy, while they bear noble and permanent fruit in the chastened and bettered life.

PUBLICATIONS RECEIVED.

COMPARISON TO THE REVISED VERSION of the English New Testament, explaining the reasons for the changes made in the Authorized Version. By Alexander Roberts, D.D, a member of the English New Testament Company. With Supplement, by a member of the American Committee. Authorized Edition. Price, 25 cts. I. K. Funk & Co., New York. This highly interesting and scholarly work should be read by every one who purposes to study the new version of the Revised Version.

REPORT OF THE SELECT COMMITTEE of the Senate of the United States, on the Regulation and Improvement of the Civil Service—A strong appeal to the Congressional members, in behalf of a system of office supply which shall be founded on merit, and not the sport of political manipulation and partisan intrigue.

THE NEW HOUSE AND ITS BATTLEMENT: The Annual Sermon of the British National Temperance League, in the Metropolitan Tabernacle. By Rev. Joseph Cook. 12mo, pp. 23. Price 10 cents. New York: National Temp. Soc. and Pub. House. Mr. Cook raised his trumpet voice again in behalf of temperance, liberty, and purity.

He says in the start with an emphasis as strong as it is true: "A drunken people can not be a free people." The point is too well illustrated in the political theatre of our boasted free nation where ignorance and ruin appear to hold the balance of power.

GOD BLESS THE LITTLE WOMAN. Beautiful Song and Chorus. Words by Howard N. Fuller. Music by Charlie Baker. Price 35 cts. F. W. Helmwick, Cincinnati, O. This song commemorates the well-known remark of President Garfield soon after he was shot.

We have received from J. S. Ogilvie & Co., publishers in New York City, the following additions to their "People's Library":

BEAUTIFUL BUT POOR; or, Only a Factory Girl. By Julia Edwards. No. 48, price, 10 cts.

LIKE NO OTHER LOVE. By the author of "Dora Thorne," etc. No. 49, price, 10 cents.

JOSE BILLINGS' SPICE BOX. Edited by Josh Billings himself. Crammed with droll sayings, laughable jokes, sharp repartee, wit itself. Price, 10 cents.

THE GRASS WIDOW; A Tale of the Indian Ocean. By Lieut.-Col. West. Price, 10 cents.

NINETY-NINE CHOICE READINGS AND RECITATIONS. Compiled by J. S. Ogilvie. Designed for use in debating societies, young people's associations, parlor entertainments, schools, etc. Price, 10 cents.

THE OCTOORON. By Mrs. M. E. Braddon, author of "Aurora Floyd," etc. Price, 10 cents.

THE RUGG DOCUMENTS. By Clara Augusta. First Series. The autobiography of Aunt Jerusha Rugg, a lone widow, who has outlived her grief for the late lamented Rugg. Price, 10 cents.

FATED TO MARRY. By the late Mrs. May Agnes Fleming. Price, 10 cents.

DORA THORNE. By the author of "A Wife in Name Only," etc. No. 46, price, 20 cents.

A DARK INHERITANCE. By Mary Cecil Hay, author of "Victor and Vanquished." Price, 10 cents.

CAST UPON THE WORLD. By Charles E. P. Rhine. Price, 10 cents.

THE TWENTY-FIFTH ANNUAL CONVENTION OF THE N. Y. PRESS ASSOCIATION, held at Utica, Wednesday and Thursday, June 8th and 9th, 1881. A full report of a most interesting affair of which the August Number of the PHRENOLOGICAL JOURNAL contained a resumé. Mr. A. O. Bunnell, editor of the *Danville Advertiser*, is responsible for this neat souvenir.

OFFICERS OF THE AMERICAN INSTITUTE OF THE CITY OF N. Y., from its organization in 1823, and including 1881; being a complete list of its officers, trustees, and boards of managers of the annual fairs, etc., and their terms of service.

THE THEOSOPHIST holds on its wonted way, representing the mysteries of Oriental philosophy with as much earnestness as at the beginning. In the later numbers there are intimations that the principles it advocates are finding fresh fields, even in communities distinguished for the higher Christian civilization. There is said to be good in everything; and, doubtless, there are some among us in this western world who are ready to avail themselves of the good outcropping from Occultism and the other sources of obscure psychology.

THE LAST POPULAR SCIENCE MONTHLY, viz., that for Sept., contains notable contributions and selections of wit: That on the Development of Political Institutions, by Herbert Spencer; on Writing, Physiologically Considered, by Carl Vogt; the Blood and its Circulation, by Darwin; and the seasonable discussion of the healthfulness of cemeteries. We have always maintained that the location usually given to cemeteries is totally out of keeping with hygienic principles. A new burial-field corporation selects a certain portion of out-of-town land that is cheap, yet well elevated; and as the neighboring territory becomes occupied, danger arises from soil drainage; and it increases, especially for the people living on lower levels. Better far to select for burial-places low land. However, the author of the article in the *Popular Science* claims that no candid investigations have shown that much injury is done to the atmosphere by the decay of the buried dead. The gaseous products of decomposition are absorbed by the earth, and there is little or no escape into the open air. They are absorbed, too, by the veins of water, and tend to corrupt the springs and wells lying in their course.

PHRENOLOGICAL JOURNAL.—To all who are interested in the study of human nature, who find it interesting to read the characteristics and motives of the people with whom they come in contact; in short, to those who believe in phrenology, physiognomy, physiology, and hygiene, this magazine will prove valuable reading, and all might profit by its teachings, which are directed to a higher and purer life. Each month a portrait and character sketch of one or more notable persons is given.—*Bath Daily Times*.

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PRESIDENT GARFIELD.

AFTER a heroic struggle for life, President Garfield died at about half-past ten o'clock P.M. of September 19th, about seventy-nine days after he received the shot from Guiteau's pistol. The end came suddenly. Hope of his

recovery had, indeed, weakened greatly after the relapse of two or three days previous; but it was thought that he would linger some time, so much vitality had he shown all along. But his great heart, exhausted by its mighty efforts for nearly eighty days, having pulsed constantly from thirty to sixty times a minute faster than the normal for such an organism, broke down all at once.

He had but fairly begun the important work intrusted to his hands as President, yet that work had been so well

begun that his administration promised much for the future good of the country, and had won the confidence of all who love good government.

A sketch of his character and life, as well as an account of Mr. Arthur, was published in the PHRENOLOGICAL JOURNAL for August, last year; it being unnecessary, after the minuteness of detail which has characterized the newspaper accounts of both the dead and the living Presidents, to occupy much space here. We must refer the reader to that Number.

LUCRETIA GARFIELD,

THE WIFE OF OUR LATE PRESIDENT.

IT is an earnest, well-poised, thoughtful mind that expresses itself in the portrait of Mrs. Garfield. As we contemplate it we scarcely wonder at the devotion which has shown itself capable of bearing and hoping all things at the bedside of her suffering husband, the President. A strongly practical intellect, a firm and resolute spirit, an ardent affection are depicted in the prominent lines of brow, nose, and mouth. There is physical power, or rather endurance, as well as mental strength, a power which is due as much to her native cheerfulness and buoyancy as to constitutional vigor of vital function. This has been shown by her recent conduct. Scarcely recovered from a severe illness, she goes to Washington immediately on hearing of the murderous attack upon the President and commences that routine of anxious watching and service which is so becoming the true wife and yet so trying to the stoutest organization.

As a woman she possesses more perceptive ability than the average of people. Mark the prominence of the forehead

over the eyes, the breadth of the nose at its root. She is a ready observer and prompt to seize any fact or datum that may be presented to her notice. She has also more than average self-reliance, firmness, and decision. She can read character with readiness and has great faith in her impressions. This last phase was indicated in a most striking manner by her conviction that her husband would recover. When physicians, attendants, and Cabinet officers had given up hope, and said the President must die, Mrs. Garfield rose in the strength of a conviction which seemed to have the power of an inspiration, and replied, "He will not die—I know that he will not." There was more in this attitude than a loving wife's instinctive shrinking from the loss of her husband, something quite different from mere reluctance to consider what seemed probable. The President has died, yet who will say that Mrs. Garfield was altogether wrong?—that a false light illumined her soul? Can spiritual influences be interpreted by mere physical events?

It is said that Mr. Garfield's domestic relations were of the happiest kind; that his wife was not to him merely his house-keeper and the mother of his children, but an intelligent, congenial companion, who helped him in his struggle with the world and contributed to his great suc-

cess. The daughter of an Ohio farmer, Lucretia Rudolph is described as being at seventeen "a quiet, thoughtful girl of singularly sweet and refined disposition, fond of study and reading, and possessing a warm heart and a mind capable of steady growth." At this time she was attending the Geauga Academy at Chester, and there James A. Garfield, a boy

of eighteen, who was working his own way toward an education, met her. Three years later the two met at the Eclectic Institute at Hiram, Portage Co., Ohio where Garfield was still the hard-working student. A mutual attachment sprang up between them, which culminated in



cess. The daughter of an Ohio farmer, Lucretia Rudolph is described as being at seventeen "a quiet, thoughtful girl of singularly sweet and refined disposition, fond of study and reading, and possessing a warm heart and a mind capable of steady growth." At this time she was attending the Geauga Academy at Chester, and there James A. Garfield, a boy

their marriage in the fall of 1858; Mr. Garfield being then teacher of Latin and Greek in Hiram school, having returned from Williams College to take the place of a teacher in the academy where he had once served as janitor. And the farmer's daughter was well fitted to be a teacher's wife, as she had acquired a knowledge of Latin, Greek, German, and French,

and was well informed in mathematics and general literature, being able to assist her husband in the preparation of his lectures.

The first four years of married life were spent by the Garfields in boarding among the families of their friends, but by 1862 careful frugality had accumulated a small fund of savings, with which Mr. Garfield purchased a small frame cottage facing the college, and Mrs. Garfield for the first time became mistress of a home. There, too, Mr. Garfield brought his widowed mother, who has ever since been an inmate of his home. Here the Garfields resided for many years until the growing needs of an increasing family necessitated a more commodious dwelling.

Of seven children born to them five are living, their names being Harry, James, Molly, Irwin (named after General McDowell), and Abram. James is a student at college, while Irwin and Abram have been instructed by a private tutor.

Mr Garfield had always a very strong desire to own a farm, and having paid off the mortgage on the little frame cottage, and being a little ahead in money matters, this desire increased upon him. A farm of 160 acres was, he heard, for sale at Mentor, Lake County, and he made arrangements for its purchase. On the farm was an ancient and somewhat dilapidated farm-house a story and a half high, and there the family removed in 1876. The ceilings were low and the house was somewhat inconvenient; but the outdoor life delighted the boys, who ran wild in the orchards and hay-fields, and Mrs. Garfield and her widowed mother-in-law rejoiced in the return to the scenes of farm life, among which both had spent their early years. Mr., now General, Garfield, also, after a session at Washington, found healthful and congenial occupation in reviving the farmer skill of his boyhood in holding the plow, loading the hay-wagon, or driving the ox-team.

In 1879 it was found practicable to en-

large and somewhat modernize the house. Mrs. Garfield had a talent for architecture, and she now devoted her attention to devising the best way of improving the home. After long consideration *she prepared the plans* for the new house, the builders were set to work, and the present commodious but unpretentious dwelling was erected around and over the old one. It is described as having two stories capped by a steep red roof, which shelters a big garret lighted by dormer windows. A wide piazza extends the whole length of the front—a wide hall runs through to a back porch. Below are the parlor, dining-room, kitchen, and two large bedrooms, one being the room of "Grandma," now nearly eighty years of age. Above are the other sleeping-rooms and the study of the master of the house. A few steps from the house is a little building of a single room called the library, with its walls lined with bookcases and with windows on all sides.

We have said that Mrs. Garfield is well educated. She has besides education a liberal share of that good sense which comes from an earnest and thoughtful appreciation of the experiences incident to every-day life. It is this good sense which constitutes the fundamental element of true culture.

An extract from one of her letters to Mr. Garfield, which appeared in the *Student*, a paper published by the students of Hiram College, shows in a marked degree culture of mind and heart. The letter was written about ten years ago and was intended only for the eyes of Mr. Garfield, but somehow it fell into the hands of the president of the College, and he made use of it in a lecture to the students. It is as follows: "I am glad to tell that out of all the toil and disappointments of the summer just ended, I have risen up to a victory; that silence of thought since you have been away has won for my spirit a triumph. I read something like this the other day: 'There is no healthy thought without labor, and thought makes the labor happy.' Perhaps this is the way I have been able to

climb up higher. It came to me one morning when I was making bread. I said to myself, 'Here I am compelled by an inevitable necessity to make our bread this summer. Why not consider it a pleasant occupation, and make it so by trying to see what perfect bread I can

mine—that I need not be the shrinking slave of toil, but its real master, making whatever I do yield me its best fruits. You have been king of your work so long that maybe you will laugh at me for having lived so long without my crown, but I am too glad to have found



MRS. ELIZA GARFIELD.

make?' It seemed like an inspiration, and the whole of life grew brighter. The very sunshine seemed flowing down through my spirit into the white loaves, and now I believe that my table is furnished with better bread than ever before; and this truth, old as creation, seems just now to have become fully

it at all to be entirely disconcerted even by your merriment. Now, I wonder if right here does not lie the 'terrible wrong,' or at least some of it, of which the woman suffragists complain. The wrongly educated woman thinks her duties a disgrace, and frets under them or shirks them if she can. She sees man

triumphantly pursuing his vocations, and thinks it is the kind of work he does which makes him grand and regnant; whereas it is not the kind of work at all, but the way in which and the spirit with which he does it."

The lineaments of Mrs. Garfield the elder are still characterized by that force and clearness of mind which so distinguished her eminent son. Nearly eighty years of age, there is, nevertheless, a freshness of expression and sprightliness which indicate an indomitable spirit, ambition, and activity. Such a mother would naturally be inclined to encourage and fortify, by kindly counsels, an ambitious youth. Her maiden name was Ballou, her father being a cousin of Hosea Ballou, the founder of Universalism in America. The Ballous are of Huguenot origin, and directly descended from Maturin Ballou, who fled from France on the revocation of the Edict of Nantes, and with other French Protestants joined Roger Williams' colony in Rhode Island, the only American colony founded on the basis of full religious liberty. Through his mother, who shows clearly her French origin in her features, Mr. Garfield doubtless derived his eloquent tongue. She was married when but eighteen, and went to live in a small log-house on a new farm in Newburg, now a part of the city of Cleveland, Ohio. Here three children were born to the earnest, laborious pioneers. In 1826 the family removed to New Philadelphia, where Abram Garfield had a contract to build a few miles of canal. Four years later they returned to the lake country, and a farm was purchased in Orange township, and a new log-house built. In

this James A. Garfield was born, on the 19th of November, 1831. Less than two years later the athletic and handsome father died from a sore throat contracted while fighting a forest fire, which threatened to destroy his fences and fields. Just before he died he pointed to his children, and said, "Eliza, I have planted four saplings in these woods; I leave them to your care." When the last sad offices of burial were concluded, the widowed mother addressed herself to the severe responsibility of supporting herself and children, and training the latter into habits of industry and honor. She worked in the fields with her eldest son, often to plant or harvest, and considered no labor too hard that could be made conducive to the comfort of her household and the welfare of her children.

The late President always expressed his obligation to his mother for the guidance of his childhood and the inspiration which turned his steps aside from following the career of a boatman to that of study and the teacher's desk. Her counsel was always at hand to help him on the road which led him to eminence. This fact should be recognized by the people and in a practical way. For instance, the large fund which has been subscribed to by so many sympathizing hearts for the benefit of the President's widow and children, should be supplemented by contributions of a small annuity for her special use. To be sure, her children will see to it that she is comfortable during the short term of life which may remain to her; but a definite sum set apart for her support from the large amount now being made up would be a graceful testimony to the people's consideration of her worth.

IN MEMORIAM—JAMES A. GARFIELD.

O TEARS! O tears! no sign of weakness are ye now
For weight of grief like this will bend the stern-
est brow;
Our chief lies silent, cold, and calm, and still, and
white.
Who was so cheerful, strong, and brave, and true,
and bright?

A stricken nation groping blindly seeks to know
Why God has laid upon it this heavy weight of
woe.
A man of men for gain and paltry place is
slain;
And tho' our hearts weep blood he will not come
again.

There are no parties now, no differences, no
creeds,
While freedom folds around her these solemn
widow's weeds,
And history writes in blackest hue the fatal
page
That tells of Garfield dead by cruel, ruffian rage.

In youthful haunts he fondly thought to stray
once more,
'Mid youth's loved scenes to dream his early
struggles o'er,
To pass with friends 'mid mountain heights some
restful days :
Instead God gave this bed of pain, this death by
cruel ways.

While days grew months with rapt suspense we
waiting hung
On ev'ry hopeful word that through the throb-
bing wires rung ;
We dared to think that we should be forgiven
In wrestling for his life against the powers of
Heaven.

But for some purpose high, in nobler world than
ours,
A place awaited him in yon supernal bowers ;
And from this narrow life, with Christian calm-
ness he
Has stepped into the spaces of Eternity.

The proud flag of his country droops as he passes
by,
Its shining stars obscured upon their azure sky ;
The great bells in their towers ring out in clang-
ing sob,
As the soul of Garfield sweeps to the heart of
Garfield's God.

Altho' they say "He giveth to his beloved
sleep,"

Yet neither eyes nor hearts can quite forbear to
weep ;
From Maine's unbroken woods to farthest West-
ern slopes,
Around him clustered hung a nation's fondest
hopes.

Enthroned in love at home, in reverence held by
all,
A nation brings him flowers, a nation folds his
pall.

A nation weeping bears him to his silent rest,
A nation weeping spreads the sod above this
soldier's breast.

O tears ! O tears ! flow on for those now left
alone,

In this vast world so dark and lonely grown ;
When such a great soul soars from earth away,
Its passage dims with shade the brightest sum-
mer day.

Our loss ! our country's loss ! will not have come
in vain

If grander purpose grow from out our present
pain,

If men will learn henceforth to build their ship
of State

With timbers strong, and true, and pure, as
great.

If they will plan that only those of worth may
dare,

In any place of fame, or power to hope a share,
Then from our martyr's death such good will
grow

As may in time assuage a nation's woe.

AMELIE V. PETIT.

Aspenshade Cottage.

OUR NEW PRESIDENT.—The situation of Mr. Arthur during the interval between the shooting and death of President Garfield was an exceedingly trying one. His political relations, his supposed personal sympathies, were made the pretexts for bitter innuendoes and criticism ; and hundreds of journalists assumed the function of monitor and turned out column after column of advice, a little of which he must have read, while he could guess at the remainder. But all must confess that Mr. Arthur conducted himself with rare discretion under the ordeal ; and that he appreciated the gravity of his position in succeeding to the Presidential office seems evident from the fitting language

of his inaugural address on taking the oath of office from the hands of Chief-Justice Waite :

"All the noble aspirations of my lamented predecessor which found expression in his life, the measures devised and suggested during his brief administration to correct abuses and enforce economy, to advance prosperity and promote the general welfare, to insure domestic security and maintain friendly and honorable relations with the nations of the earth, will be garnered in the hearts of the people, and it will be my earnest endeavor to profit and to see that the nation shall profit by his example and experience."

THE MOULD OF MIND.

ENVIRONING relations constitute the *mould* into which the human mind grows and develops. The old psychology wasted its energies in trying to solve the mystery growing out of the relation between mind and matter. The new psychology, wiser than the old, instead of trying to solve this mystery, accepts it as one of the ultimate facts of nature, and views psychological phenomena as the result of the interaction between the mind as an organism and external cosmical forces. Hence, in considering the true form of education, or mental development, environing relations which ensphere the mind and operate as counter-forces to internal psychical forces should be taken into the account. Our theories of education have been too much influenced by the metaphysical theory of mind, according to which the mind was viewed as an entity moving *in vacuo*, and not as the result of counter-forces, one side of which is material and physical. The world of mind and the world of things are the complements of each other. The world without finds its reflection and explanation in the world within, while the world within finds its ideal form of development in surrounding conditions and limitations. The relations of the two worlds, the outer and the inner, may be compared to two concentric spheres. The sphere of mind illumines with the light of thought the sphere of things within which it moves, and into correspondence with the forms and forces of which it grows and develops. Hence, the external sphere of being furnishes the teacher with the *norm* or pattern according to which he is to work in laboring to realize an ideal of mental culture and development. Since all that is to man desirable and possible, or undesirable and impossible, since all there is of good and evil, are conditioned by the nature and form of external relations, it follows that the matter of supreme importance to man is a knowledge of the outlying universe, that he may organize

his thought and volition in harmony with its requirements. What kind of a universe is this in which man awakes to consciousness? What are its orders and ranks of being, and the laws and forces which operate in them? Having learned what these laws and forces are, to what practical ends can he turn these that he may thereby promote his own well-being together with that of Humanity with which he stands organically related?

2. The conception of the universe has unfolded in the human consciousness into a threefold division. We must find the natural and primary divisions of the universe in the evolution of human thought. A systematic classification of knowledge for other than educational purposes might find its starting-point in a different principle. But a systematic scheme of knowledge which is to serve as a guide to right methods of instruction, and which should be a kind of picture of the growth of the human mind along the ages, must be constructed out of the evolutions of thought. In the undeveloped, primitive consciousness there was no differentiation of thought into the different phases of being—such as subjective and objective phenomena, the *ego* and the *non-ego*; the rational and the non-rational, the animate and inanimate, the natural and the supernatural, the human and the divine, were all blended together in the primitive consciousness into one vast undiscriminated world of wonder, mystery, awe, and fear. This blending together of the different phases of being in the primitive consciousness, and which, to the enlarged scientific mind, seems so strange and incongruous, did not do any violence to the thought of primitive man. The grand conception of the Cosmos, or world of law and order, swung in space and moving through time, in the midst of which lives the conscious soul of man, while over all rules one supreme Intelligence as the central fountain of operation and law, had not yet thoroughly irradiated the human mind. The primitive

form of thought was polytheistic, placing behind physical phenomena a multitude of capricious and fickle deities. So long as polytheism reigned over the mind, there could be no development of scientific ideas. The supernatural and theological element had to be differentiated in thought from the cosmical and the anthropological element, and these from each other, before the organism of science could begin to unfold into its related parts. The monotheistic conception of the universe expels from the mind the idea of supernatural agencies, to which the phenomena of nature were supposed to be due, and enthrones in their place the idea of established and uniform laws. The mind rises to the higher conception of a Cosmos, or beautiful and divinely arranged mechanism controlled by forces, whose modes of operation can be ascertained and formulated into laws, while over all this vast system of change and movement rules one supreme Power, the central fountain of life and energy. To make science possible, the mind had to rise to the conception of one creative Power, in whom all things find their cause, their unity and explanation. In human thought one God had to take the place of many gods, the supernatural had to be discriminated from the natural, final causes from secondary causes, and *noumena* from phenomena. Even in the time of Plato the conscious human element was undifferentiated from the Cosmos. In Aristotle it was only partially extricated. In the celebrated philosopher Descartes, in whom it has been said humanity came to a consciousness of itself, with his famous formula *I think, therefore I am*, the human soul, through its power of introspection, began to place itself in antithesis to the external world. Hence, in the fully developed human consciousness we have the three fundamental orders or phases of being, namely, Nature, Man, and God. No evolution of human thought in the future can ever obliterate or destroy these fundamental distinctions. The condition of all thinking is the indissoluble relation of subject

and object. To destroy this distinction thought would have to destroy itself. "The object of religious sentiment," says Spencer, "will ever continue to be, that which it has ever been—the unknown source of things. While the *forms* under which men are conscious of the unknown source of things may fade away, the *substance* of the consciousness is permanent." These three grand divisions of the universe which form the mould or matrix of mind have unfolded into the sciences and systems of philosophy.

3. The conscious organism of mind finds itself antagonized by an external world of forms and forces. Nature, as the objective pole of phenomenal being, with its heights and depths of space, and evolutions of time, thus becomes the object of man's study and the sphere for the development of his powers. The study of cosmical phenomena with a view to reducing these to system through the conception of fundamental laws constitutes the problem of natural science. Science may be viewed as the artificial mechanism which the human mind has constructed in its efforts to make the world of thought correspond with the world of things. The increasing correspondence of thought with the external order of nature, that is, with its co-existences in space and sequences in time, registers the progressive development of mind. Natural phenomena, reduced to the form of science, has largely formed the matrix in which the best and highest order of modern thought has been moulded. Whatever makes the modern mind superior to the ancient mind, whatever makes modern life superior to ancient life, giving it a greater expansion, richness, and complexity, must be mainly attributed to the scientific conception of nature and to the control over the laws of nature which has been obtained through this conception. The development of the individual mind should be a repetition, in its essential features, of the development of the universal human mind. Scientific ideas should be organized in the individual mind in conformity with the truth

of nature, that education may be a healthful and symmetrical development.

4. The development of the Cosmos is supplemented with the development of Humanity, and the unconscious physical forces of nature find an ally in the conscious human forces. Man, in whose individuality center all the lower physical forces, together with the superadded force of intelligence, or mind, appears as the actor in the historic drama which unfolds a new order of phenomena. Social laws and forces are conjoined to physical laws and forces, and Nature, as thus united with Humanity as an intelligent and ever progressive force, passes up into a higher phase of development. The products of this movement of Humanity are sociological phenomena in the form of institutions and laws, ethical, religious, political, and economical, together with language and literature, science and art. Hence, another important part of the mould of mind is formed out of the elements and forces which operate in this higher social sphere. Social evolution has been carried on through the interaction and adjustment of complex and manifold forces, both physical and psychological, such as pleasure and pain, sympathy and shame, pride and love, hate and terror—all of which, through countless ages, have operated on the plastic elements of Humanity to form the institutions of society, as these now exist among civilized men. These social forms and forces constitute the moral and political environment to which the plastic and growing minds of the young should be harmoniously adjusted, in order that the individual life may be brought into organic sympathy and union with the life of Humanity. We should not overlook the important fact that one of the chief factors operating in the development of Humanity has been the interaction of mind with mind. The individual finds himself an organic unit associated with a vast number of other beings, who, though like himself in the elements of a common humanity, are endowed with diverse wills and tendencies, and who,

with their attractions and repulsions, affinities and antipathies, form the complex organism of society. In the midst of these aggregated intelligencies, with their diverse tastes, interests, and pursuits, each individual must find his place, and shape and fit his social and moral character into the established institutions of society, and which commend themselves to his respect and obedience through the sanctions derived from the wisdom and experience of the past. The sociological forces in the mode of their operation, together with the results which these evolve, should be reflected in the thought of the individual, in order to preserve him from fatal mistakes, and to bring the order of his moral life into harmony with the requirements of society. Society is now suffering because the important principles of social science have not been inculcated.

5. As we have seen, the progressive development of mind does not tend to eliminate the idea of God from human thought, but, on the contrary, to make it stand out with increased clearness. The highest thought of Humanity, the perennial source of its life and inspiration, is the idea of an infinite and eternal Being in whom all things find their explanation and unity. This belief of Humanity in noumenal and absolute being in contrast to phenomenal and relative being, and which ever persists in consciousness amid the mutations of time, creates a demand for a religious *cultus*. Hence, the religious and spiritual cultus forms the third element in the mould of mind. Without this, Humanity would not manifest its higher qualities. It is the tendency of the age to believe, hope, and work only in the material to the neglect of the spiritual, which Lecky regards as the one dark shadow resting on our modern civilization. "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." Hence, to mould and impress the growing mind into correspondence with those religious forms which constitute the sacred heritage of the race, should be regarded as an important part of a symmetrical education.

Thus the developments of thought yield a threefold division of the universe, which may be respectively termed Cosmology, the science of nature in its phenomenal aspects; Anthropology, the science of Humanity in its historic aspects; and Ontology, the science of essential and absolute being. Anthropology is a term used at large with no very precise meaning, having reference, in a

general way, to the facts and doctrines concerning the individual man, such as organism, temperament, and the physical and moral characteristics of different races. As thus used, its doctrines belong partly to biology and partly to sociology. As here used, it stands as a counter-term to Cosmology, so that as the latter expresses the evolution of nature, the former will represent the progressive development of Humanity.

Now, these three grand divisions, Cosmology, Anthropology, and Ontology, as they branch out, divide and subdivide, according to the tree-form manner of development, will thus constitute the complex organism of science.

J. M. LONG, A.M.

Palmyra, Mo.

PRESIDENTIAL NASOLOGY.

EVERY one knows that he has a nose, and he knows that it is the leading feature, since all follow it; but a man hardly ever alludes to it unless in a ridiculous way. From the earliest ages the nasal promontory (and this, by the way, brings to mind the etymology of the word, which is in Saxon "ness," meaning a point of land, as Caithness, Stromness, and a hundred other nesses or noses which mother earth pokes out into the sea) has been appropriated by humorists to cut their gibes upon; it has been made the butt of satire and the target for the arrows of ridicule. Genius and passion have spoken and sang rapturously concerning eyes, lips, cheeks, and chins; but where is the poet or the lover who has dared to sentimentalize upon the nose? We gaze with admiration upon a beautiful female face that is set off with a fine nose, and acknowledge the effect which that elegant object has in the *tout ensemble*; yet if we wished to apostrophize this lady's beauty in the language of the poet, we would allude to everything except the nose. To evoke sentiment from that part of the face would only be to excite laughter and

derision. What the latent quality may be which is so productive of risibility in this instance is one of the enigmas, for in point of utility the nose is not to be laughed at. To it the respiratory system owes the ingress and egress of a great portion of the food of life—air. It is the organ of smell, and serves also as the emunctory or excretory duct of the head.

In an æsthetic point of view, the nose is no less important, for it is the main element of facial beauty. Without stopping to inquire how very much this depends upon its shape, we may easily corroborate our statement by hinting the unpicturesque effect which would be produced by a countenance minus the nasal appendage. Think of Cleopatra or Helen without that prominent facial organ smelling of rose garlands and wooing the world to their feet. Shades of Paris and Mark Antony! What lover could sigh with passion, kneeling at the feet of a woman regarding him with a tender grin on her noseless face? No; important as the nose is as an organ of utility, it serves a still higher purpose as an ornamental feature.

The old Roman augurs divined of a man according to whether his nose was long or short, convex or concave. Na-



JOHN ADAMS.

poleon, that rare student of men, said: "Give me a man with a good allowance of nose. I have almost invariably found a long nose and a long head together." Sir Charles Bell, in his "Anatomy and Physiology of Expression," remarks that "the nostrils are features which have a powerful effect in expression. The breath being drawn through them, and their structure formed for alternate expansion and contraction in correspondence with the motions of the chest, they are an index of the condition of respiration when affected by emotion." In all cases it is safe to regard the nose as somewhat indicative of, and in harmony with, the character of the individual.

We have lately been studying character as exemplified by the proboscides of our chief magistrates, and we give herewith the result of our studies to the readers of the PHRENOLOGICAL JOURNAL, believing that they will see at once the truth of our deductions. Looking upon the gallery of portraits of our Presidents, one is struck by the diversity of noses that set off and otherwise embellish their heads. It is plain that they must have differed markedly in their types of character. Accordingly we find that this is so, and in each instance the higher is the character the nobler is the nose that goes with it.

George Washington was noted for having a great deal of what is called com-

mon sense, and his nose is an admirable exponent of his intellect. It is massive and well proportioned, square at the base, with large, thick nostrils, indicating good breathing power. It is a compound of both the Roman and the Greek, and not inaptly represents a Doric column, on which seems to rest the grand dome of the cranium. Withal it is a cogitative nose, indicating a mind having strong powers of thought and given to serious meditation. A man with such a nose could both plan and execute, lead or follow, speak or write, work or enjoy recreation. He would have faculties for war or peace, and would excel as an engineer or architect, a philosopher or a statesman. The character would be well-balanced and harmonious.

John Adams' nose was the best feature of his face. With any other kind of a nose he would have been only a good-natured, cider-drinking farmer, or the convivial, rollicking 'squire. But from that round, ruddy face, with the humorous eyes and the mirthful lips, stands out a nasal promontory as royal as an eagle's beak. Our second President evidently followed his nose with some profit. There is an abundance of character in it. It is large and long, narrow between the eyes, and a trifle pendulous at the



THOMAS JEFFERSON.

tip. Such a nose indicates a warm and impulsive nature, in whose composition there is but little secretiveness and no

dissimulation. It is the nose of the orator who feels what he says, and whose convictions are too honestly entertained



JOHN QUINCY ADAMS

to be unfeelingly expressed. The development upon the ridge of the nose shows that he had plenty of aggressiveness and force, and perhaps a little too much of irritability.

Thomas Jefferson had a triangular nose, the apex starting from an over-hanging arch of brain, and the base straightly defined at a right angle. The end looks as if it had been abruptly and cleanly cut off. Aggressive and determined, it is a good, strong, straightforward nose. It neither looks up or down, but points right out into illimitable space. The downward length of the *septum* shows that he had the faculty to discover and invent new things, and the ability to generalize. The height of the upward curve of the wing indicates the power to reason *à priori*. The whole feature is an excellent index of the man who wrote the declaration of the democrat, and of the most original thinker of all our statesmen.

A finer nose than that of Madison hardly ever adorned a face. It is a clean-cut, handsome nose, long from the eyes downward, in exact harmony with his face, with circular nostrils, and the tip rather elongated. The massiveness of

its build is relieved by the grace and delicacy of its proportions. It is the index at once of a great intellect, and a frank, honest, refined, simple-hearted character, who having no deceit in himself suspects none in others.

President Monroe had a splendid nose, both Greek and aquiline in its outline and massive in its proportions, just the nose for the superb head and face it adorns. The intellect behind such a nose is chaste, plain, severe, perfectly harmonious, strong and clear. It indicates a taste for the simple and the inornate, and is a mark of sturdy refinement of character. Monroe was one of the purest and best of our statesmen.

The nose of the "Old Man Eloquent" is a study. It looks as if it started to be a Roman, then suddenly changed its mind in order to become a Celestial; but Celestial it is not. It is a long, triangular nose, with a sharp point and narrow back. The nostrils are large and well defined. Though somewhat irregular, it is finely outlined. It is a penetrating nose, a hard nose, so to speak; a nose whose owner would have strong feelings and warm prejudices, energy, firmness, indomitable courage, but not much urbanity or much sociability. Observe the wrinkles at the root of the nose. There



MARTIN VAN BUREN.

were plenty of self-esteem, practicality, and force, as indicated by the nasal feature.

General Jackson's nose is of a different sort. It is one of the heroic type, not a pure Cæsarian one, but so closely approaching it that we shall term it a Roman nose. Energy, decision, aggressiveness are written thereon; it is the nose of a conqueror. It is a rigid nose, utterly lacking flexibility, and proclaiming a mind utterly devoid of fancy. A man with a nose just like this could never write a poem or excel in oratory, and still there is feeling, practical wisdom, and shrewdness in the organ. It is not a handsome nose, but it bespeaks power. It is a fighting nose, and men like Jackson hit hard and keep on hitting.

Martin Van Buren had a long nose, large and strong; a precise nose, with a tendency to sharpness and inquisitiveness. The widespread nostrils and the thickness of the end of the nasal organ indicate shrewdness and secrecy. The owner of such a nose could not be badly cheated in a trade. There is a dash of the Jewish in it, and it is just the proboscis for a dicker. If Mr. Van Buren had turned his attention to trade he would have been as successful as in politics, and that is saying a great deal, for the shrewd Dutchman was not only the most dexterous politician the world ever produced, but he was also the most fortunate one.

The nose of President Harrison is rather long and melancholy. If it was not for its Romish arch it would resemble greatly a Celtic nose. But the prominent ridge alone saves it from weakness. It is a narrow, cold, aristocratic nose, rather thin-nostrilled, and more or less apprehensive. Harrison was a soldier by education if not by natural inclination, and though he was eminently successful in his chosen field, no one would ever have selected him for a fighting man. He was not intellectually great, but his name will go down to posterity as one of the honored ones of our nation.

The nose of John Tyler was very large, long, and prominent. It has a few elements of the Roman type, but the arch is more subdued, and the downward ex-

tension of the nose more considerable than could ever be associated with the pure Cæsarian. The nose has a look of apprehension and melancholy about it which has its influence on the whole face. A man with such an excessively elongated nasal protuberance would be liable to make himself miserable by "borrowing trouble" and indulging in "the blues." John Tyler was not a happy man. The lines of his nose are cleanly cut, and indicate taste and considerable power.

President Polk had a large, long, irregularly-shaped nose, full and indented nostrils, with a curved ridge at the bridge, almost elevating it to the majesty of the Roman. It is a firm nose, indicative of obstinacy and persistency. It is the nose of an ambitious, grave, well-poised, upright, unostentatious character.

General Taylor's nose is a soldierly-looking proboscis, with a good Roman arch, well shaped and handsome. It rests upon a broad base, thus indicating fullness and volume of mental impulse. There is not a line of culture about it, but there is force, zeal, activity, and bluntness. The kindly lines about it show that "Old Rough and Ready" usually had his heart in the right place.

Millard Fillmore had a thick, massive nose, starting straight from the forehead, slightly depressed in the center, and terminating bluntly. It is built on a large, comprehensive plan, and despite its Celestial outline, is full of character. Turned over and trimmed up a little, it would be a Roman nose. It sets off a face of manly beauty, where quiet dignity and philosophical intellect appear in every line.

Franklin Pierce had a fine, clean-cut, and prominent nose. It is Greco-Roman in its type, inquisitive yet a courteous one—the nose of a gentleman. It is the highest possible type of the American nose, a composite proboscis that in years to come will be as distinctly marked as the Greek, the Roman, the Hebrew, the aquiline, or the pug. Such a nose indicates harmony of faculties which make

up character, and admirably agrees with the reputation President Pierce enjoyed.

James Buchanan's nose indicates, main



WILLIAM H. HARRISON.

ly, culture and development of character. It is small in comparison with the size and activity of his brain, showing the subordination of impelling to guiding power. It is a composite nose, more Greek than Roman, carries itself well up in the air, and has moreover, a dash of polished eccentricity about it.

Lincoln had a strong, prominent, irregular nose, standing boldly out from the face as if confronting the future. It impresses one with the idea of solidity, power, and indomitability. The perceptible curve of the ridge gives it a military air, something even of belligerency. By the large nostrils, it is evident that there was copiousness of breathing power and also srightliness of movement.

Andrew Johnson's nose was of the kind known as "bottle-noses," and a first-rate specimen of the type. It is a thick, broad, rugged proboscis, well proportioned, however, and with a transverse ridge below the line of the eyes, which indicates pluck and persistence. There is an anxious, emphatic look about the whole feature that accords well with the character of the man.

The fine aquiline nose of General

Grant would stamp him at once as a military man. Its proportions are so admirably adjusted to the face that one would hardly call it a large nose, yet it is. It is well defined, and without any irregularity, sufficiently broad at the base, with wide, thin nostrils, indicating a lack of morbid sensitiveness in his composition. In aggressiveness and relative defence it is well developed.

In ex-President Hayes' nose we find another of the composite or American type of noses, and it is a good nose, by the way. The feature shows culture, refinement, and power. It is an artistic nose, not blunt, not sharp, but of a happy medium. It has strength and it has suavity. It is the nose of a kind-hearted man, ever ready with a kind word or good deed to smoothe the path of the unfortunate and lift the fallen on their feet again for another chance in the game of life.

President Garfield had a large, slightly aquiline nose, that stands out prominently from his face. There is much strength and positiveness about it, and all its lines show culture as well as determination. Our twentieth President had a highly-developed mentality, as indicated by his prominent and exquisitely-chiselled nose.



JAMES K. POLK.

In this national portrait-gallery there seems to be almost every variety of that feature which the ancients called

bonestamentum faciei, and we have found the same variety of character. We think we have given a truthful reading of each feature. The Roman nose indicates will-power and energy. Jackson's nose approaches the nearest to that type. That quality of force which he exhibited has passed into a proverb. The noses that most nearly approximate the Greek were those of Washington, Madison, and Pierce. Their character, in each in-

stance, possessed elements akin to that beauty-loving race. The rugged noses of Jefferson, Polk, and Johnson are complete indices of the characters of these men. Given, then, the nose, and we have the men before us. There is no other feature, I think, which is so true an index of character and a measure of force as the nasal promontory. It seems to stand out "and make its sign," and one can read as he runs.

FRED MYRON COLBY.



PEOPLE WHO LIVE IN GROOVES.

THERE is a fatal facility about grooves. They are wonderfully easy things to run in. They are labor-savers and man-savers. They save time, trouble, bravery, and brains. It is as if rivers ran down stream both ways, and oars had never been invented.

THE DOCTOR.

The groove-bound doctor attacks the patient in typhoid fever according to a formula so old as to be mossy, and the result is often something else that is mossy, if you give it time enough, to wit, a grave. The medicine and the disease are too much for the poor fellow, and between them he comes to grief and "goes to grass." Venture to suggest to this vender of antiquities the virtue of good nursing and nourishing food, and incessant watching that nature has fair play, and he denounces it as the wisdom of old women which is foolishness with mummies. The doctrine is, better die according to law than live according to grandma! The physician who studies his patient like a new book; who reads his peculiarities as if they were in print; who sees wherein this case differs from any other; who recognizes the fact that man is not a stereotype, and who finds his treatment

less in the pink-and-senna scented library than by the bedside; who dares prescribe what he thinks rather than what he remembers; who believes that books record other men's experiences, and can be verified or condemned only by his own—this man can never be a man of grooves.

THE TEACHER.

The most useless of stupidities is the teacher who is a groove-runner; who has swallowed text-books without digesting them, and feeds his pupils with the morsels as old pigeons feed squabs, until, like himself, they are all victims of mental dyspepsia, which is a curious synonym for education. Children subjected to such diet are as likely to get fat and strong as so many grist-mill hoppers, that swallow the grain without grinding a kernel. Such teachers forget that one, like Judith's sister "Feeblemind" in Cooper's novel, may have a prodigious memory. Who has not known a fool who remembered everything he heard and just as he heard it, who could run up and down the multiplication-table like a cat upon a ladder, and rattle off rule after rule without missing a word, and that was all there was of it—he was a fool still. A good memory built into a well-built intel-

lectual structure is a noble blessing, but that same memory with nothing to match it is like a garret without any house under it; a receptacle of odds and ends, that are worth less than those papers that losers of lost pocket-books are always advertising for, "of no value except to the owner."

Take English Grammar under the man of grooves. Learning to swim upon kitchen tables, buying a kit of tools and so setting up for carpenters, are all of a piece with his grammar. Hear them defining a prep'sition as "connecting words, and showing the relation between them," when not one pupil in a hundred ever finds out whether it is a blood relation or a relation by marriage. Hear them parse: "John strikes Charles. 'John' 's a noun, masculine gender, third person, because it's spoken of, sing'lar number, nominative case t' 'strike.' 'Strikes' is an irreg'lar, active, trans'tive verb, strike, struck, stricken, indicative mode, present tense, third person singular, and 'grees with John, verb must 'gree with its nom'native case 'n number and person. 'Charles' 's a noun, masculine gender, sing'lar number, third person, 'cause it's spoken of, objective case, and governed by 'strikes.' Active verbs govern the objective case—please, sir, S'mantha and Joe is a-making faces!" And all in the same breath! What ardor! What intellectual effort! What grooves! Meanwhile, grammars mended, amended, and emended, multiply. There are four things anybody can do: teach a school, drive a horse, edit a newspaper, and make a grammar. Meanwhile the same old high crimes and misdemeanors against the statutes are daily committed. This comes of grooves and the lack of a professorship of common-sense.

Take Geography. The young lady fresh from school, who from a steamer's deck was shown an island, and who asked with sweet simplicity, "Is there *water* the other side of it?" had all the discovered islands, from the Archipelago to Madagascar, ranged in grooves and at her tongue's-end. "Didn't you know," said the father to his son, who expressed great surprise

at some simple fact, "didn't you know it?" "Oh, no," replied the little fellow; "I *learned* it a great while ago, but I never *knew* it before!"

Take Arithmetic. Show a boy who has finished the book, and can give chapter and verse without winking, a pile of wood, and tell him to measure it, and ten to one he is puzzled. And yet he can pile up wood in the book, and give you the cords to a fraction, but then there isn't a stick of fuel to be measured, and that makes it easier, because he can sit in his groove and keep a wood-yard.

THE CLERGYMAN.

Clergymen are liable to preach in grooves; to employ certain hereditary forms of speech, that blunt the edge of expectation; forms whose first words suggest their followers to every hearer, and leave nothing to be listened for. Men should preach in types, and not in *stereo*-types. Words should not be uttered in blocks of phrases. It is dull and lumbering business. The art of putting things is a great art. Truth is old, but then in what numberless lights it may be revealed! Truth is the sun. He shines with one steady, everlasting beam, but behold the glories of refraction, that give the color and the beauty of the world. Preachers should be refractors. They should see the Bow from the mountain-top as well as from the plains. Hope dwells in the valleys, but Faith is a mountaineer. They should sometimes see the circle swept and finished, the seal of the new covenant complete as the marriage-ring of Earth and Heaven. There is no grooved route to such vantage-ground of view, such glimpses of glory.

Dionysius the tyrant has been sufficiently denounced, but the tyranny of grooves has never been written. Several years ago, I spent a day or two in the Engraving Department of the Treasury. The men sat in rows and in silence before a well-lighted table. One was at work upon a Pilgrim, and another giving Pocahontas a friendly touch. But what interested me most was this: you remember the fine parallel lines that used to cross the

postal currency like fairy furrows. The lines grew dim with frequent use, and it was necessary to sharpen them by deepening the impression. There sat a man with a worn plate before him, and a little instrument like a gang-plow. He set it carefully upon the plate, and ran it through those miniature furrows. Should he vary a hair's-breadth the plate would be defaced and ruined. But he struck the groove with unerring accuracy every time. He said, "I hear the tool fall into the furrow, and then I run it right through." I bent my ear to listen, but no sound even as loud as the tick of a dying watch rewarded the effort. To my unpracticed sense there was no sound at all. The man laughed and said, "Neither could I at first, but now I hear it as plain as a hammer!"

It is wonderfully easy to talk in a groove. A noted Professor of Hebrew went to Germany to spend a year or two

in study. One of his associates of the Faculty began to pray for him on the ocean before he had left New York. It was a new phrase introduced into his chapel petition, "our brother on the briny deep." It was the Atlantic Ocean surrounded by prayer. And so all autumn and winter he kept that unfortunate man "on the briny deep," like the Flying Dutchman, in all weathers, until when the Professor struck salt water there was, to say the least of it, a very cheerful cast of countenance among the students in the chapel.

And there he kept the Hebraist on shipboard while he was walking Under den Linden; while he was buried in a parchment volume as big as a trunk; while he was smoking a pipe at Heidelberg; and when he was happily home again, it almost seemed as if it might require a steam pump to get that "briny deep" out of that prayer.

B. F. TAYLOR.

THE INNER LIFE.

We know there is a life within the life
Of each, who, tolling, treads the checkered way;
Ever a fiercer strife behind the strife
That each is seen to wage from day to day.

We find ourselves contending with a world
In which ambition rules, and pride holds sway;
We drink, and soon, like others, are possessed
With zeal to grasp the baubles as we may.

So we are judged to be alike as base
As he who sells for pottage all he hath—
Who yields not only love and joy and truth,
But yields for this his soul's immortal worth.

Be thou serene before this heartless judge,
Brave heart that hath with unseen valor fought;
Strive not to hold against the world a grudge,
And sell the sunshine of thy life for naught.

The world can never know thee as thou art,
Much less with truth can judge thee as it ought;
But if thou hast with courage done thy part,
For thee there's nothing further to be sought.

'Tis well for us to toil, and strive to win
All that our comfort and our health require,
But let the angel still within us reign,
That we may aid the world to something higher.

Then let the inner life be full and free—
Let mind rule with the sceptre of its might;
Let heart and soul with aspiration burn
Toward all that's great in nature, grand in thought.

Then be the world in judgment true or false,
The heart secure in consciousness of worth
Can find within its battlements of truth
The greatest pleasure possible to earth.

ROBERT LIVINGSTON.

ALVAN CLARK,

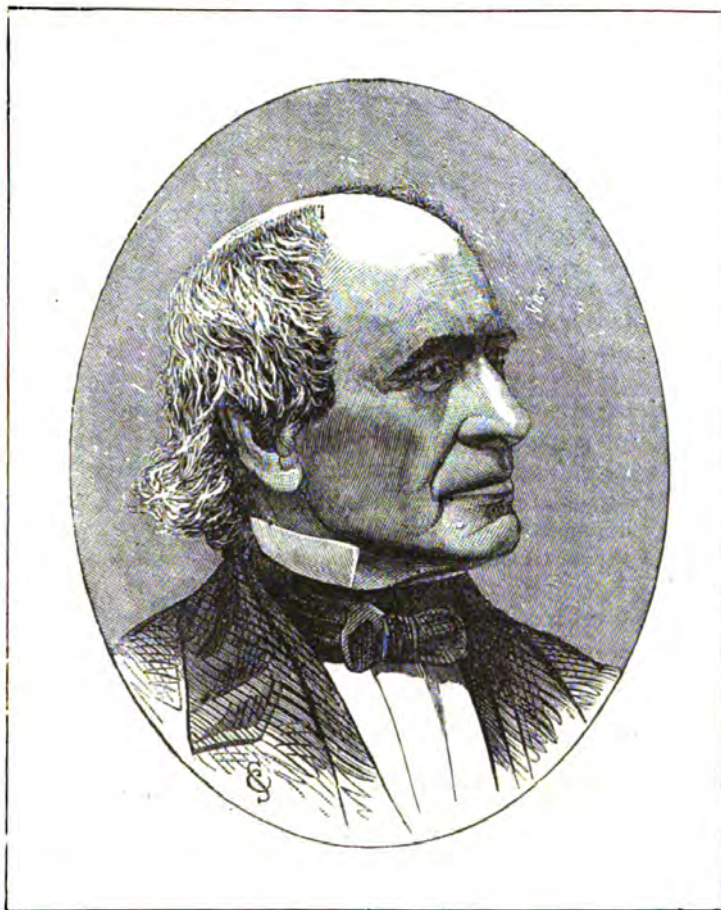
THE EMINENT TELESCOPE MANUFACTURER.

THERE are some men whose years number over seventy, who, despite Mr. Huxley's remark on the uselessness of old men in science, are still active

workers and helpers in their chosen fields. One of these is Mr. Alvan Clark, the telescope maker, of Boston, some of whose best contributions in the way of

instrumental aids to astronomy have been made within ten years; and although past seventy-seven, his faculties are as susceptible and clear apparently—especially in connection with his business—as ever. In organization he shows strength of body as well as evenness and tenacity

trait, are well developed, endowing his mind with unusual power of qualitative judgment, to use a phrase borrowed from the chemists. He is keenly analytical; can look deeply into the substance and properties of things, and judge closely of their nature and value. His memory



of mind. The rounded contour of chin and cheek indicates capital nutritive functions; his digestion is active, and his circulation abundant and free, while there is no lack of lung capacity. The brain is large, well built up in the top-head, and deep in the frontal lobes. The organs at the median line of the forehead, estimating them by their appearance in the por-

trait, are much more retentive than the average of men, and he has superior power in the way of mathematical computation. His intellect is strongly reflective, with an unusually powerful impression from the intuitional side, as indicated by the fullness of the upper part of the forehead, where its curvature joins the line of the top-head. He should be remarkable as a

reader of mind and motive in others, and very rapid in forming opinions. His disposition should be kind, cheerful, generous, and very evenly balanced. Benevolence is very large in the portrait, while the whole moral nature appears to be developed on a liberal scale. Taken altogether, he should be a gentleman of the reflective and self-contained type, with quick and clear impressions, a prompt judgment, and a cordial and broad, though very positive, charity.

ALVAN CLARK was born in Ashfield, Mass., in March, 1804, on a farm. He had no special advantages in mental training, but an early exhibited taste for design led him to practice drawing and engraving. At twenty-two years of age he obtained a situation as a calico engraver in a Lowell mill. Nine years later he was settled in Boston as a portrait painter. When over forty years of age he became interested in the study of optics and the construction of telescopes, through the wishes of his son, Alvan G. Clark, whose mind had turned in that direction. To use the words of Mr. Clark to a visitor who was looking through the telescope factory: "He was at Andover studying to be an engineer. His young mind seemed to be absorbed in telescopes. I was a portrait painter then, and I began to study mechanics and astronomy, so as to instruct my boy. You know a father will do a great deal for a son whose mind is turned in such a direction.

"We studied together and experimented together—nothing in science can be learned without experiment. We succeeded in making a reflecting telescope. One of the Cambridge professors was much pleased with some instruments we made, and when we suggested to him we would like to manufacture improved instruments, he said to us:

"'Get your stuff and go ahead; something will come of it.' We acted on his advice, and," added the old man with a

quiet smile of satisfaction, "we have accomplished *something*."

Mr. Clark and his son spent some ten years in the study of optics and the art of telescope-making, and in the manufacture of small optical instruments, before their claims in this general department of astronomical science were recognized.

The first important recognition came from England. Rev. W. R. Dawes, of England, celebrated for his measurement of double stars, learned that Mr. Clark was constructing instruments of superior purity and power, and ordered a glass for his own use, which was furnished in the autumn of 1853.

The performance of this glass excited the admiration of English astronomers, and Mr. Clark found himself suddenly famous, and received orders from abroad for telescopes; while at home he has since that time been looked upon as one of the very few men living who can supply a perfect object-glass. He has made something of a figure as a discoverer too, for on the night of January 31, 1862, he and the son already mentioned, while making some observations with a newly finished telescope, discovered the companion of Sirius, for which the French Academy of Sciences bestowed on him the Lalande Medal, which is annually given to the scientist who makes the most important discovery during the year.

This incident added to his reputation as a telescope manufacturer, and now his establishment receives orders from all parts of the world for the production of the largest and finest refracting telescopes known to astronomy. In volume XVII. of the "Proceedings of the Royal Astronomical Society" of London is a list of discoveries made by him. He is also the inventor of a double eye-piece, an ingenious and valuable method of measuring small celestial arcs from 3' to 60'. The famous instrument in the Washington Observatory was made by him, and required four years of labor. That presented to the Washington and Lee College, of Virginia, by Mr. McCormick, of Chicago, came also from the shop of

the Clarks, and cost \$40,000. So, too, the great telescope bequeathed by Mr. Lick, the wealthy Californian, for an observatory in the Golden State, was committed to the careful hands of Clark & Sons, who claim to be able to produce an object-glass forty inches in diameter which in perfection of workmanship and performance will be satisfactory to the most exacting of astronomers.

WOMEN IN CIVILIZATION.—Social science affirms that woman's place in society marks the level of civilization. From its twilight in Greece, through the Italian worship of the Virgin, the dreams of chivalry, the justice of the civil law, and the equality of French society, we trace her gradual recognition; while our common law, as Lord Brougham confessed, was, with relation to women, the opprobrium of the age and of Christianity. For forty years, plain men and women, working noiselessly, have washed away that opprobrium; the statute-books of thirty States have been remodeled, and woman stands to-day almost face to face with her last claim—the ballot. It has been a weary and thankless, though successful, struggle. But if there be any refuge from that ghastly curse, the vice of great cities—

before which social science stands palsied and dumb—it is in this more equal recognition of woman. If, in this critical battle for universal suffrage—our father's noblest legacy to us, and the greatest trust God leaves in our hands—there be any weapon, which, once taken from the armory, will make victory certain, it will be, as it has been in art, literature, and society, summoning woman into the political arena.

But, at any rate, up to this point, putting suffrage aside, there can be no difference of opinion; everything born of Christianity, or allied to Grecian culture or Saxon law, must rejoice in the gain. The literary class, until half a dozen years, has taken note of this great uprising only to fling every obstacle in its way. The first glimpse we get of Saxon blood in history is that line of Tacitus in his "Germany," which reads: "In all grave matters they consult their women." Years hence, when robust Saxon sense has flung away Jewish superstition and Eastern prejudice, and put under its foot fastidious scholarship and squeamish fashion, some second Tacitus, from the valley of the Mississippi, will answer to him of the Seven Hills, "In all grave questions we consult our women."

WENDELL PHILLIPS.

THE PURITAN CHILD.

THERE was one feature connected with the state of mind into which I had fallen, as described in the last chapter, that is not devoid of psychological significance. I was in perfect accord, in perfect

HARMONY WITH NATURE.

There was a lovely brook flowing through the farm, overhung with tall forest trees, and spanned by a rustic bridge. Here I would sit for hours, watching the speckled trout darting from the shadow of fantastic roots, and poising their fins in the amber-tinted water. The birds were not afraid of me, but picked up the

crumbs I scattered at my feet, the squirrel dropped his nuts in easy companionship, while the fox came to the verge of the wood with his little bark, at which I was pleased, not afraid. Even the snake, gliding amid the last year's leaves, became a theme for speculation, and I theorized much upon it, doubting if God was altogether good to make him without legs and arms, and I came to the conclusion that both must exist, but were hidden by the skin. Accordingly, having found a dead one on the ledge near the house, I made a little grave enclosed with shingles, and buried it, for I had

learned that the beetles and ants would soon pick its bones. Not many days elapsed before I examined the spot and found a beautifully prepared vertebræ, but no sign of limbs. I was shocked, and all afloat in my theories.

This sympathy with nature has been a marked feature of my life, and this, with my tendency at this early age to solitary speculations, was a natural sequence to the grave, earnest, secluded habits of my Pilgrim ancestors. Later in life this experience was in a measure renewed. In 1866, as noted in my journal, I was walking in our village, when I observed many birds flying about me. The old feeling of childhood came over me, and I held out my finger and said, *come*. Instantly one alighted upon it. A stranger seeing this said to me:

"You have recovered your pet, haven't you?"

I replied, "No, this is a wild bird."

He observed me with astonishment, ejaculating, "It looks like a miracle." Doubtless in the days of witchcraft I should have been denounced as a sorceress.

We had for several years in the garden a pair of king-birds which built their nest and reared their young upon a cherry-tree. My husband planted beneath it, and it was comical to see the parent birds by turns come down from the nest and light upon his hat or back, striking him with their wings. If I took the hoe or rake and worked there, they would quietly nurse their young, oblivious of my presence.

AIM AT PERFECTION.

Though with true Puritanic training and instincts, I early learned that people, even my ideals, were roughly handled, and I had even heard my idol mother criticised by persons who, seeing that I listened, would stop suddenly, saying, "Little pitchers have great ears," I early resolved that I would be an exception. I would be so utterly blameless that nobody would talk ill about me. I read over and over, "Be ye therefore perfect,

even as your Father in heaven is perfect," and so intent did I resolve to be this, that I with my pencil wrote down on the palm of my hand, some particular virtue to be cultivated for the time being. These were daily renewed, and I was quite surprised to see how easily my virtues fell into train. It seemed easy to be good, and I told people so, and they only laughed; but my mother checked me, and showed me that my virtues were small matters. This did not daunt me, and I used to think, "Well, I suppose we must begin small."

My greatest trial was an impetuosity, an impatience at impediment, a hearty indignation that often offended my taste, surprised those about me, and not a little awed my young companions. I was not capricious or violent—how could a Puritan child, born in the purple, be either?—but what looked wrong to me, unjust or mean, provoked an outburst not to be mistaken. I early felt ashamed of this, and one day when a child older than myself turned upon me and bit me, and told me if she was bad, it was none of my business (I was six years old then), it was like a revelation to me. I grew hateful to myself, and rather confused in my morals. I suppose when I was learning to read with my sister we used to read the alphabet, what was called "backwards and forwards," for I now began whenever I got angry to say the letters backwards, z-y-x-w, etc., which soon allayed my irritation.

Grown people often expend their anger mercilessly upon young children, but the Puritan household, most especially ours, was exempt from these outrages. A stern, inflexible dignity, that prevented collisions, was a trait of that period. This will account for a certain surprise and shame I experienced when perhaps ten or eleven years old, and my mother helped, with other ladies of the Rev. Mr. Payson's church, to organize

THE FIRST MATERNAL ASSOCIATION.

We children were carried at stated intervals, and became sometimes inter-

ested and sometimes indignant at the revelations there given of ill-tempered children, many of them my companions.

I remember well the staid, solemn aspect of these Puritan mothers, all of them fine representatives of the good old stock, strong, unflinching, reverential, but not sympathetical, and also the group of well-dressed, decorous little girls (for boys were not included), who sat so demurely on benches placed in the parlor of Mrs. Bartol. There were Mesdames Payson, Coe, Blanchard, and others of wealth and character, conspicuous among whom sat my handsome mother, eyeing her little brood with unwonted severity.

Knowing she disliked that abstract look native to me I tried to rouse myself, and soon became interested in the proceedings without making effort, most especially as L. P. sobbed and pouted while her mother detailed a long case of obstinacy on her part, and sound whippings which had been inflicted. I felt indignant, and inwardly resolved upon rebellion should my mother talk in that way. Fortunately I had no need, though others followed in a similar vein, she was becomingly reticent.

Mrs. Payson made a most eloquent, earnest prayer, which was followed by a hesitating, trembling one, rambling and incoherent, and though my mother was peculiarly gifted in this respect, I hoped she would be silent, which she was. Some of the children tittered at the little prayer, but I felt only sorrow and shame that anybody should be afraid to tell just what they wanted to the infinite Father.

As I look back and recall the images of those stern, conscientious women, keenly alive to the well-being of their children; anxious to lay the foundation of a national purity, no less than wholesome households, my heart warms tenderly and reverently toward them, and I see in their movement the germ of noble import, signifying more important results than have as yet been realized. I am sure that we must begin in the nursery if we would inaugurate reform.

I think about this period my mother fell

into a more formal method with her children, by reading books upon education—a mistake that I at one time made with my children in the same way.

MARTYRDOM.

The spring before I was ten years old, I renewed my study of Fox's "Book of the Martyrs," partly from lack of other reading and partly because of a certain mental misgiving that grew upon me, that I was a very weak sort of a girl, and most likely a coward. I tested myself in a variety of ways, such as holding my fingers in the flame of a lamp, and as I generally grew faint from the pain, I saw in this sensitiveness proof that I was a poor sort of a child, hardly entitled to the tenderness lavished upon me, and might on some great occasion abjure my faith, and renounce my convictions.

It will be remembered that I was not in religious accord with my Puritan mates from very early in life, and though not able to comprehend at this early age the progress of historic events, I had reached the idea that these saints and martyrs of which I read did not believe as the people about them, who were *powerful*, believed, and hence their suffering and terrible death.

We children were every week, either at home or in the church, called upon to say the Assembly's Catechism, which even at six years of age caused me a great deal of suffering. I there learned about the "Elect," and was much exercised to know if I were one. I had persisted in affirming that I was good. I said, "I never told a lie—I never stole anything—I was never disobedient—never unkind, and this is to be good, and if God does not love me, He is not good Himself." This shocked all my friends, and greatly annoyed my mother. At length in church it came to me to answer in the most objectionable, to my mind, part of the catechism, which implied that God would be justified in condemning the unelect to everlasting misery to all eternity. This awakened a terrible necessity for protest in my

mind, otherwise I should be false in uttering what I did not assent to.

It was a grievous moment—my usually white face grew pale; at length I articulated, "That is what is said in the book, but I do not think so," lisping the s's, which added to my discomfort.

"What did you say?" asked the pastor, leaning over the pew with its high balustrade, just higher than my head.

"That ith what ith thaid in the book, but I don't think tho."

I remember he drew his hand over his mouth, but said nothing. After church, or *meeting*, he took tea at our house, and I was somewhat startled when I was called upon "to talk with the minister." The good man took me trembling upon his knee and questioned me upon these theological points. He did not refer to my speech in meeting, but I saw by the penetrating look of my mother that he had told her. She had a half smile upon her face, which grew more grave as she heard my answers and dissents, so solemnly and courageously uttered. I said plainly that "a good God ought not to be pleased to see unhappy people," and then I burst into a torrent of unchildish tears.

I now recall this period—my convictions and my tears—and how I lost all confidence in any steadfastness on my part. With the old pain I ventured some little utterance of my state of mind to my sister, but she blamed me, and thought I ought not say "*one word against what was in the book*," and an ignorant neighbor, who undertook to set me right, told me I "was tempted of the devil." My little mates smirked and plumed themselves as being in better odor at Sunday-school than I was. I had read enough of history to see that there had been tyrants in the world, but I saw that the great struggles of nations were different from the persecution of individuals, and then I felt that I was just in the condition to do as those martyrs did. I must hold on to what I believed, or die as they did, or, what was worse, give up my truth. I was no philosopher, and had not learned the

progress of the ages, but I knew that my grandfather had been set aside from the church for rejecting some of the Calvinistic doctrines. I dared not ask questions, for everybody about had become tired of answering me. I knew there was deadly hostility to the Pope of Rome, and the wars of Napoleon and our wars with England, not clearly understood by a child of eight and nine years made all possibilities possible; accordingly I set myself resolutely to prepare for martyrdom. Weak as I felt myself to be, I could not renounce my convictions. Were not my ancestors steadfast? I had no fear in regard to my mental steadfastness, but I feared my poor little cowardly body would give up, and perhaps take my mind with it.

I am able to remember exactly my age in many incidents I relate, by the advent of half brothers and sisters, and by dates in books presented me by my teachers.

In view of the terrible contingencies to which I thought I should most certainly be subjected, I began, as I have said, to practice many little penances most painful to my sensitive nerves. I ran needles into my flesh; when by any accident I was injured, I forbore to mind the pain, but preserved a cheerful demeanor. Indeed I was marvelously happy, even exultant. Never more engaging and loving at home and with my mates, I was a true Puritan heroine, but in no way conscious of it.

One experience at this time was the source of so much ridicule and occasioned so much wonderment in the family, that I should have greatly suffered had I not schooled myself to endure.

My mother had been ill from pleurisy and a blister was applied. I made critical inquiries about this blister, and learned that the pain of drawing it was like fire burning into the flesh. This was just what my case required. I watched my opportunity and prepared a plaster of considerable size, which I applied just below the knee, and went to my pillow with exultant expectations of heroism. In the night I was awakened by the pain-

which I bore without moving a limb, lest I should waken my sister. I was very happy despite of pain, for I had learned that I could bear it.

At length came the hour of rising. I was conscious of lassitude, but did not anticipate anything serious. I jumped out of bed and began to draw on my stockings. I knew no more. I had fainted and was carried into my mother's room. The blister was found, amidst shouts of laughter from the doctor, and questions and wonderment on all sides. I was mortified and disappointed, but kept my secret in spite of a hundred conjectures and surmises. I wept convulsively and whispered to my mother: "I never can tell as long as I live what I did it for," at which she had me laid beside her in the bed and forbade further questioning. She never afterward importuned me in the matter, and treated me with great tenderness, having, as she told me long, long years after, partially divined the truth. This last experience finished my system of self-inflicted torture. Upon the whole I think this discipline was not lost upon me. We all have our martyrdoms in some way through life.

SENSITIVENESS.

From the first I was a most sensitive child. Pungent odors, whether agreeable or otherwise, caused me to faint. Lilac, hyacinth, honeysuckle, were too much for me, but the rose and lily gave me exquisite delight. I think had my taste allowed me to be more demonstrative I should have suffered less; but a Puritan child was expected to practice self-control in all things, and hence the reaction upon my overtaxed nervous system.

In reading of heroic, generous, or beautiful deeds, my cheek glowed and my pulse quickened, but this was repressed lest I should incur the ridicule of my companions. Cruelty, oppression, whatever was monstrous, in like manner produced pallor and cold chills; hence my early aversion to negro-slavery.

I was reading a description of tropical scenery, in which my imagination filled the picture with all the glow of scarlet blossoms, twining vines, and towering palms; in fact, was ascending an African river replete with all this affluence of beauty, when an immense boa-constrictor suddenly dropped from a lofty tree, crushing the men in its folds. The horror of the event, contrasting with the beauty of the scenery, caused me to drop the paper in a dead faint.

My mother had been much annoyed by this tendency of mine, and she brought me out of my swoon by a smart slap upon my shoulders, saying:

"Now, Elizabeth, you must learn to govern your feelings, or I shall slap you every time you faint away."

This method proved effectual, and I can never enough commend her wisdom and resolution in applying the remedy. Besides this action of the imagination, the harsh voices and discordant spheres of individuals caused me undefined and unexplained distress. In after years when I read Shakespeare, the passage where one of the witches cries out,

"By the pricking of my thumbs,
Something wicked this way comes,"

recalled vividly my early consciousness, and my early self-reproach at the repugnance thus engendered with no apparent cause to justify it. I dreaded to be in the neighborhood of certain persons, and these apparently very good people, while old, simple-hearted, wicked Uncle Zeke, a miserable drunkard, filled me with a strange pity.

As a Puritan child will, I tried to reason this out, and had a misgiving that I disliked good people and loved wicked ones, because I was more like the latter class.

I could not bear to have people stroke down my head and kiss me. The first caused me pain, and the last seemed an impertinence, which, indeed, it not only is, but accustoms the child to familiarity. And here I began, in this connection, to adopt as a part of perfection for which I so longed, the much taught doctrine of

"taking up the cross." In view of this, what was repugnant to me I tried to accept. I ceased to shun disagreeable children and people, and if I could not do them good in any other way I made them the subject of my prayers, and tried to love them.

Children doubtless suffer from the *ill-conditioned spheres* of those about them, and are blamed and punished for irritability which is caused by this idiosyncrasy alone.

All the horrors of witchcraft, it is most likely, took their rise from this source, and the unhappy children of the Rev. Mr. Paris were of this sensitive kind, and did feel as if punctured by pins and needles when touched by certain persons, and finding themselves the object of unwonted sympathy, they with childish weakness magnified their sensations till the whole miserable record of persecution followed, and thus this tragic point of our history was the result of a perverted truth.

I think I perverted a Puritan dogma by my desire very early to save others the trouble of atoning for their shortcomings. When my little mates fell into difficulty I was distressed to see their trouble, and would intercede for them, and most especially pray that God would forgive them. I would comfort them by telling them that they need not cry or be unhappy about their ill-desert, for I would make it all right by my prayers. I took some persons under my wing in this way, most especially a poor reprobate of whom I have spoken,

OLD ZEKE.

He was not good, nor attractive in any sense, but he was fond of children, having always a pleasant word or some little trinket in his huge pockets to please those of them that he liked, for he was fastidious in his likings. He told brief stories of sea-life, and my father and step-father being both of them sea-captains, invested Old Zeke with a peculiar interest to my mind. He was terribly profane, using strong expletives to give force to his off-

hand narratives. He treated me with more respect than other children; never attempted to kiss me, never ran after me or attempted to touch me, and yet I learned early to see that he was not quite content if he did not see me every day. In this way, seeing him daily looking for me, when going to and from school, Old Zeke became a feature in my little life, and the subject of my Puritanic missionary efforts. My haughty mother knew nothing of this incongruous interest till she was told of a feat of mine to please my poor old ogre.

On my way to school I passed what is called a ship-yard, where were vessels owned by the family on the stocks, and where I watched the progress of the ship with childish curiosity, being hardly six years old, slender and light of foot, and fearless as a child need be. Here in the midst of tools, chips, and lumber, pervaded by a delicious odor of forest wood, sat Old Zeke ready to give me a cheery "good-day, Lady-bird," and challenge me to a race over the skeleton ship, a hundred feet from the ground.

Instantly I sprang into the mighty frame, up and aloft, from timber to timber, over long beams and rafters, never once dreaming of danger. "God bless the ship," I used to say as I went from stem to stern, then jumped down and away to school, amid shouts of admiration from the workmen, but most of all from Old Zeke. These hazardous races came to the ears of my mother, and of course were interdicted; had she said no more than, "I forbid you to do it," I should not have failed in obedience; but she spoke with contempt for the poor old mariner, and that aggrieved me.

I studied the matter over and became convinced that Old Zeke was not a bad, but an ignorant man. I grew to pity him in the painfulest degree, and as I was forbidden to stop on my way to school, I used the never-failing remedy for all griefs to a Puritan child, prayer. One whole summer I persisted in my efforts, morning, noon, and night, with ejaculations by the wayside, and yet I could per-

ceive no change, rather Old Zeke seemed to grow worse.

One morning on my way to school I walked directly up to my wicked friend and laid the case before him : how badly I felt about him ; how earnestly I prayed that he might become a good man. He listened a while in utter silence. I observed his lips quivered, and his eyes were fixed upon my face. He at last threw up his two hands and burst into tears, and cried out :

"Now, hear her! Nobody cares for poor Old Zeke—nobody thinks about him—yet he will steer right into heaven, *convoyed* by this here angel."

I was relieved and comforted, and took my departure with a new word to be looked for in the dictionary, and to this day I never encounter the word *convoy* without remembering poor Old Zeke.

BIBLE.

I read this quite through in course twice before I was eleven years old, which was little more than other children did at that period. I conscientiously pronounced every word, and went on swimmingly with the Amorites, the Perizites, the Jebusites and Hittites. The beautiful choice of Solomon for neither riches nor honors, but only for wisdom, deeply affected me, and I at once placed the word, which I carefully studied out, among those written on the palms of my hands, and never did any anchorite pray more earnestly or constantly for the gift.

When about six years old, my dreams, always vivid, became haunted by images of death. One night I thought a vast, dark, shadowy figure stood over me, and said solemnly, "This night thy soul shall be required of thee." I awoke, uncertain what it was. I looked eagerly about the nursery and everything was terribly distinct. All were hushed to sleep—my baby brother at my side—the lamp burning low upon the hearth—the faint embers of the fire—the porringer with its gleam of brightness—the door opening into my mother's room, where I could see her white frills and laces through an

opening in the curtains. A cold chill caused me to shake from head to foot, and I thought I was about to die. Contrary to my wont, I burst into a passion of sobs and tears, which brought my mother to me.

From this time I began to ask, "If I die, will I live again?" with unchildish misgivings. More than once I tried to put the point to some little girl older than I was, who stared at me with great, round eyes, and burst into cries, at which their friends severely reprimanded me, saying, "Elizabeth, don't you frighten her again with your strange talk."

How could I help feeling as I did, and talking as I did, with the blood of centuries of pious ancestors and Christian martyrs in my veins? Is it a wonder that the Puritan blood should utter itself through babes and sucklings?

My beautiful son, Edward, when about the same age, said to me, "Mamma, I believe just as you do about God, and Heaven, and that we don't all go to dust, but, oh mamma! what a terrible thing it would be if it is all a 'suck in.' " "Suck in" is a word with boys meaning a delusion or deceit.

THE SABBATH.

We were not allowed to call this day Sunday. The idea of rest was strictly observed. It was not an irksome day to me. On the contrary, I was free on that day to abandon myself to my deepest and most abstruse speculations. Saturday night all playthings were nicely housed, dolls and tea-cups and toys laid aside, no more to be looked at till Monday. Then followed the weekly bath, whatever the season, and Sunday morning the daily ablution was succeeded by the donning of the Sunday clothes, best hat and shoes, and every child over three years of age was on the way to church promptly at bell-ringing. It was a pretty Puritanic picture, wholesome, orderly, and reverential.

In those days people did not ride or walk for pleasure. They did not read the newspapers or novels; nothing but the Bible, and such works as Schougal's

"Life of God in the Soul of Man," Doddridge's "Rise and Progress of Religion in the Soul," Baxter's "Saint's Rest," and other works of the kind, which interested even me, partly from the thoughts, and partly from the rhythm of good prose.

My grandfather's house was something over two miles from the meeting-house, and there was on the Sabbath morning the general aroma of fresh linen through the rooms, and a staid aspect of preparation. The carriage was brought to the door, in which the fine representative Puritan pair went their way to meeting, preceded by the boy-of-all-work to open both gates through the wooded lawn to the public road. Maids and youths, and dependents of all ranks, took their way across the fields, through the woods and pastures, and over the rustic bridge in the same direction. The young girls carried a pair of white stockings and slippers in their hands, which left their white shapely feet to gleam through the green grass; arriving at the brook, the youth proceeded onward while the girls washed their feet and donned their slippers. All the way they sang in concert pious hymns, which were responded to by similar groups from other by-ways, all tending in the same direction.

Arriving at the meeting-house, decorous, subdued salutations were exchanged, and on the arrival of the slow, solemn-

moving pastor, each family, with much clatter of new shoes, and rustle of silk or starched garments, took their seats in their respective pews, which were a square enclosure with seats upon three sides, surmounted with an open balustrade. My grandmother had a chair and a cushion. All rose to prayers, and lifting the hinged seats leaned over the balustrade. The prayers were very long; the sermon the same, and such as would drive a modern congregation out of the house.

There was only an intermission of an hour, at which time the elders gathered under the eaves of the house—the men to discuss the sermon, and politics of the day, and the women interchanging neighborly civilities, all indulging in a delicious lunch. I was allowed to go with aunts and uncles a little distance to the pine grove around "The love home" of which I have spoken, where others were assembled; the youth of both sexes from miles around, and where were produced boxes and bags of home-made pies, doughnuts, cream biscuit, cheese, apples, and all the dainties of the season. Doubtless the usual coquetties, and rural rivalries, and love-makings prevailed even among these Puritans of the Puritans, but I was too young to understand them, and remember only the lovely voices singing holy psalms to the cadence of the whispering pines.

ELIZABETH OAKES SMITH.

"OLD AUNT DINAH AND HER BABIES."

THERE are some very queer people in this world, and "old Dinah," as she is called, is one of them. No wonder, poor soul! as she is not right in her mind. That is to say, she is crazy—not raving mad—oh! dear, no! but if any one should attempt to carry off one of her babies I would not like to answer for the consequences. What mother would like it? But to tell the truth she is not a mother at all, and her babies are nothing more than *six laurel sticks*, about the size of your wrist, and as long as your arm.

Aunt Dinah's skin is black, her nose broad and flat, with thick lips, and her hair so frizzy and gray that one would think she had just been ducking her head into a flour barrel. Of course her babies do not look one bit like her, and yet would you believe it? she thinks they are real flesh and blood, and the image of herself. Whereas, they are only wood, of a brown color, smooth and polished, where she has rubbed them with her hands for years, in tender caressing.

She has a name for each one, but that

is her secret; and although you might listen all day long, you would never find it out. If you ask her the question, she at once hides the sticks under her apron, and stands sullenly before you, or runs away. I can not say if she tries to feed her babies, but I do know that she puts them to bed, for I have seen her; and she takes them out walking too; carries them under her arms, hidden away beneath her shawl. It is quite amusing to see her trudging along in the sand, her dress tucked up, showing her big black feet, with a broad-brimmed straw hat on her head, muttering away to her babies and chuckling and laughing, as if they were the pleasanter company in the world. Poor, silly old Dinah! and yet you would not think she was so very poor, if you could see the fine large house where she lives. It is a great building, with more than a hundred rooms, all heated by steam, with a cupola on the top, where an extensive view is had of the surrounding pine and cedar lands; for to tell the truth there is little else to be seen.

Do not suppose that old Dinah lives all alone here. Bless you, no! There are about two hundred people in the house, men, women, and children. Some of these are a great deal more crazy than Dinah. Others are only feeble and sick, some are very old and very poor, for this is the Suffolk County Alms-house, in Yaphank, on Long Island. Ah! there are some very sad hearts here, but Aunt Dinah seems happy enough. You would think so if you could peep into her little room, which is as neat and clean as a pin. To be sure, there is nothing much in it save a bed and a chair, but it is all the same to her; and the sun shines as brightly there as it does in your own pretty parlor.

And should you ask Aunt Dinah to dance, she will shuffle off a jig with her poor clumsy old feet, while a broad grin overspreads her face, which will grow broader still if you offer her an orange or a stick of candy. In the basement is a laundry for washing and drying clothes, and a bakery where nice bread and cake

are made, so that Dinah looks clean and well-fed. A large, fat, bearded woman deals out the food to the women. There is also a room where medicine is kept for the sick, and a physician visits them every day, free of charge. And we noticed a carpenter's-shop down in the cellar, where men were making chairs and baskets; and it was whispered to me that here were made the coffins or pine boxes in which the poor people who died here were buried.

Of course people die here as everywhere else, even in the palaces of the great and rich. Surely it is much better than to wander about in pain and poverty, and die in the streets! And all those who are able to read are furnished with papers and magazines. The face of one old man I recall now, bending over the pages of his Bible, that was full of beautiful promises for him. And in this house with Aunt Dinah is a colored man, who is said to be one hundred and seven years old; he is part Indian, and his gray hair stands straight up all over his head. His bare feet, with the tapering toes and nails, resemble the talons of a bird. He gave his name as "Daniel Green," from "Bay Shore," and said that his wife, who was upward of ninety, was in the same building.

I could tell you of many others who are here; one, a poor boy who has never spoken a word in his life, and who followed me about, continually patting himself on the chest. And there is an immense great woman, weighing nearly four hundred pounds, who declared "*that she could cut forty dresses in a day,*" and imagines herself to be the lady of the house. Then there is Gen. Hewlett, with his spotless white cravat, all bows and smiles, who tells us "that he served in the war of Napoleon the First."

One young woman thinks herself a princess, and wears a crown of bits of gay paper and ribbons on her head.

One poor creature was so violent that she nearly pounded the door down; and when I looked in upon her she rushed toward me with clenched fists, and wild,

staring eyes. I concluded that I liked old Dinah the best; but she is very cross sometimes, and when I asked to see her babies, she pulled the six crooked sticks from between her beds, and hugged them close to her bosom. I reached my hand

to take one, when she pushed it away and raised her arm as if to hit me a blow over the head. Since then I have not been so sure about liking Aunt Dinah the best; and if you should call to see her, I give you fair warning, *never to touch her babies.*

SARAH E. DONMALL.

MOTHER AND DAUGHTER.

"IT is my opinion that that will be a match."

Mrs. Slimborn's voice expressed genuine satisfaction. Her daughter, Miss Birdie Slimborn, playing a brilliant waltz in the hotel parlor, and James Nicklespoon, Esq., engaged in turning the young lady's leaves, were the subjects of this remark.

"Then you like Mr. Nicklespoon?" Mrs. Slimborn's companion inquired.

"Oh! very much! He is a perfect gentleman, and enormously wealthy, you know."

"So I have heard," said the plain little woman in black silk and thread lace, who was evidently watching the proceedings at the piano with considerable interest; "and I have also heard," she added, "that Mr. Nicklespoon was somewhat dissipated."

"Not to speak of, I think," Mrs. Slimborn responded, a smiling face turned to the young couple at the piano. "Mr. Nicklespoon may be a little gay," she went on lightly, "but, my dear Mrs. Beaufort, you wouldn't recommend a minister for a son-in-law, would you?"

"If the minister were a good man, and your daughter loved the minister, most certainly!" the little lady replied. "If Mr. Nicklespoon were to lose his money, has he anything to depend upon, Mrs. Slimborn?" she inquired.

"Mercy on us!" the maneuvering woman exclaimed. "You don't know what you are talking about, Mrs. Beaufort! Why, Mr. Nicklespoon's place on the Hudson is worth half a million at the very least. Mr. Nicklespoon lose his money!"

This was so comical and preposterous

a suggestion, that Mrs. Slimborn was obliged to ask pardon for being so exceedingly impolite as to laugh in her companion's face.

"Your daughter is a fine pianist!" Mrs. Beaufort remarked, after her neighbor's merriment had subsided.

"She ought to be," said the pianist's mamma. "We have spent thousands of dollars on her musical education. I left everything and went abroad with her for two years, just for the sake of having her perfected, you know," Mrs. Slimborn ran on. "Dear me! I did think I should die with homesickness and *ennui*. Birdie's teachers didn't want her to come back for two or three years more, do you think; but, of course, that was all nonsense."

"In what way was it nonsense?" Mrs. Beaufort inquired.

"Don't you think she can play well enough as it is? If we had been educating her for a public performer, that would have been different."

"I suppose she could teach music?"

This plain little lady in black silk and thread lace, seemed determined to be disagreeable; but as she happened to be the distinguished wife of a very wealthy and distinguished man, Mrs. Slimborn felt constrained to put up with her eccentricities.

"Birdie teach music?" Mrs. Slimborn was again very much amused. "Why, she is the most nervous creature in the world, and extremely delicate. You wouldn't think it to look at her, but Birdie cries at the least thing. This used to annoy the professors so much when we were abroad, but she is so sensitive, poor child!"

"I suppose your daughter's study of

music was thorough?" Mrs. Beaufort remarked.

"Well, in a way," Mrs. Slimborn replied. "I had her skip harmony and thorough bass, and all that nonsense. They weren't necessary for her, you see. We wanted her to be just what she is, a brilliant performer, able to read difficult music at sight, and all that, you know."

"In other words, Mrs. Slimborn, you desired your daughter to shine in society!" said the little woman in black silk.

"That's about it!" Mrs. Slimborn replied frankly. "We mothers have a fearful responsibility, for so much depends on the way we begin with our daughters. If they are not well settled, then they have the most perfect right to blame us."

"So much depends on what you mean by well settled!" Mrs. Slimborn's neighbor remarked. "If parents educate their daughters, as they do their sons, to be self-supporting——"

"Self-supporting?" Mrs. Slimborn interrupted, with a frightened expression of countenance. "You don't mean, to work and take care of themselves?"

"That is precisely what I mean," the lady responded. "If, for instance, you had seen to it that your daughter had studied music so thoroughly as to be able to teach it if occasion required, then you would have secured her against the future."

"Excuse me," said Mrs. Slimborn, with some coolness; "but if you will allow me to make a personal matter of it, I should like to ask if you have educated your daughters on this plan?"

The little lady in black silk smiled pleasantly.

"My oldest daughter, Mrs. Slimborn," she answered, "is now perfecting herself—try not to be shocked—in the art of dressmaking. To use a more plebeian expression, she has learned a trade. She made the dress, Mrs. Slimborn, that you admired so much to-day at dinner. Her taste ran in this direction, and my aim has been to have her learn everything that can be learned of the science of dressmaking. If anything were to happen

now or in the future which made it necessary for her to support herself, she could do it. My youngest daughter has graduated from college, and will return this fall to take up astronomy with the professor of that institution. To add a little to this personal narrative, Mrs. Slimborn," and now the little lady laughed heartily, "it is my desire that both my daughters shall live lives of single-blessedness."

"Mercy on me! old maids!" Mrs. Slimborn exclaimed.

"Old maids unless their husbands are their equals in the qualities that insure happiness to married life," said Mrs. Beaufort earnestly. "To bury my daughters, Mrs. Slimborn," she added, "would be a light trouble compared with giving them to unprincipled and dissolute men. Wealth my daughters can live without if need be, but honor is indispensable."

The music had ceased, and Miss Birdie had walked away with her admirer. Mrs. Slimborn, a good deal dazed, and more shocked by what she had heard, excused herself as soon as she could, and went in search of the young couple.

The next day the formal announcement was made of the engagement between James Nicklespoon, Esq., and Miss Birdie Slimborn.

That evening Mr. Nicklespoon celebrated his engagement by getting drunk.

"Boys must be boys!" Mrs. Slimborn remarked when the news was brought to her, and both she and her daughter commented jokingly on the young man's dissipated appearance the next day. Mr. Nicklespoon's place on the Hudson, Mr. Nicklespoon's town house, and unlimited means, fully compensated in the eyes of both mother and daughter for any and every "indiscretion" which Mr. Nicklespoon might be guilty of.

Early in the fall Mr. Nicklespoon and Miss Slimborn were married. Mrs. Beaufort, aware of the rottenness of the foundation upon which their union was built, watched with absorbing interest the career of this young couple.

It took just four years for Mr. Nickle-

spoon to go through with his property, and at the expiration of that time Mrs. Nicklespoon was obliged to flee to her parents not only for shelter, but for protection against the dissipated wretch to whom her mother had been in such haste to marry her. One child was born of their union, a poor, puny little creature, disliked by its mother, and detested by its grandmother. Mr. Slimborn, who had speculated on the expectation of financial assistance from his wealthy son-in-law, finally failed in business, and soon after died. Mrs. Slimborn, her daughter and grandchild, are now objects of charity, neither woman having the ability to contribute in the slightest manner to her own support. Mrs. Beaufort, full of pity for their misfortune, found a few music scholars for Mrs. Nicklespoon, but that lady's superficial education, notwithstanding her two years abroad, made it impossible for her to give satisfaction.

"I told you Birdie couldn't teach!" Mrs. Slimborn remarked one day to Mrs. Beaufort. "I didn't educate her for a teacher; and then her sensibilities are much too fine for such drudgery."

"It wasn't any use to say anything to her," Mrs. Beaufort remarked afterward; "but it seems to me the story of these two women ought to be written. Perhaps some mother who reads it will think less of her daughter's marriage, and more of her education. If mothers would only find out what their girls are fitted for, and then see to it that they learn thoroughly whatever they take up, always with self-support in view, a world of misery would be saved. Marriage under most conditions is a lottery," she continued; "and the proper education of our girls is the only thing in life that will ever make it less so."

ELEANOR KIRK.

ACQUISITIVENESS.—In the Introduction to his pamphlet on "How to Grow Rich," Dr. Bland gives the following definition and analysis of this organ:

"The faculty of acquisitiveness is common to brute and man. It is not an intellectual faculty, but a selfish instinct.

Its office is to desire, covet, long for grasp, appropriate, anything, everything that can in any way minister to the physical nature. It is a legitimate organ, whose function is necessary to the continued existence alike of the insect, the animal, and the human being. It is devoid of moral sense, as well as intellectual perception, hence it has no recognition of the rights of property, nor any knowledge of how to get what it desires, nor yet any idea of the relative value of things. It is simply the instinct of acquisition. The ant, the bee, and the miser act from like motives, each compelling what intellect he has to become the slave of acquisitiveness. It is the controlling faculty in each. The insect and the brute, having no other than a sensuous existence, their wants are limited to food and shelter. Man, while allied to the animal kingdom, on the sensuous plane, is lifted infinitely above it, by the fact of his being endowed with reason, and crowned with moral sense and spiritual aspirations. By means of his superior intellect, man is able to subjugate the earth and all its forces, compelling it to yield its fruits and treasures in rich and varied abundance to supply his needs and gratify his desires. Through the guiding wisdom of his moral faculties, he recognizes the brotherhood of man and the equality of the race, the foundation of the principles of justice."

Accepting these propositions as correct, it is clear that the man whose life is spent in the service of acquisitiveness is simply an intellectual brute.

LIGHT!

Out of the mind of the Infinite God
Sprang Light—an ineffable flood;
And Darkness and Chaos, they fled away
At the first blush of Dawn, the primeval Day:
And veiled was the face of the Night,
When God said: Let there be Light!

Order and Time and the Colors were born—
And Beauty, and Love,—on that morn;
And Gladness and Fulness and Sound as well,
While Creation's deep chorus the Angels swell;
And Day at once triumphed o'er Night,
When God said, "Let there be Light!"

GRACE H. HOBBS.



TEETOTALISM AND VEGETARIANISM.

I AM a teetotaler, but not by creed. I am a vegetarian too, but I never pledged my word not to eat meat; I landed in total abstinence by hygienic conviction; and keeping apart from the carnivores I feel healthier, better.

There was a time when I used to indulge in liquors, and when I believed a good full ration of beef the most nutritious diet. At that time I was a great consumer of tobacco too. But by and by I became aware of a very bad influence of this trio over my health, and although I neither approved of vegetarianism nor of teetotalism, I practically became a convert to both; the stubborn fact of my bodily strength increasing in proportion to the rigor of my abstinence, was of a too convincing nature not to presume all contradictory theories to be wrong. I asked myself: "Is it true that alcoholic drinks are more spirituous than those beverages which nature furnishes without any distillation and fermentation?" In order to give a satisfactory answer to this question I had to inquire whether our nerves, and especially our brain, undoubtedly constituting the instrument of our mind, are composed so as to admit of a peculiar nourishment by alcoholic molecules. What did I find? That there is no structure in the whole body of a more watery consistency than the brain. Yea, even more. That part of the brain which notoriously is most

subservient to all mental processes, the gray matter of the convolutions, contains the most water, viz., 85.2 per cent., while the white matter, serving less the originating of impressions and impulses than their conduction, contains about 73 per cent. We are even justified to go further than that. The most recent investigations of the functions of the brain have placed the fact beyond doubt that the cerebro-spinal fluid which fills the interval between arachnoid and pia mater, and communicates with the fourth ventricle at the base of the medulla oblongata, is indispensable for all mental activity. Now then, this fluid contains no more than 1.5 per cent. of solid matter; 98.5 per cent. are water. This explained to me the fact of finding myself a great deal clearer in my head, and more apt to be mentally active on drinking water than on drinking grog.

What, now, about the heating power of the so-called stimulants? Here, to be sure, I thought, public opinion would hold good. But by no manner of means could I make it true. Far from proving to be ready heat, they turned out on examination to be merely fuel which does not warm the body except so far as the lungs by their labor inhale the element of combustion. This put clear another fact which for many years past had puzzled me very much, viz., the fact that after an over-abundant indulgence in liq-

uors, on that ominous "next morning," when that warmth attributed to the liquors should be most intense, chills are creeping up the back, and a general frosty feeling prevails all through the body. The popular belief, therefore, of persons of inebriate habits being burned to death is altogether erroneous; they are not burned to death, but choked to death. Like a fire that is quenched by too much coal being thrown upon it, the lungs are suffocated by the sudden rush of carbon, which in shape of alcohol the blood is carrying to the air cells and passages, and which the oxygen of the respiration is insufficient to evacuate in a transformed state.

There is another point. Some eminent pathologists claim that alcohol, perhaps also some narcotics (strychnia, morphia), reduce the faculty of the red blood-corpuscles to absorb oxygen. Does not this account for the purplish or even bluish-red noses of hard drinkers? Cyanosis, or blue jaundice, results from the foetal opening in the septum between the two auricles of the heart, not having been closed in the adult, and other malformations of the heart or arteries, causing the venous blood to be mixed up with the arterial. A similar condition seems to obtain with those who obstruct the oxygenation of their blood by saturating it with too much alcoholic fuel.

The grossest physiological error committed in the dietetics of common life is involved in the idea of alcohol being particularly beneficial after fat dishes. Alcoholic drinks are, together with these, merely an accumulation of fat, the chemical formula of butyric acid, for instance, being $C_4 H_8 O_2$, and that of aldehyd alcohol $C_2 H_4 O$, thus the butyric acid representing merely a molecular duplication of aldehyd alcohol.

The most obvious proof of the true character of alcohol is exhibited in the experiment of a good full draught of brandy in a person not accustomed to its use. Such a person will be nearly choked, and continue gasping for breath until by the oxygen inhaled the overdose of

carbonaceous matter be, in part at least, disposed of. The glass of sherry at the outset, and the glass of cognac at the end of a hearty meal, are, therefore, not to be considered as being invested with digestive powers. They are nothing but an incitement to nature to some extra lung work, to make up for the overload of food the alimentary canal is being charged with. Even the after-dinner coffee, and the tea in the evening, are an additional storing up of combustive matter, not solvent or consumptive agents. If they seem to act as such, this is due to the water, not to the working principles of the tea or coffee. These are $C_8 H_{10} N_4 O_2$, differing not much from nicotine, this being $C_{10} H_{14} N_2$.

There can not be any controversy about the effect of substances on the human system reaching beyond their chemical formulas. Chemistry is far from having hatched all the eggs of nature's mystery. But we are not allowed to suppose the particular effect of any of these substances being diametrically opposed to the general laws of biology. Natural science has fathomed the phenomena of life deep enough for that. The same holds good with mechanical contrivances. Take, for instance, a stroke. Well, if impinged by the hand of an adored creature, even if in ill part, it will have a beneficial effect, for in women there is nothing like having something to forgive or to make amends for. But — to use a surgical simile — there must be a resolution of the inflammatory process that was set up in consequence of some irritant cause, if perhaps it is not cured at once by deliquescence. Should there occur nothing else but strokes, these very soon, gentle as they might be, would prove more hurtful than from their mechanical character they would appear to be. Accordingly the *petits verres* (little glasses) may sometimes be used advantageously as belligerent measures. But they will never be instruments of lasting physiological peace.

DR. C. A. F. LINDORME.

DANGER OF EXCESSIVE FATNESS.

A WRITER in the *Massachusetts Ploughman* discusses the use of fat in the human body, and its relation to disease, as follows:

"Obesity not only invites other diseases to come and stay, but renders all diseases difficult to cure. The Brahmins of Asia are proud of their excessive corpulency. They fancy that it gives them influence, as does opulence in civilized communities; so that corpulency means opulence with them. They live according to this notion. They consume non-nitrogenous food, that they may grow fat and live lazy lives, that they may not expend any lean or fat that has been once deposited upon their frames. To some extent they no doubt succeed. Some scientists have affirmed that a strictly vegetable diet produces fat more surely than any other means—and a quiet life limits the amount of expenditure.

"It is very clear to any man who looks, that two distinct classes of food exist, different in their functions, and varying in their value—the nitrogenous and the non-nitrogenous. The one is plastic, or tissue-making, including all fibrin and albuminous matters, as animal food, aiding in the forming of blood and muscle, bones and other tissues. The other is respiratory, or heating food, including starch, dextrine, and sugar. Man seems to need a mixed diet. He needs plastic and heating foods, the one to renew or restore the tissues of the body, and the other to renew or restore the fat, and so yield material for generating body heat and life. Either class of foods may be limited, as circumstances may require. Exactly what kind of diet should be given to man or beast depends upon the purpose we desire to accomplish by giving it. The ill results of obesity are so great and many that it is wise to know how to relieve ourselves of so great a burden, how to cure a disease that is sure to invite other maladies of a severer

type to come and stay. Obesity shortens life in man or beast. It certainly does not lengthen it. It obstructs the normal action of the organs and oppresses the circulation, and so at last induces distressing and fatal maladies. Nearly always when we see a very fat man or woman waddling through the streets, we pity him or her, because we know that great obesity embarrasses the activity of the mind and lessens the comforts of the body. Watch a very fat man as he moves this way or that, and you may see that he is guiltless of energy or grace, that his organs of respiration, circulation, digestion, and assimilation act too rapidly for health and comfort.

"'Laugh and grow fat' is a saying older than many may suppose—meaning that cheerfulness promotes health—and still beyond a certain limit it is not true, for flesh is not fat, and flesh only can confer health and strength. Activity is what we want. Laughing does not always mean a pure and cheerful heart, but often means a small mind and a thoughtless tongue. Smiling is a different thing. It is the expression of the soul and manifests happiness within. An old writer says that 'stupidity and fat are boon companions.' It is very certain that the fat are slow of mind, and rarely possess activity of body. Some exceptions always may be found. One of the fattest men ever known was equally remarkable for his restless activity of mind. But give us neither lean nor fat, but enough of each to make us comely and strong.

"All nations in a cold climate instinctively desire an oily diet. Butter or cream was royal food among the prophets. The land of olive oil was a land highly prized by the ancient Hebrews. All civilized nations use butter largely. The Esquimaux loves his oily food. The uses of fat are various. It impedes the too rapid escape of body heat; it forms a store from which to get supplies for waste of

tissue; but excessive amount of fat indicates disease, and that is a burden and an obstruction—a real and serious evil. A person may be large and still not obese. The muscles may be largely grown, and still the percentage of fat be small. We refer to a large amount of fat as a disease. May it not always be so, when the free action of the lungs is obstructed, when the respiration is difficult, when locomotion is exhausting, when it unfits us for the active duties of daily life?

“The causes of excessive fatness are many. The hereditary tendency of some, the habit of excessive eating, the habit of excessive drinking, consuming chiefly starch and saccharine foods, indolence

and indifference to interests and trials—all these have an influence in this direction. The sugar-cane collectors and sugar-makers of the South, in sugar seasons, the laborers in Italy, become fat during the grape and fig harvests. They consume freely the sugary juices, and become stout and fat.

“We see the same result when our cows feed on sweet sugary grasses, that are consumed while the sugar still remains in all its sweetness and before it has changed to fibrin. We see it in the sugar maple, that in some way develops a sugary fluid as food for the growth of the coming foliage. The sugar disappears as soon as the leaves begin to grow and fit themselves for the duties of the year.”

THE STOMACH'S PLEA.

Oh! give me not more work than I can do,
Or, by the laws that rule this kingdom, Man,
As sure as you're alive, I'll punish you;
Embitter and abridge your mortal span.

First, I'll protest, rebel; in spite of that,
If you load me with more than I can bear,
The superflux I'll have put down in fat,
And spoil your figure for you; so beware!

Neglect this warning, and with gross abuse
Continue still my powers to overstrain—
Well, then disorder I shall next produce,
And put you to uneasiness and pain.

I'll send redundant blood throughout your frame,
And stuff you, pursey, panting with distress;
Repletion shall suffuse your eyes, inflame
Your cheeks, your laboring heart and lungs oppress.

Too much, too rich, yet go on taking in,
And I will brand you so that men may see,
I'll throw out, in eruptions on your skin,
The messes you've ingested into me.

With me, your liver, too, you make your foe,
And we will pay you out in pretty style;
What indigestion is we'll let you know,
And make you understand what's meant by bile.

Headaches, vertigo, noises in the ears,
Congestion causing pressure on the brain,
And palpitations, qualms, and spasms, fears
Of worse, for which all physic will be vain.

For these inflictions and for more than these,
If you keep overworking me look out;
Expect particularly that disease
Known as the stomach's great revenge—the gout.

At length, unless you put on me no more,
But to my last remonstrances attend,
There's dropsy or paralysis in store,
There's apoplexy for you—and the end.

Now go, with measure share the civic feast,
Or wisely dine at Greenwich or Blackwall,
But if you choose to make yourself a beast,
And me a slave, you see your way, that's all.

—Punch.

WHY WE GET SICK.

THE man, woman, or child who gets through one of our American summers without getting sick is exceptionally fortunate; yet few are willing to admit that this is a very unhealthy country, nor yet that we as a people are so broken

in constitutional vigor as not to be able to resist the causes of disease incident to the changes of temperature as the various seasons supplant each other. When pressed for a sound reason why we all get sick with influenza, pleurisy, or pneu-

monia in the winter, dysentery, cholera morbus, malarial fever or hay fever in the summer, we are obliged to admit that it is chiefly due to our bad modes of life, our unhealthful diet, unphysiological dress, and our irregular habits of exercise, bad air, loss of sleep, anxiety of mind, etc.

We all recognize, in theory, the fact that physiology is a science which has fixed laws, and that health depends upon a strict obedience to those laws, and that disease is the result of, and penalty for, disobedience to those unalterable laws; yet so few give practical heed to this great fact, that he who does is looked upon as eccentric by his fellows.

There is a reason for this, as for all things else, and it is found in the ignorance of the people on the subject of the laws of health and the cause of disease. It is one thing to assent to the fact of the existence of those laws, another thing to know what they are. The reasons are many. Obedience to law involves sacrifice, self-denial, the subjection of the sensuous in our nature to the intellectual and moral. If we would avoid disease of the stomach, liver, and blood, we must eat to live, instead of living to eat—that is, we must study the nature of our bodies and the chemistry of our food, and eat such articles, at such intervals and in such quantities, and such only as a healthy appetite demands. If at any time one finds himself without an appetite, he should recognize that as proof that he should not eat. To tempt the palate with dainty dishes is suicidal. Food taken into the stomach when that organ is not in want of it, or in such quantities, or of such character that it can not be digested and assimilated, must necessarily ferment and produce disease of the stomach, or, passing from the stomach derange the bowels. Now, what is the sensible thing to do when one's stomach tells him by its only language of warning, pain, that it has a mass of stuff which it can not immediately dispose of? Why, just what you would do if you had accidentally swallowed poison—apply the stomach pump or take an emetic. What

you probably would do, however, would be to send for a physician, who instead of removing the cause of your disease, would render you oblivious of it by means of a dose of morphine, should the stomach be in a state of active rebellion, as in the case of a friend of ours, the head of a Government bureau, who is at this moment suffering from a fit of gastritis, brought on by over-eating, and whose physician, finding his stomach in such a state of active effort to relieve itself of the poisons it already contained as to refuse positively to retain those he put into it, deliberately opened a vein in the patient's arm and injected a solution of morphia. This of course brought surcease of pain, but it did not cure the disease; on the contrary, it prolonged the attack and enabled the doctor to run up a large bill. It is charitable to suppose that this doctor did for his patient the best he knew, with his limited knowledge of disease, its cause and cure.

One reason why we are sick in summer is that we do not change our diet to suit the season. During cold weather we can stand—in fact, we need—a good deal of carbonaceous or heat-producing food. To continue this in summer is to inflame the blood and bring on disease. In winter we require woollen clothing in sufficient quantity to protect the skin from the contracting influence of cold, thus maintaining an equilibrium of the circulation. Colds, pleurisy, pneumonia, etc., are invariably caused by the blood being driven in from the surface and the extremities to the mucous membrane of the pleura, lungs, and other internal organs. In summer the weather is variable, sometimes oppressively warm, at others quite cool. We are much in the habit of throwing off our winter clothing when the first warm day strikes us, and donning a summer suit, stick to it through hot and cold, till autumn frosts appear. This is very unwise. We should change our clothing gradually, as the season changes, and vary it as the weather varies; and lastly, we should take a reasonable amount of exercise in the open air daily.

T. A. BLAND, M.D.

THE ECCENTRICITIES OF BULLETS IN FIGHT.

AT the battle of Peach Orchard, when McClellan was making his change of base, a Michigan infantryman fell to the ground as if shot stone dead, and was left lying in a heap as the regiment changed position. The ball which hit him first struck the barrel of his gun, glanced and struck a button off his coat, tore the watch out of his vest pocket, and then struck the man just over the heart, and was stopped there by a song book in his shirt pocket. He was unconscious for three-quarters of an hour, and it was a full month before the black and blue spot disappeared.

At Pittsburg Landing, a member of the Twelfth Michigan Regiment of Infantry stooped to give a wounded man a drink from his canteen. While in the act, a bullet, aimed at his breast, struck the canteen, turned aside, passed through the body of a man and buried itself in the leg of a horse. The canteen was split open, and dropped to the ground in halves.

At the second battle of Bull Run, as a New York infantryman was passing his plug of tobacco to a comrade, a bullet struck the plug, glanced off and buried itself in a knapsack. The tobacco was rolled up like a ball of shavings, and carried a hundred feet away. Directly in the line of the bullet was the head of a lieutenant, and had not the bullet been deflected, he would certainly have received it. As it was, he had both eyes filled with tobacco dust, and had to be led to the rear.

At Brandy Station, one of Custer's troopers had his left stirrup-strap cut away by a grape-shot, which passed between his leg and the horse, blistering his skin as if a red-hot iron had been used. He dismounted to ascertain the extent of his injuries, and as he bent over, a bullet knocked his hat off and killed his horse. In the same fight was a trooper who had suffered several days

with a toothache. In a hand-to-hand fight he received a pistol ball in his right cheek. It knocked out his aching double tooth, and passed out of the left-hand corner of his mouth, taking along a part of an upper tooth. The joy of being rid of the toothache was so great, that the trooper could not be made to go to the rear to have his wound dressed.

An object, however trifling, will turn the bullet from its true course. This was shown one day at the remount camp in Pleasant Valley. They had a "bull pen" there, in which about 500 bounty jumpers and other hard cases were under guard. Once in a while one of these men would make a break for liberty. Every sentinel in position would open fire, and it did not matter in the least if the man ran toward the crowded camp. On this occasion the prisoner made for the camp and as many as six shots were fired at him without effect. One of the bullets entered the tent of a captain in the Twelfth Pennsylvania cavalry. He was lying down, and the course of the bullet would have buried it in his chest. Fortunately for him a candle by which he was reading sat on a stand between him and where the bullet entered. This was struck and cut square in two, and the lighted end dropped to the floor without being snuffed out. The ball was deflected, and buried in the pillow under the officer's head, passed out of that and through his tent into the one behind it, passed between two men and brought up against a camp kettle.

There is in Detroit, Mich., a man who was wounded five times in less than ten minutes, at Fair Oaks. The first bullet entered his left arm; the second gave him a scalp wound; the third hit him in the foot; the fourth buried itself in his shoulder; the fifth entered his right leg. While he was being carried to the rear, the first two men who took him were

killed. While his wounds were being dressed, an exploded shell almost buried him under an avalanche of dirt. In being removed further to the rear, a runaway ambulance horse carried him half a mile and dumped him out, and yet he is seemingly hale and hearty, and walks without a limp.—*Ex.*

SLEEPING ON THE WALL SIDE.

A PHYSICIAN was lately called to prescribe for a young lady who lives in one of the most charming villas in Learnedville.

"Nothing the matter with her," she declared, "nothing but terrible headaches." Every morning she waked with a headache, and it lasted nearly half the day. It had been going on for months—ever since they moved into their new house. The old doctor tried all the old remedies and they all failed. Riding and archery were faithfully tested, study and practice were cheerfully given up. Nothing did any good.

"Will you let me see your bedroom?" asked the doctor one day, and he was shown up into the prettiest little nest imaginable.

Nothing wrong about the ventilation. The windows were high and broad and left open every night, the patient said. The bed stood in one corner against the wall.

"How do you sleep?" says the doctor.

"On my right side at the back of the bed, with my face to the wall. Lou likes the front best."

"The dickens she does!" says the doctor. "So do I. Will you do me the favor to wheel the bed into the middle of the room and sleep so for a week? Then let me know about the headaches."

Doctors are so absurd! The middle of the room indeed! And there were the windows on one side, and the two doors on the two other sides, and the mantel with its Macrame lambrequin on the fourth side. There was no place for the bed but just where it stood, in the corner.

"Never mind! Sacrifice your lambrequin," urged the doctor—"just for a week, you know."

The lambrequin was sacrificed, the bed

moved where it had free air on both sides, and the headaches disappeared.

It may be only an exceptionally delicate system that would be induced to actual headache by breathing all night the reflected air from a wall. Yet possibly some of the morning dullness we know of may be traceable to a like cause. At any rate, plenty of breathing space around a bed can only be an advantage to everybody.

In visiting three or four newly-built and beautiful houses recently, the lack of a good place for the bed was the most striking feature of the bedrooms. Some of these rooms were finished in shining mahogany, ebony, or walnut. Some were hung with rich modern tapestry. All were elegant and a few were airy. But in the most of the best of them, where was the bed to stand? A bay-window, perhaps, would occupy the middle of one side, another window another, a door another, a mantel-piece another.—*Christian Union.*

CURE FOR WARTS.—A correspondent of the *Scientific American* writes as follows: "Some years since a corn doctor advised me to use coal oil. My hands were covered with them. Having little faith I tried it, putting a drop on each of common kerosene and letting it absorb; where there was a hard crust, scraping it to facilitate absorption. In a fortnight after twice daily treating them, they began to lessen, and finally disappeared without scar. Then the right hand, in part, leaving one which remained after all others had passed away, and then that one. Have advised others to try it, with like effect on persistent use. Simply softened the top, dropped the oil on, and let it be for some minutes to absorb."

WHAT DELICIOUS SODA-WATER.—One of our exchanges blurts out: "You never know what you're drinking when you step up to the soda fountain in the drug-store, where everything is supposed—vain delusion—to be pure; and the nicely-scented three-dollar-a-week nice young man, with three hairs on one, and four on the other side of his upper lip, and his hair so beautifully banged, rivaling the clerk in the barber-shop around the corner, steps up and says, 'What syrup?' And you, reading the legend, *Pure fruit syrups*, over his head, say, 'Pineapple.' He'll pour you out a little butyric acid (which is made from rancid fat) and a little alcohol. If you say raspberry, you get a decoction of fusil oil; if gooseberry, you get oxalic acid; if lemon, you get citric acid, and so on. They are all shams, but they are so marvelously like the genuine that you can't tell them apart. In fact, the flavor of the genuine is due to the presence of these very identical things. But the curiosity of man has made it possible to imitate them thus closely, and you needn't be scared about

it either. Drink just as much as the other young man you're with is willing to pay for; it won't hurt you." (To which remark we can not subscribe.)

A STRONG ADVOCATE.—A correspondent of one of our exchanges relates the following pleasant piece of information. We trust it is more true than romantic: "The greatest temperance lecturer in the country is the U. P. Railroad. It imperatively and constantly insists on having sober men to run its trains as engineers, conductors, and brakemen. Let a man under the influence of liquor attempt to board his engine to run over one of these divisions, and he would be prevented from going out, and a sober man put in his place. The officials of the U. P. are too far-sighted to risk life and property in the hands of one who has already put his powers under the influence of 'the little brown jug.' A man seen to be drinking, sometimes gets a ten days' 'lay off' as a warning; and if that does not reform him he gets the 'grand bounce.'"

HABITS AND LONG LIFE.

ENCOURAGEMENT for the industrious and hygienic is to be gathered from the vital statistics compiled by a German observer, Baron G. F. Kolb. These show conclusively that long life is intimately related to purity of morals, high intelligence, and the useful employment of our time. Rectitude in the social relation has a most favorable effect on the health and wealth of a population. Thus in Bavaria, out of 1,000 children born alive, there died, of legitimate children, 248 boys and 212 girls; of illegitimate, 361 boys and 342 girls. Out of 100 children suckled by their mothers, only 18.2 died during the first year; of those nursed by wet nurses, 29.33 died; of those artificially fed, 60 died; of those brought up in institutions, 80 died in the 100. The influence of prosperity or poverty on mor-

ality is also shown by Baron Kolb. Taking 1,000 well-to-do persons and another 1,000 of poor persons—after five years there remained alive of the prosperous, 943; of the poor, only 655. After fifty years there remained of the prosperous, 557; of the poor, 283; at seventy years of age there remained 235 of the prosperous, and of the poor, 65. The average length of life among the well-to-do was 50 years, and among the poor 32 years.

One of the most potent shorteners of life appears to be the anxiety of providing for bare subsistence. The lack of sanitary conditions also shortens man's years. Idleness, as compared to intense industry, outweighs—prejudicially outweighs—all the advantages of ease and abundance.

NOTES IN SCIENCE AND AGRICULTURE.

Economy of Scientific Knowledge.—Geology doubtless has been one of the greatest aids to our race in making its marvelous progress, and of it we desire to speak more particularly. Minerals furnish the basis of nearly all the useful arts and manufactures, and, had it not been for geology, we never would have had any. It made the discovery that mother earth possessed within herself all the minerals of which we know anything—gold, silver, coal, zinc, lead, iron, baryta, ocher, peat, etc., and without all these, or most of them, what would our boasted progress in civilization and the arts be worth? Indeed, it is highly probable that had they remained forever hidden, we would never have acquired the cheerful habit of boasting. Many a fortune has been sunk in searching and experimenting for coal, gold, lead, zinc, iron, or other ores in places where the pyramids might be looked for with the same chance of success in finding them.

Bitter experience has taught many prospectors and miners how indispensable to their success is a knowledge of geology. Late geological studies of the Hoosac Mountain have proved that millions of dollars might have been saved to the State of Massachusetts, if like studies had been made before the excavation of the great Hoosac tunnel. It is asserted that enough funds were needlessly expended to pay for a complete topographical, zoological, geological, and botanical survey of the whole Commonwealth, such as no State in the Union now possesses, and such as would forever put away the danger of similar loss in the future. Geology must determine the cost of production of the precious metals, such as gold and silver, and their probable abundance for centuries to come.

The practical value of science in its various departments is too manifestly great to be ignored by any one interested even in a small way in the grand procession of progress. Americans in particular can not devote too much attention to the study of it in its various branches, as their national preëminence is due to their intimate and practical knowledge of all really scientific subjects, and it behooves them especially to continue to be the friends and patrons of science.

Another Prehistoric Man.—Some human remains, evidently of great antiquity, says the *Academy*, were discovered a few months ago at Carabacel, near Nice, and have been reported upon by a local scientific committee, as well as examined by M. de Quatrefages. The bones had not been artificially interred, but were found embedded in a deposit of calcareous clay at a depth of about nine feet from the surface. This deposit was irregularly stratified, and contained a mixture of pliocene and eocene shells,

showing that it had been formed by the reconstruction of the preëxisting strata. Of the bones, the most remarkable is the lower jaw. This is sufficiently characteristic to enable De Quatrefages to refer it to the Cro-Magnon type. The fossil man of Nice, therefore, belongs to the same race as M. Riviere's skeleton from Mentone—both being probably of Paleolithic age.

Man's Treatment of the Horse.

—The man has cut away the frog, because he thinks the horse will be injured if the frog touches the ground. He has then cut a deep groove at the base of the frog. This is to give a well-opened heel, as he is pleased to call it. He has scooped away the sole to "give it spring." He has scored a deep notch in the toe for the shoe. This is evidently a conservative relic of the time when nails were not used, and the shoe attached by three pointed clips hammered over the edge, one in front and one on either side. Then he has improved the whole of the outer surface of the hoof. As the Creator has furnished this part of the hoof with a thin, hard, polished plate, forming a sort of varnish which is impervious to wet, the farrier as a matter of course rasps it all away up to the crown. And, as the Creator has placed round the crown a fringe of hair, which acts as a thatch to the line of junction and throws off the rain upon the waterproof varnish, he cuts this away with his scissors. Lastly, the Creator having given to the horny hoof a mottling of soft and partially translucent brown, gray-blue, yellow, black, and white—never exactly the same in two hoofs, much less in two horses—the farrier takes a blacking-pot and brush, polishes up the hoofs until they look like patent-leather boots, all four exactly alike, and then contemplates his work with satisfaction. In his own words, he has "turned out a finished job of it."—*Good Words*.

Blue Glass in Insanity.—Professor Schlager, director of a noted insane asylum at Vienna, announces the result of experiments made by him in relation to the blue-glass healing theory, which at one time attracted so much attention in America as well as abroad. He had a room furnished with windows of blue glass, and had the walls painted of the same color. He then selected sixty persons, who were more or less deranged mentally, and made them the subjects of experimentation for a period of three years, placing them at selected times in the blue room, and carefully noting the apparent effects upon them. He discovered that the abnormally aroused and excited temperament experienced a remarkably soothing and quieting influence in the blue light, and he expresses the conviction that with persons thus

mentally deranged, with whom every other method of treatment has failed, this should be tried. He does not report any complete cures made by this means alone, but says that in most cases the treatment has proved beneficial, and that if continued systematically and persistently, the indications are that it will lead to complete restoration. In no case did it work injury. He expresses the intention to continue his experiments, and calls upon all associates and colleagues in the treatment of the insane to do the same and make careful notes of their observations. Professor Schlager has also made valuable and interesting experiments in treating deranged persons of abnormally depressed or sluggish and apathetic temperaments by exposing them in a similar manner to red light. His conclusions seem to be based upon careful and scrupulous study and observation, and are attracting deserved attention.

Insectivorous Plants.—Some of our practical observers are inclined to challenge the view put forth by prominent scientific men that certain plants feed on insects. Mr. Peter Henderson, the prominent gardener of New Jersey, has experimented with such plants, and his conclusions are not in agreement with the scientists. In a late letter to the *Scientific American*, Mr. Henderson says:

"In your issue for May 14, 1881, reference is made to the later experiments of Sig. Vayreda with some of the different species of *Silene* (catch-fly), in which he arrives at the conclusion that the plants do not digest the insects, or, if they do, they are not benefited thereby any more than if they did not eat them.

"During the summer of 1878, assisted by Mr. William I. Tait, of Jersey City Heights, N. J., we made most careful and exhaustive experiments with the Carolina fly-trap (*Di-*onea muscipula**), and arrived at exactly the same conclusion as Sig. Vayreda has done—that the so-called 'feeding' of the plants in no way conduced to their health or vigor, being identical in all respects with those that had not been given the insects. One hundred healthy plants were used in each of the two experiments. The whole details of the experiment were given in the *Gardeners' Monthly*, of Philadelphia, in December, 1878, and brought out a very interesting discussion from those believing in the Darwinian theory and those who did not.

"But why because the exudations from a plant are such as to cause an insect to adhere to it, or its mechanical formation entrap the insect, we should jump to the conclusion that it should then feed on its prey, it is hard to imagine.

"On the 'cruel plant' (*Physianthus albens*), hundreds of moths, butterflies, and other insects may be seen any day in August when the plant is in bloom, dead and dying, firmly held by their antennæ. Professor

George Thurber thus describes the trap contrivance by which the insect is caught:

"The anthers are so placed, that their spreading cells form a series of notches in their ring around the pistil. The insect, in putting its proboscis down for the honey, must pass it into one of these notches; and, in attempting to withdraw it, the end is sure to get caught in a notch—boot-jack fashion, as it were—and the more the insect pulls, the more its trunk is caught.' Thus caught, the insect starves to death; hence the well-deserved name of 'cruel plant.'

"Now, here is a trap nearly as wonderful as that of the Carolina fly-trap, and far more so than that of the viscid exudations of the *Silene*; yet even Mr. Darwin would hardly say that the 'cruel plant' feeds on these insects, any more than that the gnats caught by millions by the resinous exudations of the hemlock tend to augment their growth, or that the thistle or burdock of the wayside owe any part of their health and vigor to the scores of butterflies, moths, or bumble-bees that are in their headlong flight impaled on their spines."

Educating Horses.—Horses can be educated to the extent of their understanding as well as children, and can be as easily damaged or ruined by bad management. The great difference in horses as to vicious habits comes much more from different management than from variance of natural disposition. Horses with high mettle are more easily educated than those of dull spirit, and more susceptible to ill-training. But horses with dull spirits are not by any means proof against bad management, for in them may often be found the most provoking obstinacy and vicious habits of different characters that render them almost worthless. Could the coming generations of horses in this country be kept from their days of colthood to the age of five years in the hands of good, careful managers, there would be seen a vast difference in the general characters of the noble animals. If a colt is never allowed to get an advantage, it will never know that it possesses a power that man can not control; and if made familiar with strange objects, it will not be skittish and nervous. If a horse is accustomed from his early days to have objects hit him on the heels, back, and hips, he will pay no attention to the giving out of a harness, or of a wagon running against him at an unexpected moment. I once saw an aged lady drive a high-spirited horse attached to a carriage down a steep hill, and with no hold-back straps upon the harness, and she assured me that there was no danger, for her son accustomed his horses to all kinds of usages and sights that commonly drive the animal into a frenzy of fear and excitement. A gun can be fired from the back of a horse, an umbrella held over his head, a buffalo robe thrown upon his neck, a railroad engine pass close by, his heels bumped with sticks, and the animal take it all as a natural condi-

tion of things, if only taught by careful management that he will not be injured thereby. There is great need of improvement in management—less beating and more education. —*Country Gentleman.*

A Hot Day.—Wednesday, September 7th, was the hottest day known for many years east of the Mississippi River. The thermometer marked at Philadelphia, $101\frac{1}{4}^{\circ}$; Pittsburg, 99° ; Baltimore, 100° ; Cincinnati, 93° ; Louisville, 94° ; St. Louis, 97° ; Toledo, O., 92° ; Vicksburg, Miss., 92° ; Albany, 97° ; Boston, 100° ; Washington, $104\frac{1}{2}^{\circ}$; Poughkeepsie, 100° ; Ocean Grove, 104° ; Trenton, 100° ; and over 100° in many places in New Jersey, Pennsylvania, and Delaware. In the extreme north-west a cold wave was moving eastward. Snow fell in the Black Hills on the 5th, five inches falling at Deadwood, D. T., and two feet deep on Bald Mountain. This low temperature was soon lost in the eastward passage of the wave, and after the 7th the temperature in the Eastern States remained well up toward the nineties the remainder of the week.

Labor-saving Devices vs. HEALTH.—A contributor to the Boston *Journal of Chemistry* thus reflects upon the effect of easing man from the burden of laborious effort:

"This is the age of labor-saving contrivances, and the saving of labor is generally an obvious gain. In some instances, however, it may be indirectly a loss or an injury. Possibly this is true of certain devices intended for the use of literary men, which, though very convenient and unquestionably useful under some circumstances, may be objectionable in others as tending to make sedentary labor more continuously sedentary, and consequently more detrimental to health. A man may now sit at his desk or library-table for hours without the necessity of rising and walking across the room to consult a book. A revolving book-case puts a small library beside his chair, and patent book-rests hold half a dozen volumes open before him for instant reference. All the manuscripts and memoranda that he has occasion to use are classified and filed in pigeon-holes or drawers within easy reach. All the tools and appliances of his art are literally at his fingers' ends. He may write a whole page if he chooses without lifting his pen from the paper to replenish it with ink.

"On the face of it, all this is as comfortable as it is convenient, and for many classes of workers it may be every way economical and advantageous. Sometimes, however, we fear that the apparent advantage may be really a disadvantage; the seeming gain an ultimate loss. Much, of course, depends upon individual temperament and habit; but for many brain-workers, who have to be in the harness a good part of the day, we have no doubt that it is well to be compelled to leave one's chair now and then. The mere change of position, the slight relief to one

set of overstrained muscles, the momentary exercise of others long kept inactive—all are good for the body, as the diversion of attention from what is immediately under the eye is for the mind. To go across the room, to take down a heavy book from a shelf and hold it in the hand while looking up some little point, is exercise different not in kind, but only in degree, from a walk of a mile. One returns to his writing rested and refreshed by it, and the stimulus it gives to exertion soon makes up for the loss of time.

"A stylographic pen is an admirable contrivance for some kinds of work. Reporters, students taking notes of lectures, clerks who have to make entries or memoranda here and there in a large warehouse, and everybody who must write 'on the wing,' so to speak, find it extremely convenient to have pen and inkstand in one, and always ready for use; but, for a man writing steadily at his desk, we believe that the relief to the muscles of the hand and arm in pausing to dip the pen into the inkstand is well worth the few seconds it takes. In the long run, it may be just enough to save one from 'writer's cramp' or pen-palsy. In any mechanical labor that keeps one set of muscles in constant and rapid exercise, there is rest and recuperation in occasional change of motion, however slight and momentary. The heart, whose throbbing labor knows no intermission by day or night from birth to death, rests for an instant between its successive beats, and the interval, though almost inappreciable, is necessary to the healthy performance of its functions. No part of our muscular or nervous system was made for incessant and unvaried activity."

A Soap Recipe.—The London *Druggist* contained recently a carefully written article on soap-making, from which we borrow the following:

"It is perfectly easy to make a few pounds of soap at a time with this article. No boiling-pans are required, and it is about as easy to make a dozen pounds of soap as a cup of coffee; or a few hundred-weight of soap can be made with less care and attention than is required to make a dozen loaves of bread! The following simple recipe, if exactly followed, will always succeed:

"Take exactly ten pounds of double-refined ninety-eight per cent. caustic soda powder (Greenbank), put it in any can or jar with forty-five pounds (four and a half gallons) of water, stir it once or twice, when it will dissolve immediately and become quite hot. Let it stand until the lye thus made is cold. Weigh out and place in any convenient vessel for mixing exactly seventy-five pounds of clean grease, tallow, or oil (*not* mineral oil). If grease or tallow be used, melt it slowly over the fire until it is liquid and just warm—say temperature not over 100° Fahrenheit. If oil be used, no heating is required. Pour the lye slowly into the melted grease or oil in a small stream continuously, at the same time stirring with a flat wooden stirrer

about three inches broad. Continue gently stirring until the lye and grease are thoroughly combined and in appearance like honey. Do not stir too long, or the mixture will separate itself again. The time required varies somewhat with the weather, and the kind of tallow, grease, or oil used; from fifteen to twenty minutes will be enough. When the mixing is completed, pour off the liquid soap into any old square box for a mold sufficiently large to hold it, previously damping the sides with water so as to prevent the soap sticking. Wrap up the box well with old blankets—or, better still, put it in a warm place until the next day, when the box will contain a block of one hundred and thirty pounds of soap, which can afterward be cut up with a wire.

"Remember the chief points in the above directions, which must be exactly followed. The lye must be allowed to *cool*. If melted

tallow or grease be used, it must not be more than *warm*. The *exact* weights of double-refined ninety-eight per cent, powdered caustic soda and tallow or oil must be taken; also the lye must be stirred into the grease—not grease or oil added to the lye. If the grease or tallow used be not clean or *contains salt*, it must be 'rendered' or purified previous to use—that is to say, boiled with water, and allowed to become hard again to throw out the impurities. Any salt present will spoil the whole operation entirely, but discolored or rancid grease or tallow is just as good as fresh for soap-making purposes."

It is said that "there are 11,825,000 cattle killed in the United States annually, the meats from which amount to 4,088,300,000 pounds, and their total value when killed for food is \$608,200,000."



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OUR LATE PRESIDENT.

WORN out at length, his mighty heart ceased to beat, and our noble President Garfield is no more. For nearly eighty days he lay upon the bed of suffering to which the assassin's bullet had consigned him so suddenly; and during that time fifty millions of people may be said to have lived in a condition of suspense, watching and pondering, fearing and hoping. Every bulletin issued by the physicians, every opinion uttered by attendant or friend was eagerly seized and made a topic for varied comment.

As the weeks rolled by, it seemed that his being alive gave warrant for the thought that he would recover; but when official announcements revealed no progress, no material improvement, the public mind slowly prepared itself for the sad termination of a most heroic struggle against death.

When we wrote the brief paragraph in the October PHRENOLOGICAL, we had been encouraged by the successful removal of Mr. Garfield from Washington to Long Branch to hope for a speedy improvement; and our forms had just closed and been placed on the press, when the news came of his final relapse and sudden dissolution.

But fifty years old, and yet what a history! From a humble station in life, dependent when scarcely more than a boy upon his own industry for the education he craved, he advanced rapidly to distinction and public office, reaching at length the highest place known to the American citizen. Every school-boy is acquainted with the life of the boy Garfield, and we trust that the lesson of earnestness, industry, and honor which it teaches, every school-boy has learned.

Not, however, with the expectation of becoming a member of Congress or President of the United States—it is not likely such a possibility entered the head of the boy Garfield—but with the purpose of becoming useful, upright, self-supporting, and respected as a man and a citizen.

We can not but think that the strange experience of the seventy-nine days between the shooting of our late President and his death will prove most monitory and useful to the nation. There were awakened sentiments of loyalty and sympathy of which we had supposed certain classes of men and certain parts of our country were quite devoid. Men of opposed views in politics were brought together in a mutual expression of conviction that the blow of the assassin was not aimed at the man Garfield, but at the nation, and the extreme partisan hastened to declare his hatred of such demoniacal meanness. North and South joined in a patriotic demand for the cause which prompted Guiteau to his terrible deed; and while scrutinizing the relations of political parties, pointed to the peaceful and prosperous state of the nation, the tendency of legislation toward improved methods in its different departments, and the general satisfaction of the people at large with the *régime* of the new administration. Never before, it was generally agreed, was there less occasion for the people to be dissatisfied with the policy of the National Government; it had begun in a spirit which promised much for the solid welfare of the country. By pen and tongue these matters have been gravely discussed, and patriotism and honesty have had a rare opportunity for uttering their opinion, and for pressing

home the conviction that there is great need of purity in our politics and of improvement in the machinery of central and local governments, and that the people at large must rise to an appreciation of the importance of attending personally to the selection of those who are to be invested with official authority if they would be properly represented and their private interests protected.

Hence we think that the outcome of this severe trial, the loss of a man who had shown himself to be a devoted patriot, a zealous advocate of reform in the public service, an affectionate husband, father, and friend, a frank and earnest Christian, and, in the long, long days of great pain and helplessness, a patient and even cheerful sufferer, will be beneficial to the nation. A sharp trial at a time seemingly fraught with danger to our institutions, it has an educational effect upon the masses of our own people and upon the world at large, showing to our statesmen important needs in certain directions, and impressing the attentive European with the strength of our civil edifice and the devotion of Americans to its peculiar constitution. The death of Abraham Lincoln occurred at a much more critical juncture, and excited the gravest apprehensions for the security of our Government; but there was strength developed to meet the emergency, and who will not say that it was successfully met, and an event that shocked the country to its deepest recesses, made contributory to the permanent advantage of the nation?

Using the language of our beloved President, whose body has just been consigned to its final resting-place in his native State, "God reigns, and the Government still lives," in a stronger, higher

sense than in 1865; and we can not fear any great civil disaster in the change which has been wrought by his death. The change we feel sure will be mainly that of the succession of Mr. Arthur to Mr. Garfield as our President; the steady course of affairs will be maintained; peace, prosperity, and honor will sit enshrined on our national banner.

We should be remiss were not a word added here with reference to the wonderful interest shown by the world at large in our national sorrow. Government seemed to vie with Government in expression of sympathy for the stricken man and for the people he represented. It was not only the Anglo-Saxon race throughout the globe that indicated its bond of blood and Christian fellowship, but Arab, Muscovite, Israelite and Turk, Chinaman, Japanese and Hindoo, and the islanders of the ocean witnessed to a common feeling of sorrow. The "deep damnation of his taking off" aroused the indignation and grief of all peoples capable of discerning the principles whose operation made Mr. Garfield the chief magistrate of the United States. Being, indeed, from and of the people, he was deemed thoroughly representative of them, and carried their interests in his heart. And to represent the American people thus was, in a sense, to represent mankind. As a true democrat, our President was more than American. He was cosmopolitan. The cause of liberty is universal man's, and men everywhere seeking political freedom watch with closest attention every movement in our civil affairs.

COLLEGE EDUCATION UNPRACTICAL.

THE editor of *The Argonaut* visited the University of California a short time

ago, and feeling himself edified or fired up by what he saw and heard, indulges in a little by-play of reflection on certain incidental associations of American student-life. We think he is not far wrong in some of his inferences. For instance, he is led to say:

We hear too much vain and empty declamation regarding university education, and we weary somewhat of being told that civilization is to be rescued, society reclaimed, and the institutions of government to be preserved by a set of unmannerly, cigarette-smoking, hobble-de-hoy boys, who play soldier with unloaded muskets, and hiss the president of their University when he expresses opinions concerning the study of Latin and Greek not in accord with the unfledged sentiments of our gosling youth. This shameful incident occurred at Berkeley on Tuesday. It is not true that the universities and colleges produce the best men or the best minds of this country. It is not true that the ablest intellects who have the ability to think, nor the men of high moral courage who have dared to think and to express their thoughts, have come from the institutions of higher learning in America. It is not true that, as a rule, our statesmen, our higher legislators, our scientists, our best lawyers, our best writers, our deepest thinkers, our most active business men, have "matriculated" from a college, or are the "alumni" of a university. The very contrary of that proposition is true; and, when we consider that, as a rule, the young gentlemen graduates are from the class of society that has money, and have parents who can give them the opportunity of study and the "chance" in life, and who surround them with teachers, books, and appliances of learning, the proportion that turn out able, serviceable, successful men is alarmingly small. We dare statistics upon this proposition, confining the figures to this country, and barring the preachers. We say "this country" because it is for this country that we are educating our youth; in this republican land of ours the great majority of our boys must be the artificers of their own fortunes. They are the bread-getters of themselves and the families they grow, and, if the American system of higher education does not fit them for this battle for bread, then it is not a success, and it does not deserve the encomiums that are so thoughtlessly poured over it. . . . It is from the uneducated—and we use

the term uneducated in contradistinction to the super-educated—that come our best, most useful, most gifted men. It is from the country boys, from shops and counters, from common schools that come the men of mind and action. The world is governed and its battles fought, not by the pampered fledglings of the higher schools, nor by the sons of the wealthy, nor by the inheritors of opportunities, but by bare-footed boys, whose toes become prehensile in the scratch and scramble of their upward struggle.

There is a good deal of hard sense in this square-toed logic, friend Pixley. The men whose broad shoulders and strong, clear faculties maintain the current of progress for our nation have come up from the farm, the factory, the mill, the shop and the store. We are just reminded of a statistician's inquiry among the "solid" men of Providence, R. I., with reference to their early life, and his finding that over eighty per cent. of them had been farmers' boys, and had worked their way in life mainly by their own exertions.

Yet it must be confessed that Harvard, Yale, Princeton, and other universities have contributed many strong and able minds to our science, literature, and politics, and also to our industrial activities. The roll of American statesmanship does great honor to American education—from Jefferson to Garfield. To be sure, many of our prominent men who wear the laurels of scholarship upon their brows were born in humble circumstances and worked their way through school and college, their own resolution and courage bearing them triumphantly over the obstacles which poverty usually places in the avenues of higher education. Genuine success in life is dependent mainly upon high motives, earnest endeavor, and that practical knowledge of human nature which is obtained only in the high-ways and by-ways of society. The educa-

tion which acquaints us with ourselves and teaches us to understand our fellow-men is the best.

UPHELD BY LAW I

ONE of the most conspicuous of anomalies in government, is that system which permits the broadcast sale and use of alcoholic liquors, and yet punishes the alcoholic criminal. The tendency and effect of liquor-drinking are known as well as any scientific data we have relating to human pathology; nevertheless legislators who were ostensibly chosen to provide for the welfare of the people and who openly profess to have the prosperity and happiness of the community at heart, utterly ignore the great evil which wastes hundreds of millions of treasure, destroys tens of thousands of lives, and converts hundreds of honest and industrious men and women into robbers, murderers, and profligates. The attitude of government, in view of the open and lawless work of alcohol, seems to us practically that of condoning vice and crime.

We might add a word with reference to tobacco, especially in the new phase of its use in the way of cigarette-smoking among our youth; but so much has been already said by newspaper and periodical declaratory of this practice as one fraught with great peril to health and morality, that at present we just mention it as a matter demanding the earnest and emphatic consideration of law-makers. Alcohol and tobacco indeed being twin in their pernicious ravages upon the community should together be embraced in statutory proscription. Oh, law-maker, awake to a sense of public need, and honestly and fearlessly do your plain duty!

A PHRENOLOGICAL CONVENTION.

A HIGHLY esteemed friend, a New England clergyman, suggests the celebration of the birth of Dr. Gall or the coming of Spurzheim to America. He thinks that there ought to be some anniversary occasions when the friends of Phrenology and mental science may come together and discuss important questions bearing upon their favorite studies. We think so too. Something of this sort would help to stimulate thought and action among phrenologists, and would attract public attention to the importance of the phrenological work. Scientific men, journalists, physicians, teachers,

ministers, have their annual conventions, and look upon such gatherings as very desirable to their individual and collective growth and influence. It is certainly time that phrenologists made an effort in a similar direction. They are numerous in America, and exercise not a little influence in every department of thought, and their expression of view as an assembly on the great question of social reform and progress would command general respect.

We shall be glad to hear from our friends with regard to the expediency of holding a convention, and the time and place which would be appropriate and convenient.



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.

TO OUR CONTRIBUTORS.—It will greatly aid the editor, and facilitate the work of the printer, if our contributors generally should observe the following rules when writing articles or communications intended for publication:

1. Write on one side of the sheet only. It is often necessary to cut the page into "takes" for compositors, and this can not be done when both sides are written upon.
2. Write clearly and distinctly, being particularly careful in the matter of proper names and quotations.
3. Don't write in a microscopic hand, as the compositor has to read it across his case, a distance of nearly two feet, and the editor often wants to make changes and additions.
4. Never roll your manuscript or paste the sheets together.
5. Be brief. People don't like to read long stories. A half-column article is read by four times as many people as one of double that length.
6. Always write your full name and address plainly at the end of your letter. If you use a pseudonym or initials, write your full name and address below it.

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.

GRAY MATTER AND LENGTH OF FIBER.—"Lecturer" is substantially right in his statement with regard to the constitution of the gray substance and fibers of the brain, but does not appear to appreciate the fact that the greater the depth and extent of the convolutions, the longer must be the fibers. Leading authorities in physiology are taking the ground that intellectual capacity is related to the size of the frontal lobes, and their comparative projection in front of the ear is a guide to estimating their development. The white fibers play a secondary part in the mental operations. True. Their function is annunculative and communicative; they are the instruments by which mind is expressed in the outward conduct. Longuet, Dalton, and others think that the fibers which pass downward from the convolutions to the medulla oblongata, are reinforced by the great ganglia through which or over which they pass; that the optic-thalami, corpora quadrigemina, tuber annularo, etc., supply nervous force in some way. In this way, too, then, length of fiber has something to do with nervous energy. The character of the nervous tissue is dependent upon quality and temperament, but of this it is hardly necessary to remind "Lecturer."

LEFT-HANDEDNESS.—*Question:* I would like to know your opinion, through the *JOURNAL*, why people are left-handed. J. M. B.

Answer: The use of the left hand instead of the right for the common purposes of life may be due to inherited peculiarity, or to accident or habit which has led to its special training. Some persons are ambidexterous, i. e., can use both hands with equal facility, which goes far to show that what we call the better hand depends upon its exercise. There are physiologists who claim that the left hemisphere has the predominant influence in the mental life, and as its fibers cross to the right, and have a particular relation to the right half of the body, therefore the right hand and the right foot are more responsive to mental impulses and more susceptible to training.

O. S. F.—*Question:* Is O. S. Fowler still living? If so, please state whether he has been lecturing in Texas during the past winter or not, and oblige a subscriber. C. E. V. M.

Answer: Mr. O. S. Fowler is alive, and, according to late report, in good health. He was in Texas last winter or spring.

REPEATED FEVER.—*Question:* For the past four years I have been troubled occasionally with being threatened with fever. Two years ago I had a run of typhoid fever, and now am threatened again in the same way. What is the cause of it, and how can I better my condition? A. W. D.

Answer: You are evidently the subject of functional trouble involving the liver, spleen, and other organs, which is becoming chronic or kept up by your mode of life. Should you order your habits with reference to your febrile tendency, you would doubtless find much relief. Personal cases like this may be communicated to the editor, who will advise the correspondent direct, this department being for the consideration of questions of general interest.

LOCATION OF ORGANS.—F. B.—The location of the organs in the bust is mainly approximative, and the divisions are not intended to be absolutely exact. This could not be. The bust is a guide to the regional distribution of the organs rather than an exact showing of their size and position. In life the variations from a standard is great, and dependent upon many peculiarities of brain-structure, hence the aim of those who prepared the bust was to indicate the center of an organ rather than its extent.

POSITION IN SLEEP.—*Question:* Is sleeping upon the back, or lying long in that position, injurious? M. D.

Answer: The position in which we sleep is largely a matter of habit; some persons think that they sleep better lying on the back than in any other attitude, and Dr. Trall and other physiologists deem that the best. But some other authorities claim that while lying on the back the stomach and other viscera press upon the large blood-vessels in the spinal region, and so tend to produce congestion and cerebral disturbances. Late and hearty suppers probably have something to do with the nightmares and unpleasant dreams people complain of as arising from sleeping on the back. The position in bed should be such as to allow free play to the action of the heart, lungs, etc., and it certainly appears that the horizontal, flat pose of the body is most likely to do this. We think that people usually raise the head too much with pillows and holsters, and so interrupt the movement of the blood between the heart and head.

FEATHER-WEIGHT.—*Question:* I have heard it said that if a pound of feathers, as usually weighed, were placed under a receiver and the air exhausted, that the feathers would be heavier than the pound-weight. Is this so, and what buoys up the feathers in the open air? M. M. H.

Answer: In an exhausted receiver the feathers and pound-weight would balance. In the open air the feathers are sustained because of their peculiar structure; the hollowness of the quill and the light, spreading plumes, offer a striking contrast to the solid and dense pound-weight, and when thrown into the air the lightest breeze wafts them about, because their delicate filaments offer scarcely any resistance. Furthermore, it is the spread of the plume which prevents its rapid falling, just as an open umbrella dropped handle downward will fall, but slowly. If, however, you pack a quantity of feathers closely in a bag and let it fall from a height, it will descend rapidly.

NAMES FOR BOYS.—*Ed. PHRENOLOGICAL JOURNAL:* In answer to a correspondent in the June Number of the *JOURNAL* for 1878, you suggest some very tasteful names for girl-babies. Will you not have the kindness to suggest some equally tasteful and appropriate names for boy-babies, and oblige, R.

Answer: Among the names not often met with and which we think appropriate for boys, are: Almer, Wilson, Clay, Dehart, Fenlow, Harold, Merton, Seton, Searle, Spenser, Tyrrell, Wilmor. Consult a large directory—like that of Boston, New York, Philadelphia, St. Louis, or Chicago, for other 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.

FROM A LECTURE IN SCOTLAND.—A newspaper of Dumfries, Scotland, reports at considerable length a lecture delivered in that town not long since, by Mr. L. N. Fowler. The following are extracts from the report: "The world was made for man; man's body was made for his mind; and there was no other science by which we could learn so much of this the chief work of creation as we could learn by Phrenology. In order to read character we must understand organism, and must have some regard to its quantity and its quality, hereditary tendencies, and educational influences. Man existed by the union of body, soul, and spirit; there being a close affinity between the three, a gradual merging of the lower in the higher. Of the human mind we knew nothing, except through the medium of the brain. The lower brain was adapted to the physical wants of man; the frontal, to his intellectual pursuits; the superior, to his moral and spiritual nature. Some people were afraid that Phrenology led to materialism and infidelity. That was an entire misapprehension. Phrenology taught that man had a threefold nature—that he was a social being, that he was an intellectual being, and that he was a moral and religious being. It was because of the fact of his religious nature, fully recognized by Phrenology, that man had his churches and believed in his Saviour. Phrenology had its foundation in nature, and claimed to be as true as any other science. It could not be demonstrated as an exact science, but it was just as true as if it could be. There were few things that could be demonstrated that were accepted and dealt with as truths. We could not prove that medical science was exact, and yet we placed our health and lives in the hands of the doctors. Phrenology informed us more correctly of the component part of the mind than any system of mental philosophy that had yet been written. He was surprised at those people who accepted physiognomy as a guide to character and rejected Phrenology. There could be no physiognomy without Phrenology. The more of a fool a person was, the less physiognomy had he to show. In proportion as he had talent and character there would be a manifestation, an expression of talent in the features. A man's character revealed itself in various ways—in his voice, in his gesture, in his walk, in his physiognomy, and, most of all, in the formation of his head. Phrenology, as a guide to character, could be applied to the youngest children; the others—

the gesture, the voice, the walk, the physiognomy—did not come into operation until later. A child two or three months old would show in its head the strength and peculiarities of its mind; the phrenologist could tell you what that child would be, what sort of training would suit him best, and what the mental and moral capacities and dispositions he would afterward manifest. That the human race were sprung from a single pair would, he believed, be scientifically established in the end, for it was a fact that the composition of the blood of all the various tribes of men was fundamentally the same. The difference between us was not organic; it was a difference of quantity, quality, and environment—a difference of hereditary bias, development, and discipline. Mr. Fowler proceeded to speak of the obligation there was on every one of us to work up his own nature to as near perfection as he could, and to show that though he could not examine the quality of a brain in a living person, yet a pretty correct estimate could be formed of it by seeing the quality of the skin, of the face, of the hair, etc., for the parts of a human being were not made separately, but grew up together, and if the hair and skin were coarse so would the brain be, and if these were fine then the brain would be finer and of better quality."

AN UNFORTUNATE STUDENT OF ANTHROPOLOGY.—An Arizona correspondent writes in a late letter: "How often I gazed with delight upon your collections of skulls and busts! But you don't know that twice in my wandering career I have made collections of skulls on the Pacific coast for the purpose of sending them to your house, but each time I was foiled through the superstition of the people. My first collection embraced skulls of the different tribes that inhabit both sides of the Gulf of Lower California, to which were added some skulls of Spaniards and cross or mixed breeds. These skulls were all robbed or taken from me by the people and soldiers of La Paz, and buried with the ceremonies of the Catholic Church, while I was looked upon as a sacrilegious heretic. My collection number two was made during the Frazer River mining excitement. It was from the tribes inhabiting the Gulf of Georgia and Vancouver's Island. The crania I had collected were left in my room under lock and key at Whitcomb, while I was away on a visit to Victoria. Upon my return I could not find my skulls; the boarders and other people insisted that the house had become haunted since the introduction of the skulls; that their original owners had taken possession and kept the people from sleeping, etc. Thus frustrated, I have made no further attempts at collecting, except once in tropical Mexico I attempted to capture alive, by magnet

ism, a magnificent serpent of golden color with black adornments, but, like the Vermont professor showing his pupils the power of magnetism upon a ball, I got the worst of it, and had to run for my life. So, my dear old friends, from whom I learned so much in youth, I was unsuccessful in these, as in many other pursuits of life, since that time; and now I am settled in this cradle of the desert, hoping and waiting for the full solution of the origin of the races. I am no Darwinian in theory or belief; I think that the Indian and African races are the remains of a people once higher, now devastated.

"ALFRED A. GREEN."

SEED IN GOOD GROUND.—The following letter tells its own story clearly enough:

"J——, PA., Feb. 8, 1881.

"GENTLEMEN:—I have just received the description of character written by you for me from my photographs. You have done more than describe my character, by describing how to regain my health also, for which I would willingly give a thousand times more than it costs to have the character written. I shall take your advice in all respects, and will send on two more sets of pictures for description shortly. My shop-mates say you know more about me than I know of myself. I have obtained fifteen of them as subscribers to the PHRENOLOGICAL JOURNAL. All of them have received the JOURNALS and the premiums, and are well pleased with them.

Yours truly, F. H. A."

PERSONAL.

MR. BRONSON ALCOTT is reported to have said at the Concord School, that "Actualty is the Thingness of the Here." *The Portland Advertiser* adds: "An ordinary person dislikes to set up an opinion against so high authority, but sometimes it does seem as though Actualty is really the Hereness of the Thing."

POSTMASTER-GENERAL JAMES told the President, during a brief interview he had with the latter recently, that he had saved the Government about a million and a half dollars in his department since the fourth of March. Of course, a good economical officer will be retained by the new President.

RISTORI, at fifty-eight, has undertaken to learn English in order to play Lady Macbeth. Never too old to learn.

PROF. CHEVREUL, of Paris, aged ninety-five, has just completed a course of forty lectures on chemistry, for which he was widely advertised a few months ago. We should like to have his

portrait. Can not some of our Paris correspondents get it?

Two allopathic physicians, one homeopathic and one eclectic, are serving amicably together as a committee appointed by the Connecticut Legislature to draft a medical practice act. So says an Exchange. Why shouldn't they?

BLIND TOM, the piano player, was born at a little town called Winton, three miles from Columbus, Muscogee County, Ga. His father's name was Mingo, and his mother was known as "Aunt Charity."

THE successor to Dean Stanley as the head of Westminster Abbey is Dr. Bradley, formerly Head Master of Marlborough School, and subsequently Master of University College, Oxford. He holds broad views as to Churchmanship. Mr. Gladstone is a sagacious man in the matter of clerical preferments, and the estimation he holds of Dr. Bradley is sufficiently shown by the fact that he has made him within fifteen months University Commissioner, Canon of Worcester, and now Dean of Westminster. The salary of the Dean is \$10,000, with a fine house and handsome perquisites.

WISDOM.

GENIUS is eternal patience.—*Buonarrotti*.

THE more one judges, the less one loves.—*Balak*.

THE truest proof of a man's religion is the quality of his companions.—*Bailey*.

CRAFTINESS is a quality in the mind and a vice in the character.—*Dubay*.

ONE great cause of our insensibility to the goodness of our Creator is the very extensiveness of His bounty.—*Puley*.

FOUR things belong to a judge: To hear cautiously, to answer wisely, to consider soberly, and to decide impartially.—*Socrates*.

WITH the best impulses, the noblest aspirations, and the purest motives, every man needs the grace of God to resist sin and lead a righteous life.

THERE is a gift that is almost a blow, and there is a kind word that is munificence; so much is there in the way we do things.

PLUNGE in the busy current, stem

The tide of errors ye condemn,

And fill life's active uses;

Begin, reform yourselves, and live

To prove that honesty may thrive

Unaided by abuses.

WHOLESOME COUNSEL.—“He that hearkeneth unto counsel is wise.”

Whoever would live long and happy, let him observe the following rules :

Let your	Thoughts Conversation Works Manners Diet Apparel Will Sleep Prayers Recreation Memory	Be	Cheerful, serious, godly. Little, honest, true. Profitable, holy, charitable. Grave, courteous, kind. Temperate, convenient, regular. Frugal, neat, comely. Constant, obedient, ready. Moderate, quiet, seasonable. Short, devout, frequent. Lawful, brief, healthful. Of God, Death, Eternity.
Hear, Be silent, Understand, Remember,	and learn to	Be silent. Understand. Remember. Do accordingly.	
All that you	see, judge hear, believe know, tell can do, do	Not.	
Wealth Health Virtue Soul	Lost, { some much more All }	Lost.	
By { praying, giving alms, being unjust, lying,	you { lose impovertish enrich profit }	not.	

If ever you speak anything, speak first, and look narrowly to what you speak, where you speak, of whom you speak, and to whom you speak, lest you bring yourself into great trouble.

M. A. D. B.

MIRTH.

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

“WE both scratched for a living,” said the old hen to the editor. He told her to shear off.

A WESTERN humorist, who is courting a girl named Furlong, says it is an eighth of a mile around her waist. He must be a rood fellow.

ON Broome Street, New York, there are two doctors, side by side, one named “Little,” and the other named “Shorter.”

A FLY is said to have 16,000 eyes. No wonder he is careless where he leaves his specs!

“I BELIEVE in nothing,” said a weak, self-conceited fellow to Gilkerson. “Well,” said Gilkerson, after looking at him a while, “I believe you do.”—*Puck*.

A PROMINENT lumberman in Burlington has had his coat-of-arms painted on the panels of his carriage, with the Latin motto, “Vidi.” Which by interpretation is, “I saw.”

It is said that the German word “pfingsten” comes from the old Greek “Pentecoste.” Yes, and dyspepsia comes from sauerkraut.—*Puck*.

“Is it law you’re talking about? Look, now, when I was a sandger I shot twenty men for the Queen, and she gave me a pinshun, but if I was only to shoot one stray fellow for myself, bedad, I’d be tried for murder. There’s law for yez.”

AN Oil City man purchased a small hand-bellows, took it home, and told his wife he had concluded to blow his brains out; whereupon she replied that a smaller-sized bellows would have answered the purpose better.

A FIDGITY maiden, Lucinder,
Poked her head out the open car winder,
And, when she drew back
Struck the sash with a whack,
Having caught in her eye a loose cinder.

“JAMES,” said a motherly woman to a young man whose first sermon she had just heard, “James, why did you enter the ministry?” “I had a call from the Lord,” said the young man, and then she replied: “But are you sure it wasn’t some *other* note that you heard?”

"ARE sisters Sally and Nancy resources, pa?"
 "No, my boy; why do you ask that question?"
 "Because I heard uncle Joe say that if you would only husband your resources, you would get along a great deal better than you do. That's all, pa."

A FRENCH experimenter has been trying the effect of alcoholic intoxication on pigs, and says that those which have been kept drunk a year don't seem any the worse for it. That's pretty much the case with human pigs, too.

"Yes," said Mr. Profundity, "it is the silent strength of gravity that binds the world together; it is the silent power of light that gives life and beauty to all things; it is the silent stream that is deepest; it is—" "It is the still sow that gets the most swill," Mrs. P. put in, seeing her liege lord had got to the end of his rope and similes. It was kind of her, but it somehow spoiled the effect of his dissertation.

In a certain minister's family the conversation turned upon the character of the baby. Why was the baby so naughty? The brother, who had reached the age of twelve, and was studying the steam-engine in his intervals of catechism, gave vent to his orthodoxy in the following suggestive inquiry: "Papa, as we all inherit the sin of Adam, and the baby is such a little fellow, is there not a greater pressure of sin to the square inch in the baby than in the rest of us?"



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.

REVISED ODDFELLOWSHIP ILLUSTRATED. The Complete Revised Ritual of the Lodge and Encampment and the Rebekah Degree. Profusely Illustrated. pp. 281. Cloth. Price, \$1. Chicago: Ezra A. Cook, Publisher.

Oddfellowship is presented here to the public in a form which implies authenticity, and it appears to disclose even the minutest of its ceremonies and practices. The day of secret organizations is past, our civilization can not tolerate them. If an enterprise be right and its purpose humane, it is more likely to gather support by openness and directness, rather than by arts of

cunning and silence. It is no excuse that its work may be better done under cover. There are benevolent societies which do much good quietly and thoroughly, but not in secret. Society has confidence in them, and supports them without caring to question their methods. The President of Wheaton College furnishes an historical sketch of the Order, and the critical analyses of the nature of the degrees. It seems a little odd that intelligent men should seriously take part in such elaborate ceremonials and indulge in so much mummery. As a matter of amusement we should not object to it. Possibly that is the major premise.

THE FEEDING AND MANAGEMENT OF INFANTS AND CHILDREN, and the Home Treatment of their Diseases. By T. C. Duncan, M.D., author of "How to be Plump," etc., editor of *The United States Medical Investigator*, etc. Sold only by Subscription. 1-mo, pp. 426. Chicago: Duncan Brothers.

The author shows in this carefully prepared volume that the field of infant management is by no means filled by the numerous books which are in print on the subject. He has many details on methods of feeding and preparing food, on dressing very young children, which show not a little observation and thought, and which we do not remember seeing in other authors. In his advice concerning the ailments of infancy he endeavors to be comprehensive in their classification and clear in diagnosis; but we should not advise a prudent mother to follow her own conclusions even with such a guide in a case where the disease is evidently severe or complicated. The majority of childhood sicknesses are not of a grave character, and they may be managed by an intelligent parent, with the assistance of such a book as the above; and for them, therefore, it is very appropriate. As hygiene enters largely into Dr. Duncan's plans of treatment, he has, therefore, a good prestige for trustworthiness, besides his manifest knowledge of infant physiology and pathology.

A SELECTION OF SPIRITUAL SONGS for the Sunday-school. Selected and arranged by Rev. Charles S. Robinson, D.D. pp. 249. Flexible red cloth, 20 cts. Published by The Century Co., New York.

A neat little book, containing many of the best hymns in our language appropriate to the Sunday-school. Another form, containing the tunes, is offered at 40 cts.

PUBLICATIONS RECEIVED.

WESTERN HOME JOURNAL. Published at Columbus, O. Frank W. Gunsaulus and A. W. Lincoln, Editors. Price, \$1 per annum. A good beginning.

VICK'S ILLUSTRATED MONTHLY MAGAZINE. Published by James Vick, Rochester, N. Y. As fresh and neat as ever.

VICK'S FLORAL GUIDE, Autumn, 1881. Published by James Vick, Rochester, N. Y.

THE CHURCH AND TEMPERANCE: A Paper. By Hon. William E. Dodge.

MISS SLIMMENS' WINDOW, No. 2. By the author of "A Bad Boy's Diary." Price, 10 cts.—THE DIARY OF A MINISTER'S WIFE. By Almeda M. Brown, No. 4. Price, 10 cts.—SISTER DORA: A Biography. By Margaret Lonsdale. Price, 10 cts.—THE TALE OF SIN. By Mrs. Henry Wood, author of "East Lynne," etc. Price, 10 cts.—THE FATAL LILIES. By the author of "A Gilded Sin." Price, 10 cts.—COW-WEBS AND CABLES. By Hesba Stretton, author of "In Prison and Out," etc. Price, 10 cts.—EAST LYNNE; or, The Earl's Daughter. By Mrs. Henry Wood, author of "A Life's Secret," etc. Price, 10 cts.—THE BLACK SPECK: A Temperance Tale. By F. W. Robinson, author of "No Man's Friend," etc. Price, 10 cts.—BOBBOWED PLUMES. By Mrs. Jennie S. Alcott, author of "Conan Sidney," etc. Price, 10 cts.—THE SORROW OF A SECRET, and LADY CARMICHAEL'S WILL. By Mary Cecil Hay, author of "Missing," etc. Price, 10 cts.—A STRANGE DREAM. By Rhoda Broughton, author of "Cometh up as a Flower," etc. Price, 10 cts.—A GILDED SIN. By the author of "Dora Thorne," etc. Complete, paper. Price, 10 cts.—THE RUGG DOCUMENTS. By Clara Augusta. Complete, paper. Price, 10 cts.—MISSING. By Mary Cecil Hay, author of "A Shadow on the Threshold," etc. Price, 10 cts.—NINETY-NINE CHOICE READINGS AND RECITATIONS, No. 2. Compiled by J. S. Ogilvie. Price, 10 cts.—A ROGUE'S LIFE FROM HIS BIRTH TO HIS MARRIAGE. By Wilkie Collins. Price, 10 cts.

The foregoing are from the press of J. S. Ogilvie & Co., New York, and form parts of their "People's Library."

THE October Number begins Vol. VI. of THE HOMILETIC MONTHLY (I. K. Funk & Co., New York, publishers)—the word "Preacher" hereafter to be omitted from the name. The contents are of more than usual interest. The series of lectures by Dr. Joseph Parker in reply to Colonel Ingersoll is continued. The publishers offered to publish Ingersoll's lecture by the side of Parker's reply, but Ingersoll refused permission. We have also, in the Sermonic department, "Gilded Sin," by Howard Crosby, D.D., LL.D.; "The Lamb of God," by John Hall, D.D.; "The Popular Estimate of Sin," a revival sermon, by Charles S. Robinson, D.D.; "The Sin of Esau," by D. C. W. Bridgeman, D.D.; "Man's Wrath Overruled for God's Glory," by I. H. Cuthbert, D.D.; and a "Children's Service," by Rev. W. F. Crafts. Among the miscellaneous papers is one by Dr. Robert Young on the distinction between "Sheol, Hades; Gehenna,

Tartarus." Professor E. P. Thwing gives an interesting account of the "Children's Service" in England, just now awakening so much interest.

WOMAN AT WORK, a literary monthly published at Louisville, Ky., has features which should commend it to the public. Prominent among them is the endeavor to inculcate principles of domestic and social usefulness. Woman as a home-maker is set forth with earnestness. In the September edition "No Sects in Heaven" is published, with the name Lizzie Doten appended. We had supposed that Mrs. Cleveland was the author of this well-known expression of liberal theology.

THE AMERICAN JUVENILE SFEAKER AND SONGSTER. — For day-schools, public schools, church exhibitions, socials, and parlor entertainments. By C. A. Fyke. Price 40 cents.

A variety of engaging music, songs, and recitations; many of them quite new, and well adapted to meet the constant popular demand for such things. Published by F. W. Helmick, Cincinnati, O.

THE PHRENOLOGICAL INSTITUTE is at this time in session, with a large attendance of students. Its aim is to prepare men and women for lecturing on Phrenology and physiology, and for practicing in mental science as a profession. One-half of our students, however, attend as a means of general culture, and to fit them the better to perform the duties of their vocations, whatever they 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 a systemic knowledge of 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 the one great feature in all worldly affairs, he who understands him best will best fulfill his duty.

Any person who would like to receive special information in regard to the course of study followed in the Institute, may write for a circular to the American Institute of Phrenology, New York.

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[WHOLE No. 517.]



JOSIAH GILBERT HOLLAND,

THE LATE POPULAR AUTHOR.

ANOTHER of our authors, those whom we have grown to regard distinctively American, has passed from us. The editor of *Scribner's*, now the *Century Magazine*, from its beginning, he had added much to a reputation and popularity already acquired, being found in questions having a right and a wrong

side, most always on the right; and his advice, which was kindly accorded to any who asked it, being always practical and generally appropriate to the case. His intellectual organism fitted him for close, specific observation. The lower part of his forehead was prominent and squarely cut, evincing precision, method, and directness. It was well filled out in the median region from the nose to the hair, indicating memory of facts, power of analysis, and delicate discrimination. His Language being large, joined to such qualities, rendered him able in description, especially in that department which relates to character. He could enter into the intricate workings of human nature, especially on its sympathetic side, his own temperament being delicately impressible, and his intuitions alert. His social nature was very influential, giving him a high appreciation of the helpfulness of friends and of family ties, of the true enjoyment found in social intercourse, and also of the duties belonging to citizenship. Hence he easily won friends and kept them. The head rose highly in the crown, impressing his character with qualities of firmness, self-reliance, and independence, and rendering him clear and emphatic in the expression of views, yet by no means careless of incurring the displeasure of others or losing in their esteem. There was, in fact, so much of delicacy and refinement in his mental composition that he was acutely sensitive to censure and reflection. His imagination was active, but held in good subjection to his practical judgment; it was employed with a purpose, and not permitted to soar as a balloon.

In his organization, as a whole, there was much of the historical and descriptive; something of the teacher, something of the metaphysician, a good deal of the moralist and critic. He was capable of writing for practical, common-sense people, in such a manner as to interest them and at the same time to inculcate leanings and likings for the higher, purer, and richer sentiments of the spiritual side of human nature.

He was born in Belchertown, Hampshire County, Mass., July 24, 1819. His father was a machinist and inventor, a man of singular simplicity and purity of character, whose virtues his son has celebrated in a poem entitled "Daniel Gray," published several years ago in the *Atlantic Monthly*. Owing to failure of health while fitting for college, he was obliged to relinquish an academic course; and when twenty-one years old he entered the office of Drs. Barrett and Thompson, of Northampton, as a student of medicine. He was graduated a doctor of medicine at the Berkshire Medical College in 1844, but after a three years' practice in Springfield, Dr. Holland gave up his profession and entered upon a more congenial line of life, literature, to which all his natural tastes led him. While preparing for this new field he became teacher in a private school in Richmond, Va., and while thus engaged, was chosen superintendent of the public schools in the city of Vicksburg, in Mississippi. This office he accepted, and satisfactorily discharged its duties for a year and a quarter, when events of a domestic nature called him back to Massachusetts. On his return to his Springfield home he was induced to accept a position, then vacant, in the office of the *Springfield Republican*. Here, associated with Mr. Samuel Bowles, he entered upon his first work as editor. The earlier years of this connection were years of severe labor, the two young men doing the entire editorial work of the establishment.

Two years after entering the office he became joint proprietor, and continued his interest in the business throughout the entire period which was occupied in raising the concern to its present magnitude and prosperity. In 1866 Dr. Holland withdrew from the management, and subsequently visited Europe.

In 1870 he became editor of *Scribner's Monthly*, a magazine in the establishment of which he took a leading part. It is unnecessary to dwell upon the great popularity of this periodical, which from the

start has been well printed, well edited, and admirably illustrated. Dr. Holland's own editorial contributions were principally comments upon literary, political, and social topics, and usually marked by much independence of opinion and plainness of speech.

Besides his editorial writings and occasional contributions to prominent magazines and other periodicals, he has given to the world several volumes of superior merit. His first book was "The History of Western Massachusetts," written for his Springfield paper, and subsequently published in two volumes. This work has much local value, and involved an incredible amount of drudgery. Then followed a novel, also written for the paper, and afterward published by Putnam, entitled "The Bay Path." Subsequently he produced "Bitter Sweet," a poem which has been generally admired; "The Titcomb Letters," an exceedingly pleasant volume; "Gold Foil," a series of essays: "Miss Gilbert's Career," a novel; "Lessons in Life"; "Letters to the Joneses"; "Plain Talks on Familiar Subjects"; "Kathrina," a poem of unusual sweetness. Among his later volumes "Arthur Bonnicastle," "Seven-oaks," and "Nicholas Minturn" are noteworthy.

The popularity of Dr. Holland's books is attested by their publisher's figures. Of the "Titcomb Letters," 61,000 copies have been sold; of "Bitter Sweet," 90,000; of "Kathrina," 100,000; while the circulation of the magazine has always been very large. His books have given pleasure and profit to a generation of readers, and in so large a list it is a great deal to say, as it would be of any author, that there is nothing in them offensive or unclean.

Dr. Holland married, at twenty-six, Elizabeth L. Chapin, of Springfield—the Elizabeth to whom he dedicates "Kathrina." He leaves three children, two daughters and a son, all grown up, and, we believe, unmarried.

His death occurred suddenly, on the morning of October 12th, before he had

risen, and was caused by a disease of the heart, with which he had been troubled for several years.

We have said that Dr. Holland took practical, common-sense views of life, and made his writings the interpreters of practical life, with such a blending of moral philosophy as served to impress his reader with elevated and purified ideas of the motives and purposes that should govern human action. An article written several years ago has been preserved among our selections, and may, we think, be fitly placed here as an example of his way of giving advice, while it intimates something of his own personal habits:

"MOTHS IN THE CANDLE.

"Every moth learns for itself that the candle burns. Every night while the candle lasts, the slaughter goes on, and leaves its wingless and dead around it. The light is beautiful and warm, and attractive; and, unscared by the dead, the foolish creatures rush into the flames, and drop, hopelessly singed, their little lives despoiled. It has been supposed that men have reason and a moral sense. It has been supposed that they observe, draw conclusions, and learn by experience. Yet there is a large class of men, reproduced by every passing generation, that do exactly what the moths do, and die exactly as the moths die. They learn nothing by observation or experience. Around a certain class of brilliant temptations they gather night after night, and with singed wings and lifeless bodies, they strew the ground around them. No instructions, no expostulations, no observations of ruin, no sense of duty, no remonstrance of conscience, have any effect upon them. If they were moths in fact they could not be sillier or more obtuse.

"A single passion, which need not be named,—further than to say that, when hallowed by love and a legitimate gift of life to life, it is as pure as any passion of the soul—is one of the candles around which the human moths lie in myriads of disgusting deaths. If anything has been proved by the observation and experience

of the world it is that licentiousness, and all illicit gratification of the passion involved in it, are killing sins against a man's own nature—that by it the wings are singed not only, but body and soul are degraded and spoiled. Out of all illicit indulgence come weakness, a perverted moral nature, degradation of character, gross beastliness, benumbed sensibilities, a disgusting life, and a disgraceful death. Before its baleful fire the sanctity of womanhood fades away, the romance of life dies, and the beautiful world loses all its charm. The lives wrecked upon the rock of sensuality are strewn in every direction. Again and again with endless repetition, young men yield to the song of the siren that beguiles them to their death. They learn nothing, they see nothing, they know nothing but their wild desire, and on they go to destruction and the devil.

“Every young man who reads this article has two lives before him. He may choose either. He may throw himself away on a few illegitimate delights which cover his brow with shame in the presence of his mother, and become an old man before his time with all the wine drained out of his life; or he may grow up into a pure, strong manhood, held in healthy relation to all the joys that pertain to that high estate. He may be a beast in his heart, or he may have a wife whom he worships, children whom he delights in, a self-respect which enables him to meet unabashed the noblest woman, and an undisputed place in good society. He may have a dirty imagination, or one that hates and spurns all impurity as both disgusting and poisonous. In brief, he may be a man, with a man's powers and immunities, or a sham of a man—a whited sepulcher—conscious that he carries with him his own dead bones and all uncleanness. It is a matter entirely of choice. He knows what one life is, and where it ends. He knows the essential quality and certain destiny of the other. The man who says he can not control himself not only lies, but places his Maker in blame. He can control himself, and if

he does not, he is both a fool and a beast. The sense of security and purity and self-respect that come of continence, entertained for a single day, is worth more than the illicit pleasures of a world for all time. The pure in heart see God in everything, and see him everywhere, and they are supremely blest.

“Wine and strong drink form another candle in which millions have singed themselves, and destroyed both body and soul. Here the signs of danger are more apparent than in the other form of sensuality, because there is less secrecy. The candle burns in open space, where all men can see it. Law sits behind and sanctions its burning. It pays a princely revenue to the Government. Women flaunt their gauzes in it. Clergymen sweep their robes through it. Respectability uses it to light its banquets. In many regions of this country it is a highly respectable candle. Yet, every year sixty thousand persons in this country die of intemperance; and when we think of the blasted lives that live in want and misery, of wives in despair, of loves bruised and blotted out, of children disgraced, of alms-houses filled, of crimes committed through its influence, of industry extinguished, and of disease engendered, and remember this has been going on for thousands of years, wherever wine has been known; what are we to think of the men who still press into the fire? Have they any more sense than the moths? It is almost enough to shake a man's faith in immortality to learn that he belongs to a race that manifests so little sense, and such hopeless recklessness.

“There is just one way of safety, and only one, and a young man who stands at the beginning of his career can choose whether he will walk in it, or in the way of danger. There is a notion abroad among men that wine is good—that when properly used it has help in it—that in a certain way it is food, or a help in the digestion of food. We believe that no greater or more fatal hallucination ever possessed the world, and that none so great ever possessed it for so long a time.

Wine is a medicine, and men would take no more of it than of any other medicine if it were not pleasant in its taste, and agreeable in its first effects. The men who drink it, drink it because they like it. The theories as to its healthfulness come afterward. The world cheats itself, and tries to cheat itself in this thing; and the priests who prate of 'using this world as not abusing it,' and the chemists who claim a sort of nutritious property in alcohol which never adds to tissue (!) and the men who make a jest of water-drinking, all know perfectly well that wine and strong drink always have done more harm than good in the world, and always will until that millennium comes, whose feet are constantly tripped from under it by the drunkards that lie prone in its path. The millennium with a grog-shop at every corner, is just as impossible as security with a burglar at every window, or in every room of the house. All men know that drink is a curse, yet young men sport around it as if there were something very desirable in it, and sport until they are hopelessly singed, and then join the great, sad army that, with undiminished numbers, presses on to its certain death.

"We do not like to become an exhorter in these columns, but, if it were necessary, we would plead with young men upon weary knees to touch not the accursed thing. Total abstinence, now and forever, is the only guaranty in existence against a drunkard's life and death, and there is no good that can possibly come to a man by drinking. Keep out of the candle. It will always singe your wings or destroy you."

A LEARNED MAN'S CREED.—The eminent French author and statesman, Guizot, thus declared his convictions with respect to an overruling Providence, and the necessity of religion to man, in his will, drawn in September, 1873:

"I have examined, I have doubted, I have believed that the human mind had power enough to solve the problems pre-

sented by man and by the universe, and that the human will had force enough to regulate human life according to the dictates of law and morality. After a long life spent in thought and action I became, and I am still, convinced that neither the universe is competent to regulate its own movements nor man to govern his own destiny by means only of the permanent laws by which they are ordered. It is my profound conviction that God, who created this universe and man, governs, preserves, and modifies them either by the action of general laws, which we call natural, or by special acts, which we call supernatural, and which, as well as the general laws, are the emanations of His free and perfect wisdom and His infinite power; we are permitted to discern them in their effects, and forbidden to understand them in their essence and design. I have therefore returned to the faith of my childhood. I am still firmly attached to the use of my reason and to the free will which are my gifts from God, and my birthright and my title of honor upon earth; yet I have learned to feel myself a child in the hands of God, and sincerely resigned to my large share of ignorance and weakness. I believe in God and worship Him without attempting to understand Him. I see His presence and His action not only in the unchangeable law of the universe and in the secret life of the soul, but in the history of human society; and especially in the Old and New Testaments—those records of revelation and of the divine action of the mediation and sacrifice of our Lord Jesus Christ for the salvation of the human race. I bow before the mysteries of the Bible and the gospel, and I refrain from the discussions and scientific solutions by means of which men have tried to explain them. I have a firm faith that God allows me to call myself a Christian; and I am convinced that when I shall, as will soon be my lot, enter into the full light of day, I shall see how purely human is the origin, and how vain are most of the discussions in this world concerning the things which are divine."

STUDIES IN COMPARATIVE PHRENOLOGY.

CHAPTER X.—(CONTINUED).

STRUCTURE OF LOW HUMAN ORGANISMS.

IN a work published recently by Prof. Bastian, of London, on the "Brain as an Organ of Mind," the author has com-

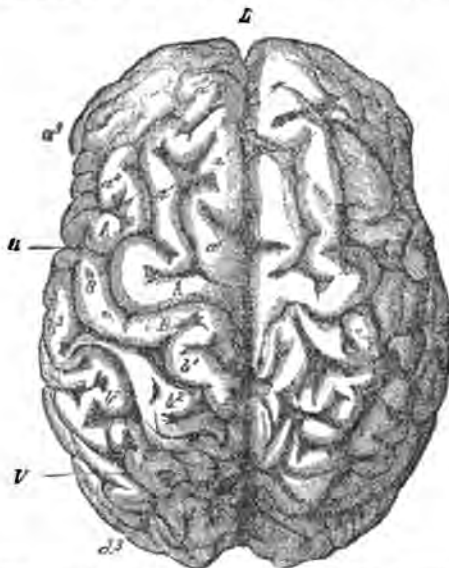


Fig. 242.—BRAIN OF HOTTENTOT VENUS, (GRATIOLET). UPPER SURFACE.

pared much valuable data with reference to the superiority of the civilized brain in extent and structure to the savage or uncivilized. The pertinence of these data to our present studies can not be overlooked, and must be appreciated by the reader who has followed closely the series of papers thus far presented.

In studying the external configuration of the human brain it is expedient, in the first place, to look at the characteristics of the organ as it exists in a low form as shown in some of the most uncivilized races of mankind. We may then advantageously compare one of these simple types with the more highly evolved forms of the same organ, such as are common among representatives of the higher civilized races. The brain of the so-called "Hottentot Venus" was carefully examined by Gratiolet. Though her intel-

ligence was not notably defective, the convolutions of her brain were relatively very little complicated. After commenting upon this fact, Gratiolet adds: "But what strikes one at once is the simplicity, the regular arrangement of the two convolutions which compose the superior angle of the frontal lobe. These folds, if those of the two hemispheres be compared, present, as we have already pointed out, an almost perfect symmetry, such as is never exhibited by a normal brain of the Caucasian race. . . . This regularity, this symmetry involuntarily recalls the symmetry and the regularity of the cerebral convolutions in the lower species of animals. There is, in this respect, between the brain of the white man and that of this Bosjesman woman, a difference such that it can not be mistaken, and if it be constant, as there is every reason to suppose it is, it constitutes one of the most interesting facts which have yet been noted."



Fig. 243.—BRAIN OF BUSHWOMAN, (MARSHALL). UPPER SURFACE.

Prof. Marshall, in his memoir of the brain of a Bushwoman, published in "Philosophical Transactions," 1864, furnishes a

very complete description of the brain of one of the lower races. The organ was decidedly small, as was the case of the Hottentot Venus. To quote from Prof. Marshall: "When viewed from above the Bushwoman's cerebrum, like her cranium, presents a long and narrow ovoid form; the line of greatest width corresponds with the parietal eminences, and it is placed rather far back, viz, at two-thirds of the total length of the cerebrum from its anterior border, so that one-third only is behind those eminences. From this prominent parietal region the cerebrum slopes or falls away in all directions very suddenly backward, and rather so forward as far as the entrance of the Sylvian fissure, where, like the fœtal brain, it appears remarkably constricted, and then widens again at the outer angles of the frontal region, which is, nevertheless, decidedly narrow. The left hemisphere, as seen from above, is two-thirds of an inch longer than the right, the increase being almost entirely behind. This relatively greater length of one hemisphere backward (usually the left, so far as I have observed) is very common in the European brain. Viewed laterally, the parietal region is salient; the vertex is low and flattened. Its highest point being placed far back, the frontal region is shallow. . . . The temporal lobe is narrow, the line from its point to the tip of the posterior lobe being very long; the curve formed by the under border of the cerebrum, above the cerebellum, is slighter, and its direction more oblique upward and backward than in the European brain, owing apparently to the want of downward development of the occipital region, which is very shallow. . . . The tops of the temporal lobe are pointed and much inclined toward the middle line. . . . The orbital surfaces are especially contracted, but have a square or human, and not a pointed or ape-like shape."

Taken as a whole, the brain of the Bushwoman, when compared with that of the European, was found to be specially

defective in depth and vertical height. Prof. Marshall says further: "The fissure of Sylvius in the Bushwoman's brain extended well backward, but inclined more upward than in the European brain (these are marks of low development; in brains of higher development the fissure is shorter as well as more nearly horizontal in direction), and its course is marked soon after its commencement by a peculiar horizontal step. . . . Its margins are not very closely adapted together, especially opposite or behind the hinder border of the frontal lobe, which is here very defective. The fissure, indeed, is so patent that without any separation of its margins a portion of the island of Reil, or central lobe, though small, is distinctly visible.



Fig. 244.—BRAIN OF BUSHWOMAN, (MARSHALL). SIDE VIEW.

This condition recalls to mind the fœtal state of the human cerebrum, but, so far as I am aware, is not present in any adult quadrumanus brain. The defect in the frontal lobe explains the remarkably constricted form of the Bushwoman's brain already mentioned as existing at that point, a form which we may assume is characteristic of the Bosjes brain, as it is equally present in the brain of the so-called Hottentot Venus, where it has also been noticed by Gratiolet as a fœtal character."

The fissure of Rolando (Fig. 244, d, d) commences about one and a quarter inches behind the tip of the frontal lobe. It terminates considerably beyond the middle of the long axis of the cerebrum, nearly as far back as the line of greatest

width of that organ; so that it passes proportionally further back than in the Hottentot Venus, or, indeed, than in the European.

"The external perpendicular fissures (Fig. 244, P) can be traced as easily as the Hottentot Venus (Fig. 242,v), but are soon interrupted by the external connecting convolution (a, B). Toward the sides these fissures are certainly more easily followed than in the European, a circumstance which imparts a lower character to this part of the Bosjes brain; at the same time they are far more interrupted

the outer surface of the temporal lobe is more tortuous on the left side in the Hottentot Venus, though less so than in ordinary European brains. . . . The *internal perpendicular fissure* is more vertical than in the European, but much less so than in the chimpanzee—the angle formed by this fissure and the base line drawn through the corpus callosum being in the European 123° ; in the Bushwoman, 115° ; and in the chimpanzee, 93° . As in the European, this fissure joins the hippocampi below, while in the quadrumana it usually stops short at that fissure."

Without pursuing further our quotations from Prof. Marshall's detail of the various convolutions of the Bushwoman's brain, we will reproduce some of his more interesting general conclusions, as follows: That all of the primary convolutions which should exist in the human cerebrum "are present in the Bushwoman's; but, as compared with the ordinary European brain, they are smaller and in all cases so much less complicated as to be far more easily recognized and distinguished among each other. This comparative simplicity of the Bushwoman's brain is of course an indication of structural inferiority, and, indeed, renders it a useful aid in the study of the more complex European form. On contrasting the several regions of the cerebrum, the primary convolutions of the upper frontal and outer parietal regions are, on the whole, the best developed; those of the middle and

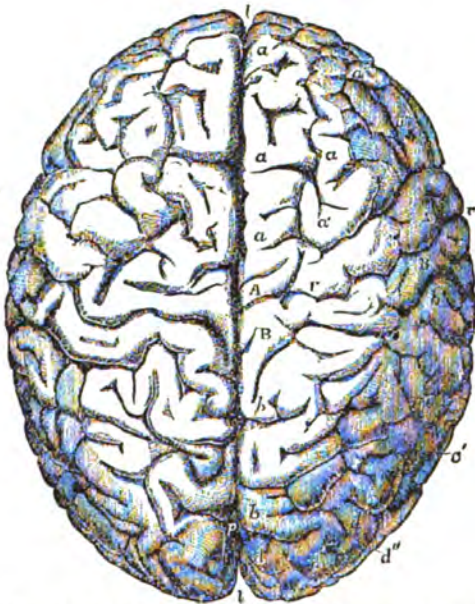


Fig. 245.—BRAIN OF GAUSS, EMINENT MATHEMATICIAN, (R. WAGNER). UPPER SURFACE.

than in the chimpanzee or orang-outang. These short external perpendicular fissures join as usual the summits of the internal perpendicular fissures, and, together with the fissures of Rolando, divide the upper surface of the cerebrum into three regions. Of these three regions, when measured longitudinally from the vertex, the parietal is found to be specially defective in the Bushwoman's brain; since, instead of being equal to, or rather longer than, the occipital, as is commonly the case in European brains, it is very distinctly shorter in this latter region.

"The parallel fissure (Fig. 244, f, f) on

lower frontal regions of the temporal region, the central lobes and the inner surface the next; while those of the orbital surface and occipital lobe are the least developed."

"Of the connecting convolutions, those highly important and significant folds, the external connecting convolutions, are in comparison with those of the European brain, still more remarkably defective than in the primary convolutions. All four of these convolutions are present; but all are characteristically short, narrow, and simple, instead of being complex and occupying a large space; hence,

though the external perpendicular fissure is soon filled up, the parietal and occipital lobes are more easily distinguishable from one another than in the European brain. . . . The numerous sulci and convolutions which so complicate the longer ones in the European brain, are everywhere decidedly less developed in the Bushwoman—but especially so in the occipital and orbital regions on the bent convolution, and on the external connecting convolutions. This is a further sign of structural inferiority."

As compared with the brain of the

Hottentot Venus that of the Bushwoman is "in nearly all cases, where comparison is possible, a little, or very little more advanced and complex in its convolutional development, the one exception being in regard to the size of the occipital and external connecting convolutions, which are smaller in the Bushwoman." The resemblance between the convolutions of the two brains is, however, very close, while the simplicity of their arrangement is not to be paralleled, or even approached in the normal European brain.

PRESIDENT GARFIELD'S "MAXIMS" AND A LATE LETTER.

OUR friend, Dr. A. M. Ross, of Montreal, Canada, sends us a copy of "Maxims," which our late President presented to the Doctor's little son, Garibaldi, last year, and also a copy of a letter which, as the reader will see, was written but a few days before he was shot. The maxims are as follows:

"I feel a more profound reverence for a boy than for a man. I never meet a ragged boy in the street without feeling that I may owe him a salute, for I know not what possibilities may be buttoned up under his coat."

"LUCK is an *ignis fatuus*: you may follow it to RUIN, but never to SUCCESS. A pound of PLUCK is worth a ton of LUCK."

"Poverty is uncomfortable, as I can testify; but nine times out of ten, the best thing that can happen to a young man is to be tossed overboard and compelled to sink or swim for himself."

"For the noblest man that lives, there still remains a conflict."

"The privilege of being a young man is a great privilege, and the privilege of growing up to be an independent man in middle life is a greater."

"It is no honor or profit to appear in the arena. The WREATH is for those who contend."

"Things don't turn up in this world until some one turns them up."

"If there is one thing on this earth that mankind love and admire better

than another, it is a brave man—it is a man who dares to look the devil in the face, and tell him he is a devil."

"Every character is the joint product of nature and nurture."

"Be fit for more than the THING you are now doing. If you are not too large for the place, you are too small for it."

"In order to have any success in life, or any worthy success, you must resolve to carry into your work a fullness of knowledge, not merely a sufficiency, but more than a sufficiency."

"To a young man who has in himself the magnificent possibilities of life, it is not fitting he should be permanently commanded; he should be a commander. Do not, I beseech you, be content to enter upon any business which does not require and compel constant intellectual growth."

"Young men talk of trusting to the spur of the occasion; that trust is vain; occasion can not make spurs. If you expect to wear spurs you must win them."

The letter is couched in these terms:

EXECUTIVE MANSION, WASHINGTON, D. C.
June 26th, 1881.

DR. A. M. ROSS—*My Dear Friend*: I received your letter and the book which accompanied it. Thanks for both, but especially for the kind words in your letter. Rest assured I shall do my utmost to make this Government "a terror to evil-doers." . . .

Sincerely yours,

J. A. GARFIELD.

HOW SECRETIVENESS, ACQUISITIVENESS, SELF-ESTEEM, AND OTHER ORGANS WERE DISCOVERED.

DR. GALL, when making his investigations into the phenomena of mind, was accustomed to collect at his house individuals of the lower classes of society, that he might study their mental characteristics, which he supposed would be manifested with greater simplicity among them than among people of cultivation and refinement. He gained the confidence of these persons by giving them wine and money, and got them to discourse about one another's peculiarities. On many occasions the persons so assembled accused each other of petit larcenies, or what they termed *chipeuries*, and the *chipeurs* themselves stood forth unabashed, and apparently proud of their superior skill. Gall's attention was particularly attracted by the fact that while some of the men possessed a decided aversion to thieving, and would not on any account receive any part of what had been stolen, the *chipeurs* ridiculed such conduct, and thought it silly. Dr. Gall divided the company into three classes for the purpose of discovering whether a tendency to steal was connected with any part of the brain. One class included the *chipeurs*; another, those who regarded stealing with indifference; and the third, those who abhorred the very idea of theft. On comparing the heads of these three classes, he found in the heads of the most incorrigible thieves a long prominence directly in front of the organ of Secretiveness. In the heads of those who manifested indifference to theft, this region was less developed; while in those who abhorred the very idea of stealing, it was flat. He repeated these experiments with different assemblies, and invariably found the same results attending his experiments. Gall was at this time, physician to a deaf and dumb institution where pupils were received from six to fourteen years of age without any previous education. Some of these showed a decided proclivity to theft, while others did not

manifest any tendency in that direction. Some of these boys were easily reformed, while others were altogether incorrigible. On examining the heads of all these boys, the same region was found uniformly developed in proportion to the strength of the tendency to steal. Gall made casts of the heads of the confirmed thieves, that he might have them for comparison with those of any thieves or robbers which might afterward fall in his way. About this time, also, he met with a boy of fifteen in a house of correction whose head presented the same fullness in the temporal region, and who had been an inveterate thief from infancy. Punishment was powerless to reform him, and he was at last condemned to imprisonment for life, as altogether irreclaimable. From the uniformity in the results of these observations, Gall felt himself warranted in believing that the propensity to appropriate is innate in the human mind, and that it is connected with a cerebral organ. In accordance with the predominant disposition with which he found it connected, Gall named it the organ of theft—a most unhappy name, since it is incredible that the Creator should have implanted in the human mind a natural disposition to steal, and then should have issued the command: "Thou shalt not steal." Acquisitiveness, or the desire to accumulate, is the corrected name by which this faculty is now designated, and all will agree that it has a legitimate sphere of activity in a world where it is necessary to store up in the fruitful harvest to maintain ourselves during the barren winter, and when sickness, old age, and a thousand exigencies of life make it necessary that we have a surplus laid by to meet the essential wants of nature. It is only when excessively developed, and unrestrained by the higher sentiment of justice, that it leads the individual to appropriate to himself the property of another.

Dr. Gall gives the following account of the discovery of the organ of Self-esteem. A beggar attracted his attention by his extraordinary manners. Reflecting on the causes which could reduce a man to mendicity, he believed he had found the chief of them in levity and the want of foresight. He was confirmed in this opinion by the form of this individual's head, since he found the organ of Cautiousness little developed. He moulded the beggar's head, and upon examining it with attention, he found in the upper and back part of the middle line a prominence from above downward, and which could arise only from the development of the brain there situated. A prominence in this portion of the head had not previously attracted Gall's attention, and he studied over the matter with a great deal of interest. After many questions addressed to the beggar with a view to discovering his predominant traits of character, Dr. Gall requested him to relate his experience. In reply, the beggar said that he was the son of a rich merchant, and that he had always been too proud to apply himself to business, either to retain his fortune or to acquire a new one, and that this unhappy pride was the only cause of his misery. Dr. Gall made several remarks to the beggar to show that he doubted his veracity, but the man reiterated his former statement, and declared that even now he could not condescend to follow any kind of employment. It was difficult to conceive how pride could induce any one to prefer begging to engaging in any occupation, but the reiterated statement of this beggar led Gall to reflect upon the sentiment, and to observe the organs, and he found incontrovertible proofs of their connection. Dr. Gall mentions a variety of cases which confirmed his observations on this faculty. A young man well endowed mentally had manifested insupportable pride from infancy. He constantly declared that he was of too good a family to engage in any occupation, and he was actually confined in a house of correction for eighteen months to free

him from this absurdity, but without avail. A physician of Vienna carried this feeling to such a height that, when called to a consultation with other physicians, even though they were older, and occupied higher positions than himself, made it a point to take the precedence, both in entering and in retiring from the apartment. He invariably insisted on affixing his signature first to any document which was to be signed. At Heidelberg a girl of eighteen came under Gall's notice who revolted at any word or gesture in the least familiar, and who called on God on every occasion, as if He took a special interest in her affairs. When she spoke, assurance and presumption were marked in every feature. Her head was carried high, and a little backward, and pride was expressed in every movement. She was incapable of submission, and when in a passion, she was violent and disposed to proceed to all lengths. She spoke her native language with extraordinary purity, and had no communication with any but those of her own rank. The portion of head previously referred to was in all these individuals very largely developed.

When Dr. Gall was engaged in making observations on the organ of Self-esteem, he met with a woman in a lunatic asylum who believed herself the Queen of France. He expected to find the organ of Self-esteem well developed, but instead, found a distinct hollow at the location of this organ, but a decided prominence on each side of it. At first he was considerably embarrassed by this circumstance; but, upon observing the subject attentively, he noticed that her insanity differed materially from that of men whose insanity took the form of pride. The latter affected a masculine majesty, and were grave, calm, imperious, and arrogant. In patients insane through vanity, on the contrary, there was restless frivolity, great talkativeness, the most affected forwardness, and eagerness to announce high birth, boundless riches, and promises of favor and honor. This case furnished Gall with a correct idea of the

difference between the sentiment of self-esteem and that of love of approbation. Pride is an abuse of self-esteem, and vanity is an abuse of love of approbation, and between these two feelings Dr. Gall draws the distinction with great accuracy. "The proud man," says he, "is imbued with the sentiment of his own superior merit, and from the summit of his grandeur treats with contempt or indifference all other mortals. The vain man attaches the utmost importance to the opinions entertained of him by others, and seeks with eagerness to gain their approbation. The proud man expects that mankind will come to him, and acknowledge his merit; the vain man knocks at every door to draw attention toward himself, and supplicates for the smallest portion of honor. The proud man despises those marks of distinction which on the vain confer the most perfect delight. The proud man is disgusted with indiscreet eulogiums; the vain man inhales with ecstasy the incense of flattery, though profusely offered, and with no very skillful hand."

Dr. Gall knew a prelate in Vienna, a man of considerable intellectual ability. Some persons had an aversion to him because, through fear of compromising himself, he introduced into his discourses interminable reflections, and delivered them with insupportable slowness. It was with difficulty that any conversation with him could be brought to a conclusion. He would stop in the middle of a sentence, and begin it again two or three times before completing it. A thousand times he severely tried the patience of Dr. Gall. He never happened by any accident to give way to the natural flow of his ideas, but recurred continually to what he had said, and consulted with himself if it could not be amended. His manner of acting was in strict conformity with his manner of speaking. He made the most careful preparation for the most insignificant undertaking; every connection being subjected to the most rigorous examination and calculation before it was formed. This prelate was connected

in public affairs with a counselor of the regency, whose eternal irresolution had procured for him the nickname of Cacadubio. These two persons were seated side by side at the examination of the public schools, and Dr. Gall occupied a seat directly behind them. This position gave him an excellent opportunity to observe their heads. In doing so his attention was forcibly arrested by the great breadth which each of them presented in the upper, lateral, and hind parts. With the exception of the characteristic above mentioned, these men were very different in disposition and intellectual qualities, and the fact that they resembled each other in this disposition and in this peculiar form of head, suggested to Dr. Gall the idea that irresolution, indecision, and circumspection might have a special organ in the brain. This conjecture was confirmed by many subsequent observations.

A friend of Dr. Gall's frequently remarked to him that as he was seeking for the external signs of character he should examine the head of his servant, Joseph; "For," said he, "it is impossible to find a greater degree of goodness than that young man possesses. For more than ten years, during which he has been in my service, I have seen him manifest on all occasions only benevolence and sweetness of disposition; this is the more surprising as he does not possess the advantages of education, and has grown up to manhood among servants of very inferior habits." Previous to that time, Dr. Gall says, he had been far from supposing that what is called goodness of heart could have any organ in the brain, and consequently he never looked for any indication of it in the head. His curiosity, however, was at last awakened by the repeated solicitations of his friend. He recalled to mind a young man whom he had known from infancy, and who was distinguished from his brothers and sisters for his goodness of heart. Although passionately fond of the games of youth, he relinquished these entirely when any of his brothers or sisters fell sick, and an

inclination still more powerful kept him at home, and caused him to give to the sufferer his most assiduous attention. When fruit was distributed among the children, his share was always the least, and he rejoiced to see the others partake more largely than himself; and he often shed tears of joy when any good fortune happened to those whom he loved. He was fond of taking charge of sheep, dogs, rabbits, pigeons, and birds, and when any of them died, he wept bitterly; which conduct never failed to draw upon him the ridicule of his companions. "Up to the present time," says Dr. Gall, "benevolence and goodness are the distinguishing characteristics of this individual. These dispositions certainly did not arise from education; on the contrary, he had been all along surrounded by those whose conduct was calculated to produce the very opposite results. It then occurred to Dr. Gall that what is called goodness of heart is not an acquired but an innate quality of the mind. On another occasion, in a very large family, he spoke of the boasted goodness of heart of the servant Joseph. "Ah," said the eldest daughter, "our brother Charles is exactly like him; you must positively examine his head. I can not tell you how good a child he is." "I had thus in my eye," says Dr. Gall, "three cases in which goodness of disposition was strongly marked. I took casts of the heads, placed them beside each other, and continued to examine them until I should discover a development common to the three. This I at last found, though the heads were in other respects very differently formed. In the meantime I tried to find similar cases in families, schools, etc., that I might be in a condition to multiply and correct my observations. I extended my observations to animals also, and in a short time collected so great a number of facts that there is no fundamental quality or faculty whose existence and organ are better established than those of benevolence."

Dr. Gall gives the following account of the discovery of the organ of Venera-

tion. His father's family consisted of ten children, who, though receiving the same education, manifested very dissimilar talents and dispositions. One of his brothers showed a strong tendency toward religion from infancy; he was constantly engaged in prayer and saying mass, and spent his time, when obliged to be absent from church, in ornamenting and gilding a crucifix of wood. He disliked the occupation of a merchant, for which his father had intended him, because, he said, it would subject him to the necessity of lying. He abandoned merchandise at the age of twenty-three, and having lost all hope of pursuing the studies necessary for the Church, he fled from his father's house and became a hermit. His father at length allowed him to study, and, in due time, he took orders, and continued till his death to live in the exercises of devotion and the practice of penance. Dr. Gall further observed that some of the children in the schools took no interest in religious instruction, while others received it with eagerness. And that those who voluntarily devoted themselves to the Church were either studious, pious, virtuous, and honorable, young men, or idlers of the worst description, indolent, and totally destitute of talent. The latter, he says, obviously had no other aim than that of living at the expense of their fellow-citizens; while the former felt a lively interest in their chosen avocation. "This commendable feeling sprang up in them," says he, "nobody knew how; and it certainly was not attributable to example or education, nor to the circumstances in which they had been placed, for many of them embraced the clerical profession, even contrary to the intentions of their parents and guardians." He was convinced by these facts that there is an innate tendency in the human mind toward religion. These observations, made in his youth, were recalled later in life, when he was investigating the primitive faculties of mind, and led him to examine the heads of persons eminent for devotion. He visited the churches of every sect, and

carefully observed the heads of the individuals who were the most completely absorbed in their devotions. The result

was the discovery that the sentiment of reverence or veneration is connected with a particular cerebral organ.

JAMES MCNEIL.

ALMA TADEMA, A.R.A.,

THE CLASSICAL ARTIST.

THERE are evidences of vital stamina and mental force in the portrait of this painter of ancient life in Egypt, Greece, and Rome. The features show the emphatic contours of his Teutonic ancestry, which are, however, rounded and softened by that esthetic quality which he has also inherited and cultivated. He is a man of very positive impressions and convictions. Firmness rises conspicuously in his head, dominating over the neighboring organs of the crown. He believes most strongly in himself, and is not afraid to put his beliefs to the test. His executive faculties are marked, giving him the disposition to work out his ideas and plans, to try their effects practically. He has a well-developed intellect, the perceptive faculties of the student who would see and know for himself what he deems desirable for his own use. The organs of Ideality and Constructiveness are well indicated in the forward and upper part of the side-head, their contour being particularly distinct on the right side of the head in the engraving. Mr. Tadema is not a man of faith, no believer in luck, but in the logic of effort. The religious organs do not appear to be specially influential, although Veneration may be fairly developed. He appreciates the utilities; with him the merely sentimental is barren; emotion without practical action absurd. He believes in taking men at their true standard, rating them

for what they are worth to the world as agents of its work. Although an artist, he values the useful more than the merely ornamental, and would strive to make his canvases teach some useful lessons not only in the manner of their detail or finish, but in the subject and its rendering.

LAURENS ALMA TADEMA is a Hollander by birth and education, having been born at Droup, in West Friesland, Holland, January 8, 1836. He was educated at the Gymnasium of Leenwarden, where he devoted himself especially to the study of Roman and Egyptian antiquities. When about sixteen years of age he entered the Academy of Fine-Arts in Antwerp, and studied painting, subsequently continuing this his chosen profession under the eminent master, the Baron Leys. His pictures obtained notice rather early and found places in the exhibitions at Paris and Berlin, winning gold medals for superior excellence. Of these works the "Ancient Egyptian Festival," produced in 1862; "Entrance to a Roman Theatre," 1866; "Ancient Roman Siesta," 1868; and "Claudius Imperator," 1870, are worthy of special mention.

In 1870 Tadema removed to England, having found among Englishmen that appreciation of his merit which is dear to every artist, and he is now a naturalized subject of Great Britain. London is his residence, and such has been the pecuniary rewards of his industrious plying of the brush that he has been enabled to make his home a place of great beauty and attractiveness to cultivated tastes. A correspondent of the *New York Times*

describes the house and its appointments as follows :

"The house stands somewhat back from the street, with a strip of grass on either side the paved walk, and beds of bright-hued crocuses. The house door attracts your attention at once; it is made of one entire slab, or panel, of light

la; low chairs and small settles, a table with a few old bronzes, and a rug of harmonious but dull coloring complete the room. From this apartment opens a large alcove-room, in pale olive and white, which leads to the stairway and hall; the dado of the two latter is of a dark Eastern fabric, while the entire wall



[Engraved from a photograph by the London Photograph Co.]

wood, beautifully veined and highly polished. In the center yawns an open-mouthed brass knocker. Above, in the glass light, written in letters of brass, is the word 'Salve.' On your left, as you enter, is a small morning-room finished in neutral tints. The lower panes of the window have two heads in outline stained glass; a tall book-case fills one of the side walls, upon the end of which rests a terra-cotta bust of Tadema, by Amendo-

is covered with photographs and engravings of Tadema's works. On the right, as you reach the landing, is a small ante-chamber, the west end of which is one large window; the square, low chairs and couches are in light colors, with cushioned seats of brocade or satin; an arched doorway, hung with a portière—blue on the one side, white, covered with Japanese embroidery, on the other—connects this little nest with the gold drawing-room.

The entire eastern front of this apartment is made into a window composed of stained glass shaded by hangings of creamy gray damask, with a loose band of gold embroidery and a lambrequin of cloth of gold heavily embroidered. The floor is of small wooden tiles, light oak and ebony, highly polished; the ceiling and walls of dead, beaten gold, while about four feet from the floor, forming a dado, runs a band, some five inches deep, of carved ivory figures, set in narrow ebony mouldings. Not a painting or a plaque disfigures the sheen of this gold-lined room. Across the window stands a grand piano. It is made of the finest light oak, most exquisitely finished; on the curved side are three medallions, with a bar of music engraved upon each; the first is the note of the lark, the second that of the owl, the third that of the cuckoo, and mounting guard on either side, on their individual notes, rests the little birds in gold intaglios; the brass side-rests for the candles form the name Alma Tadema. You lift the lid; the inside is lined with the whitest parchment, and on this is to be inscribed the autograph of each distinguished artist who plays thereon. Among others I noticed those of Herr Henschel and Anna Mehlig. The piano seat is of the same light oak, low and square in form, with dark blue embroidered satin cushions. A sofa in some invisible color, covered with more embroideries, and an old carved chair complete the furniture.

"The arched door-way is divided into three spaces, the two side ones fitted at the top with shelves containing curios from other lands; the mantel drapery is of finest India cashmere, and a tiger-skin lies before the fire-place. A portière of dark blue satin, sprigged with fine flower and bird embroideries, separates this gold room from the drawing-room proper. The floor here is laid in ebonized wood separated by gilt bands running lengthwise; the dado, which rises some five or six feet from the floor, is of crimson velvet panels embroidered in silks, the deep frieze of bronze brown leaving but little

wall visible. Four columns of polished Sienna marble make a division on one end of the room; opposite to them is the marble mantel-shelf, the fire-place hidden by mantel portières of white brocaded silk drawn on gilt rods. A folding screen at one side protects one from draughts; a large, carved table in black oak placed against the window, and holding some old faience; a lounge luxuriously cushioned, a low, carved tea-table, and some quaint, square-backed chairs are a few of the accessories of this picturesque apartment. From a small door, concealed by the folding screen, you enter a narrow passage, softly carpeted, subtly colored; at one end a low seat looks most inviting. It is from here Mr. Tadema gets the 'long views' of his work, for the other end of this passage opens upon the studio. This is not a large room; indeed, rather small in space, but as esthetic in its treatment as is the entire house. A window thrown out to the north makes a slight recess and gives the necessary light, while the side panels, being of mirrors, produce good reflections; the floor, like the others, is a hard-finished parquet; two sides of the room are shelvings reaching nearly to the ceiling where are kept all those wonderful and marvelous harmonies in brocades and satins that are reproduced in Mr. Tadema's pictures. Over the mantel hangs a golden drapery throwing out the bronze bust of Mrs. Tadema below; to the left another door-way opens on to the ante-chamber, hung with a semi-transparent shade of painted bamboo."

Mr. Tadema is an academician at Amsterdam, Munich, and Berlin, and an associate of the Royal Academy at London. His success as a painter is mainly due to his industry in a special department of art, while at the same time he possesses an original adaptation to his chosen calling. He was early impressed by the lack of intelligence in the treatment of classical subjects by modern artists, and so determined to study Greek and Roman life in ancient days and apply his acquirements to art.

His studies have evidently been faithful and exhaustive, and his diligence has been amply rewarded by the consideration given everywhere to his work. Aside from the accurate archæological knowledge shown in his paintings, there is usually a human or philosophical interest

by no means an insignificant element: This is seen in a marked degree in the "Silent Counsellor," the "Last Egyptian Plague," and other subjects. Several of his works are familiar to Americans, as they have been copied by engraving and lithograph, and found a good market in this country.

A MID-DAY BATTLE NOTE.

THE days are hot, and the nights are cold,
But the battle for life goes on.
We press to the front with scars untold
And the victory barely won.

We press to the front and hold our own
By effort and God's sweet grace,
While the sun and shadow have softly thrown
Age lines into beauty's place.

The poet may sing, the yeoman plow,
The philosopher rub his stone,
We are warm with sympathy, yet somehow
We must fight our battle alone.

For life is double within, without,
With scars and with blossoms fair,
And we are alone, though compassed about
With a wealth of love and care.

Each cry for strength and each prayer of thanks
Must peal from our inmost soul
If it reach the Lord of the serried ranks
As the tides of action roll.

There is no rest, and no grand discharge,
But we fall out one by one,
Receiving our pension, small or large,
According to service done.

MRS. S. L. OBERHOLTZER.

MEMORY AND FACULTY.

DOES the possession of a good memory afford any indication of the presence or absence of any other mental faculty?

Memory is a strange power of the mind. The feelings of wonder aroused in me by my first reflections on it, which were many years ago, I have never lost. I was impressed then with the conviction that *forgetting* was only a relative term for the greater or less power we have of recalling ideas, and that nothing ever really escaped the mind that it had once become conscious of. This was as far as I thought of going then. I do not know where I got the conviction (if conviction it can be called); but I know it was a point I used to dispute with my schoolmates, all of whom, with myself, of course, were utterly ignorant of metaphysics and would not have known the word from so much Choctaw, such philosophers we were. None of the rest thought as I did. They could not reconcile their positive

knowledge that they *did forget* with my statement that such a thing was impossible; nor was I able to do it for them. I obstinately retained my belief notwithstanding, and I retain it yet. I now know, too, there is a goodly company of whom I was then an unconscious follower and with whom I am now a fellow believer.

In order that a thing should be in our memory (to use the ordinary figure, since it is more convenient), it is not necessary that we should be able to recall it; nor, if we do recall it, that we should be able to understand it. The mere fact of memory does not necessarily indicate any operation of the understanding. These statements may seem to contradict the definition of memory, which "is the power to *review* in our minds the *ideas* which, after imprinting, have disappeared"; but I do not think they do; for the possession of a power does not always imply the liberty to use it, nor that it is always exercised.

If I have a sum of money, I have to the extent of that amount a *purchasing power* or command over commodities, but I may not be allowed to use it. Some extraneous circumstances may prevent me. Again, I may voluntarily abstain from using the money. But in either case the purchasing power remains the same, even though it be dormant. There can not be, it seems to me, any objection to the second part of my illustration; nor to the first, if it is reflected that money is a *power* with respect to commodities and not with respect to the circumstances that might affect the action of the individual. We know that beyond the ideas impressed upon us by frequent repetitions, the power of a voluntary recall of ideas rapidly diminishes until we reach the point of oblivion. There, so far as our wills are concerned, we must stop. But is that because we have no further power of memory, or because that faculty is hindered in its operation? The latter, I think, we shall see.

An old story is told by Coleridge, how well authenticated I know not, of a learned divine who had the habit of reading or repeating from his Hebrew Bible aloud. Through the open door of his library the words sometimes reached the ears of his cook, who knew not one syllable she heard, nor could she have repeated a single word of the Hebrew if her life had depended on it. Nevertheless some years after, when suffering from a fever, she was heard talking in a tongue none of her attendants understood. This proved to be Hebrew. She was quoting fluently from the Hebrew Bible as she had heard the worthy doctor read it. When she recovered she could not recall a syllable of it. At no time did she ever understand it, and there is no evidence that she ever knew what language it was written in.

If we take this story for true (and I know no reason why we should not), what does it teach us? The woman did not remember, in the current use of that term, for she could not be said to know the Hebrew. She could not by any pos-

sibility have recalled the words voluntarily, and yet they must have been in her memory. How else shall we explain the fact of her repeating them? The impressions made on her mind at the time of hearing them were necessarily very slight, too slight to allow any consciousness on her part of their existence a moment after they were made. The impressions were durable, however, and the power of recalling them was all the time among the possibilities, although in the ordinary course of things she would never have been able to exercise it. They lay beyond the bounds within which either the will or the power of association is operative. The repetition of the words could have been accompanied by no conscious action of the understanding. She recognized no idea (not even as much as we receive from mere abstract numbers) beyond an unusual and unintelligible sound. This she could review at will; but it is not connected at all with the strange repetitions she made. These required peculiar conditions for their accomplishment. The whole impression made on her was analogous to the indentations sometimes produced in our flesh during sleep, while our sensibility is dull, and which we only become conscious of by observing them when we are awake. So it does seem that we remember without knowing it, and that when the peculiar hindrances to our knowing it are removed we may yet have no other idea than the mere fact of the remembrance itself.

But is it not probable, since the intensity of the power to review ideas whether known or unknown, decreases to so low a point that it finally ceases altogether? Is there not a literal Lethe? I think not. It is quite as probable that the media of the manifestation of mind are too coarse to reveal all that we are, and that if these media were refined we should find ourselves almost infinitely rich in what we now think ourselves as infinitely poor. The diminishing of voluntary remembrance only shows that the hindrances to it predominate, not that it

ceases. If the mind be immortal it is probable, rather, that a power once acquired becomes a part of itself, and therefore likewise "puts on immortality."

But this far-reaching power of recalling ideas does not belong to the current "good memory." It comes wholly within the range of practical life, and consists "at its best estate" in quickness and retentiveness combined.

Is not all this a little irrelevant to the question we desire to answer? I hope not. I have premised the foregoing that we might see how "deep" the query is before I give the answer which seems to me to be conclusive. Memory is not a creative faculty, unless it be creation to build houses of the bricks and mortar that have been used at least once, perhaps many times. It only deals with second-hand *material*. It can never take the place of "contemplation" and present new ideas, without first losing its nature and office of reviving old ones. If, therefore, there were no ideas to disappear, memory could have nothing to do; and since, as far as we know, faculties only exist so far as they are active, in the case supposed, memory, having nothing to do, would no longer exist. The possession of a good memory or other memory does indicate, therefore, the presence, not the absence, of at least one other mental faculty.

But how does this accord with what I have already said, that memory might be active without necessarily indicating any operation of the understanding? Perfectly. To use a former illustration, in the case of the young woman certainly there was no degree of understanding in repeating the Hebrew words. She could not have remembered their meaning, for this she never knew. The whole process

was what we call mechanical. Unconsciously to herself a permanent impression of a certain combination of sounds had been made upon her. This, meaningless to her, she remembered, nothing more. (No doubt the whole occurrence was as strange to the woman as to anybody else). But without that impression there would have been no memory. In most cases there is a more or less intelligible idea. The only point is that there can be no memory without something to remember, and that that something is the product of some other mental faculty either actively or passively. There seems to be both a conscious and an unconscious memory, the one dealing with conscious and the other with unconscious ideas.

While memory does indicate the presence of the mental faculties, it has no vital connection with them, except in so far as itself is concerned. It occupies the place of a great convenience in the mental economy. Without it, as Locke says, "all our other faculties would be in a manner useless." Social and moral ties would cease except when the ideas of them were impressed on us momentarily. All business and education would be impossible, only as the latter rendered the reception of ideas easier. It could do no more. Nevertheless, men could subsist in favorable climates, but that is all. Hunger and thirst recurring at intervals would present themselves each time as new ideas to a man, and if his eye fell on food he would eat it, or just as in his infancy, he might be prompted to seek it. But without memory he would be strongly out of balance, and be reduced to the minimum of intelligence and capacity of enjoyment.

MATEO JUAN.

OLIVER CROMWELL'S HEAD.

THE disposition of the great Protector's remains has always been an interesting subject, it being currently reported that after the Restoration they were exhumed and scandalously abused

by the zealots of royalty. A writer in the *London Times* thus endeavored to set at rest conflicting rumors on the subject:

"Several imperfect statements having lately appeared on the above subject, let

me explain what became of the remains of Cromwell. Partly from printed records, and partly from what I heard from Mr. Wilkinson, to whom one of the press have alluded, Oliver Cromwell died at White Hall Palace, on the 3d of September, 1658, after a protracted illness. He had been long suffering from ague, and his case is cited in medical books as one of a man who died of ague, while our warehouses were groaning with Peruvian bark, which he did not know how to use. During his illness he became so depressed and debilitated that he would allow no barber to come near him, and his beard, instead of being cut in a certain fashion, grew all over his face. After his death the body lay in state at Somerset House, having been carefully embalmed, and was afterward buried with more than regal honors, in Henry the Seventh's Chapel, in Westminster Abbey, where it lay until, after the Restoration, it was taken out of the grave, as were also the bodies of Ireton (Cromwell's son-in-law) and Bradshaw; the latter, as President of the High Court of Justice, having pronounced sentence of death on Charles I. The three bodies were taken in carts to the Red Lion, in Holborn, and on the 30th of January, the anniversary of King Charles' death, they were removed on sledges to Tyburn, where they were hanged until sunset, and then taken down and beheaded, their bodies buried in a deep pit under the gallows, and their heads stuck on the top of Westminster Hall, where, at that time, sentinels walked.

"Ireton's head was in the middle, and Cromwell's and Bradshaw's on either side. Cromwell's head, being embalmed, remained exposed to the atmosphere for twenty-five years, and then, one stormy night, it was blown down and picked up by the sentry, who, hiding it under his cloak, took it home and secreted it in the chimney corner, and, as inquiries were being constantly made about it by the Government, it was only on his death-bed that he revealed where he had hidden it. His family sold the head to one

of the Cambridgeshire Russells, and in the same box in which it still is, it descended to a certain Samuel Russell, who, being a needy and careless man, exhibited it in a place near Clare Market. There it was seen by James Cox, who then owned a famous museum. He tried in vain to buy the head from Russell, for, poor as he was, nothing could at first tempt him to part with the relic, but after a time Cox assisted him with money, and eventually, to clear himself from debt, he made the head over to Cox. When Cox at last parted with his museum he sold the head of Cromwell for £230 to three men, who bought it about the time of the French Revolution, to exhibit in Mead Court, Bond Street, at half-a-crown a head. Curiously enough, it happened that each of these three gentlemen died a sudden death, and the head came into the possession of the three nieces of the last man that died. These young ladies, nervous at keeping it in the house, asked Mr. Wilkinson, their medical man, to take care of it for them, and they subsequently sold it to him. For the next fifteen or twenty years, Mr. Wilkinson was in the habit of showing it to all the distinguished men of that day, and the head, much treasured, yet remains in his family.

"The circumstantial evidence is very curious. It is the only head in history which is known to have been embalmed and afterward beheaded. On the back of the neck, near the vertebræ, is the mark of the cut of an axe where the executioner, having, perhaps, no proper block, had struck too high, and, laying the head in its soft, embalmed state on the block, flattened the nose on one side, making it adhere to the face. The hair grows promiscuously about the face, and the beard, stained to exactly the same color by the embalming liquor, is tucked up under the chin, with the oaken staff of the spear with which the head was stuck up on Westminster Hall, which staff is perforated by a worm that never attacks oak until it has been for many years exposed to the weather.

"The iron spear-head, where it protrudes above the skull, is rusted away by the action of the atmosphere. The jagged way in which the top of the skull is removed, throws us back to a time when surgery was in its infancy, while the embalming is so beautifully done that the cellular portion of the gums and the membrane of the tongue are still to be seen. Several teeth are yet in the mouth; the membrane of the eyelid remains; the pia-mater and the dura-mater, thin membranes which, I believe, lie over the brain, may be seen clinging to the inner and upper part of the skull. The brain was of course removed, but the compartments are very distinct. When the great sculptor, Flaxman, went to see it, he said at once, 'You will not mind my expressing any disappointment I may feel on seeing the head?' 'Oh, no,' said Wilkinson. 'But will you tell me the characteristics by which the head might be recognized?' 'Well,' replied Flaxman, 'I know a great deal about the configuration of the head of Oliver Cromwell. He had a low, broad forehead, large orbits to the eyes, a high septum to the nose, and high cheek bones; but there is one feature which will be with me a crucial test, and that is, that, instead of having the lower jawbone somewhat curved, it was particularly short and straight, but set out at an angle, which gave him a jowlish appearance.' The head exactly answered to the description, and Flaxman went away expressing himself as convinced and delighted.

"The head has also a length from the forehead to the back of the head which is quite extraordinary, and one day, before Mr. Wilkinson retired from practice, his assistant called him into the surgery to point out to him how exactly the shaven head of a lad who was there as a patient resembled the embalmed head of Cromwell up-stairs, and more particularly in the extreme length between the forehead and the occiput.

"Mr. Wilkinson mentioned the circumstances to the gentleman who brought the lad to him. 'No wonder,' said the

gentleman, 'for this lad is a direct descendant of Oliver Cromwell, whose name, like this boy's, was Williams before they changed it to Cromwell.' It was curious that this type should re-appear or remain after so many years.

"When the head was in the possession of Samuel Russell he was frequently intoxicated when he showed it to his friends, and they cut off pieces of the hair until the head was closely cropped.

"A correspondent of the *Globe* of the 26th of September, or thereabouts, believed that the body of Cromwell, after removal from the Abbey, was buried in Red Lion Square, and another body substituted and sent to Tyburn with Ireton and Bradshaw. But it is not probable they could have obtained an embalmed body for that purpose.

"The embalmed head is now in the possession of Mr. Horace Wilkinson, Sevenoaks, Kent.

"There is a small hole where the wart was on his forehead, and the eyebrows met in the middle. The head has the appearance of hard, dry leather. There are other details, and there is other circumstantial evidence, and there are records printed and published at the time, but I feel I must not trespass on your valuable space any further, although it is a subject in which many of your readers may take as great an interest as I do."

[A mask of the face of Cromwell, apparently taken after death, but bearing no marks of disfigurement, is in the collection of the Phrenological Institute. It corresponds in the main to Flaxman's description. There are appearances of beard, but it could not have been very full, as the cheek is quite free of hair. The nose is long and powerful, a little awry, and in general outline resembles Washington's. The forehead is very wide, and the face being broad and generally large it appears low, although really of more than average height. The perceptive faculties are very prominent, and there are indications that the head extended greatly in front of the ears.—ED. P. J.]

MY PANSIES.

Oh, flowers so pure, so fair and bright,
My room you filled with peace last night,
Empurpled with ethereal dawn,
My soul you thrill with light this morn.

Who takes such tireless pains with you,
Gives you that softest, rarest blue,
Wakes you at morn so early bright,
Closes your weary lids at night?

Arches your airy, azure fold,
Festoons your fairy, faultless gold,
And paints with perfect, peerless grace,
Each curving line, each charm of face?

Now glancing up, now gleaming down,
Now bending low your beaming crown,
Transcending all artistic rule,
Came you from far seraphic school?

Tell me the magic of your power
To win a charm from every hour,
Through cruel cold or ruthless rain,
To brighter bloom and smile again.

Your robe, that feels as fair and frail
As some blonde beauty's bridal veil,
Touched by some mighty mystery through,
Is armored steel and strength for you.

Tempests that bow my head more gray,
But uplift yours serenely gay;
The storms that spoil my silks and lace,
But freshen all your fringes' grace.

And when my heart can't climb so high
As faith's unclouded, beaming sky,
In your angelic face I see
A heavenly window close to me.

Oh, words, how wondrous weak you are,
Each syllable should be a star
To paint my peerless pansies fair,
Resplendent, royal, radiant, rare.

From winter's death their love-life came,
So I from death shall live again;
Some fadeless spring, my flowers and I,
Shall bloom beneath a bluer sky.

LYDIA M. MILLARD.

PREVISION.

[The following article was written and sent to us before the death of President Garfield. This will explain to the reader any seeming incongruity.—ED. P. J.]

MANY of my friends are saying to me, since the attack on the life of the late President, "I thought at once of what you said." Yes, at the time he was inaugurated, I was filled with the most melancholy forebodings in regard to his future as our President. They took no definite form, only an indescribable mournfulness fell upon me in thinking of him. I had often said: "I'm afraid he will be killed; I *know* there is trouble for him."

At a little meeting, when we had united in fervent thanksgiving that he had been elected, that we were to have a Christian man for our President, I remarked, "I most sincerely hope my foreboding may prove false, but I can't help but feel that something dreadful is to happen to him."

Whence this feeling? Why should

this thing that has taken place have been shadowed forth to me, an entire stranger? Is it prevision? Can not you gentlemen who are so well versed in mental phenomena give us some light upon the subject? Alas, too true were my presentiments! From the time of his inauguration, something seemed occurring to mar his happiness; the annoyances of factional feeling, the serious illness of his wife, and last, the terrible wound of the assassin. Though we had the most encouraging accounts from his physicians, the shadow would not lift from my spirit, or rather the terrible fear of what might be.

Again, I ask, why these presentiments to me, instead of to those nearer and dearer? But did they *not* have them? I must think that the departure of his mother from the White House, for the reason that the excitement was too much for her, and the illness of his wife, were the effects of the shadow of that fearful

man who all the time, according to his own confession, was dogging the footsteps of their loved one.

Every day, I believe, we are coming to apprehend spiritually more and more what is impending. It seems to me men never read each other so clearly as now. Always there will be in this world happy, unasking, unreading, innocent souls, who look with a kind of awe-struck wonder upon those who seem to read the future. Are they not the *only* happy ones in this marvelous world of ours? Certainly they are the loved ones, for people don't like to be read too closely by their fellows. These happy, loved, unreading ones, are just the ones to marry, to live happily in that state. They believe, therefore they enjoy. Now these poor questioners, these mind-readers, that forever dive beneath the surface of things, distrustful of everything almost, they are not comfortable companions, straightforward and conscientious as they may be; so they may as well learn at once to be content with little love, to be misunderstood, and to go on prophesying and exciting the wonder of those whose gifts lie in a different direction. Is this gift of prophecy to be received otherwise than in awe and fear? Is any gift of God to be refused? Are people, because some may be offended because their prophecies are fulfilled, to try to smother their intuitions?

When it was told me "the President is killed," as was currently reported the day after the shooting, though inexpressibly saddened, I was not yet unprepared. I should have been more surprised had all gone well with him and his, forewarned as I had been.

The self-condemned murderer! what shall we think or say of him? I think, I believe, as the man did who is reported as saying, "It should be hanging for shooting at the President." And yet as I looked at the portraits of the President and the assassin side by side in the papers, I said to myself, here is the one who has had all his life a good, loving, Christian mother; and here the one who at three years lost his, and has drifted about un-

loved, uncared for, at least with an unselfish love. Not a wholly bad face, not an insignificant phrenology by any means; an unpleasant, sensual mouth, showing indecision. But what might he not have become, had he, like his victim, been true to his religious faith? Reason as we may, pity as we must, yet must we never believe that *he* could have been an honest man had he tried as faithfully to be one as he did to obtain his desires in political life? As I studied the face of Guiteau and thought of his future—disclaiming all morbid sympathy with criminals—an indescribable pity filled my heart. I asked, Where are these criminals to be in the other life? Are we to meet them there, and shall we *know* then what made them such, as we can not know here?

I always have such an intense desire to know *why* such men have been wicked. I attended the trial of Frost, the wretched murderer, the loathsome murderer of his brother-in-law. I sat near him, and though utterly repulsive to me, studied his phrenology attentively, and wished I could study his inner soul as clearly.

I have always had a great interest in the inmates of prisons. I have often and often wished there was no necessity for them, or for work-houses, asylums, etc. They seem a blot on this fair earth to me; and yet I am a firm believer in law, in punishing the transgressor of it, and at once too. I think we are come upon times when all law is mocked at, as it were; but are mankind yet in such a state that it is safe for them to "become a law unto themselves"?

For his dear home-circle, and for the nation's welfare, I prayed God that President Garfield's life might be spared; yet there came the feeling that his death might do more for the welfare of both than his life.

"We see but dimly through the mists and vapors,
Amid these earthly damps;
What seem to us but dim funereal tapers,
May be heaven's distant lamps."

Glorious is the martyr's crown. Some are counted worthy to wear it.

COUSIN CONSTANCE.

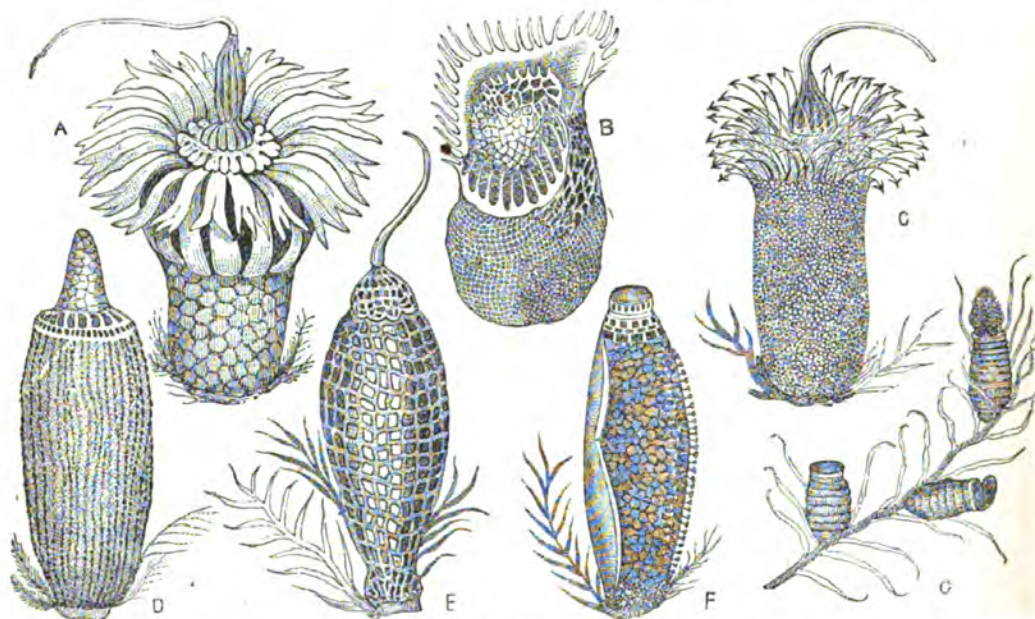
THE EGGS OF BIRD PARASITES.

IN whatever direction the observer of nature turns, his astonishment and admiration are elicited by wonderful organisms. The most minute of living forms have their peculiarities of structure which fill the earnest student with enthusiasm. The microscope indeed has opened to us a world of curious organisms which may never be thoroughly explored. Every plant, every animal seems a universe

between the flattened barbs on the inner surface of the feathers, they appear like some new species of sea-mat.

The strangely-formed eggs found on the Australian crane are arranged in a similar manner, and a slide containing several rows of these eggs is a beautiful sight under the microscope.

On one species of crowned crane—the Balearica—are found eggs having a thick



A, Parasite of Black-winged Peacock.—B, Ground Hornbill.—C, Australian Mallee Bird.—D, Common Hornbill.—E, Golden Pheasant.—F, Crowned Crane.—G, Showing how the eggs are fastened to a feather, with a parasite issuing from the egg at the expiration of two days.

almost under the magic glass. One department which has proven fertile in revelations of very interesting objects is that of parasites, especially those which infest the bodies of birds. Our illustration represents magnified views of the eggs of several species of these minute creatures, and they are certainly of a very extraordinary character.

The eggs of one of the species which infest the ground hornbill so much resemble the cells of some of the polyzoa that, being deposited in close contact one above another, and in many parallel lines

calcareous wall, being covered, as it were, with little white domes. Each of these projections appears to be deposited around and supported by a short spine proceeding from the shell of the egg, and supported by a sub-quadrate, pellate disk. The egg of a parasite of the Australian mallee bird resembles somewhat the ripe fruit of the corn blue-bottle flower. The spines on the lowest or outer row on its summit are ornamented by little anchors, very like those of the *Spicula synapta*.

All these interesting eggs are, however, altogether exceeded in beauty by those

found in the body of the Indian black-winged peacock; these are constructed so much like flowers that a botanist might amuse himself by describing every part of them in the language of his science.

The manner in which these eggs are deposited is also most singular. The animal attaches a mass of secretion to the inner side of the shaft of a feather, and then proceeds to construct two or three oval perforated, much larger than the eggs. On and in these strange sacs the eggs are found in considerable numbers, the whole making a very interesting object for microscopic examination.

It is, of course, extremely difficult to

tell the genera to which the eggs respectively belong. With foreign birds especially it is almost impossible to do more than form a probable guess on the subject. The peacock has a fine specimen of goniodes, and the common turkey is infested by a large goniodes and a lipeurus. There is a remarkable species of acarus, described by Dr. Robins, found spinning a white silken web on the base of the sparrow's thigh, or on the forepart of its body. On raising this delicate web you perceive that it is filled with minute eggs, from which the young issue, being in due time hatched by the warmth of the body they are destined to subsist upon.

ITALICS.

ONCE before I made a short plea for italics, but it seems to have been ineffectual. More and more we see long, solid, solemn columns of reading matter, every letter stiff and straight as soldiers on dress parade. From top to bottom not one out-of-the-way, disorderly italic to relieve the monotony. It's absolutely dreadful to contemplate such a column of reading. It seems like attacking an impregnable wall.

Oh, yes; I know we are told the best writers do not use italics—by the way, I believe a LITTLE margin is still allowed for individual taste as to who are the best writers—that their use shows a meager command of language, etc., etc.

What are we coming to? I am really afraid we shall drift back to the old style of printing—no capitals, no punctuation, and only one kind of type.

Italics in printing take the place of emphasis in speaking; and among public speakers we find the same tendency to bring everything down to a dead level. This makes a man stand up before an audience with folded arms, and talk to them in a monotone. He should have his hands tied, for fear he might inadvertently lift one to brush off a fly or a mosquito, and then some reporter would say, he "sawed the air, and yelled," and

straightway he would be set down as "vulgar."

There are dread premonitions that before long it will be vulgar to speak at all, and the person who is not able to convey his or her ideas by gentle motions of the eye-balls will be considered below the standard.

I have watched this decline of emphasis with great solicitude, for, I believe God gave us emotions, or the power to experience them, and intended to have us express them in the tones of the voice, the attitudes of the body, and motions of its various members, and, when printing came so near perfection, in italics. To smooth everything off, and tone everything down, as present good usage requires, is exceedingly painful to one who believes in natural expression.

CELIA B. WHITEHEAD.

"How do you like the rooms?" asked Mrs. Dotonart, while showing the Smithingtons over her house. "Oh, they are perfectly lovely!" exclaimed Mrs. Smithington, "and they are furnished so sweetly! What exquisite plaques those are, aren't they, Smithington?" "What! them dishes on the wall? Yes, they are pretty enough, but why in thunder didn't they have closets in the house to put the crockery in?"

THE SCIENTIFIC BASIS OF FAITH.

(READ BEFORE THE WOMEN'S NATIONAL HEALTH ASSOCIATION
OF WASHINGTON, D. C.)

SCIENCE is a knowledge of what is visible. Faith a belief in what is invisible. There is not only no conflict between the two, but the latter can not exist without the first. To talk of antagonism between science and religion is as absurd as to say that cause and effect are out of harmony with each other. Science and religion are interchangeable terms. Science may properly be defined as the religion of intellect, and religion the science of morals. The one is based on physical facts, the other on spiritual realities. Science invites attention to a shadow; religion says: "I see the shadow; and although I can not demonstrate the fact, I know that there is a substance somewhere which causes the shadow to appear." Science points to the infinitely varied and marvelously beautiful phenomena of nature.

Religion says this phenomena is interesting in itself, but its chief value lies in the positive proof it furnishes of a realm of spiritual realities and forces which existed before the forms we see took shape, and will continue after they have passed into other forms of being, or have been resolved into their original gases. That eminent and renowned sacred logician, St. Paul, defines faith to be "the substance of things hoped for, based upon the evidence of things not seen." We are admonished also by the sacred writer to be always ready to give a reason for the faith we hold.

The scientific philosopher only can understand the above definition of faith or obey the injunction given. The infantile or ignorant mind may accept the statements of others, but this is superstitious credence, not faith. Such a mind does not grasp the idea or substance of its creed, nor can it present an intelligent reason for its belief. It is asserted by some that science is sapping the foundations of our faith and displacing religion

with skepticism. But science can only destroy false fables, not true faiths, which are based upon the "evidence of things not seen." It can only promote a skepticism toward those beliefs which have no solid foundation of facts upon which to stand. A religion which rests upon a marvelous mythology or false legend, and appeals to the ignorance of the people, will find in science an uncompromising foe.

The gods of Olympia and the once powerful religion of paganism, based upon belief in those imaginary beings, have disappeared before the rising sun of science. A knowledge of the nature of electricity solved the problem of thunder, and not only deprived Jove of his occupation—that of hurling fiery bolts across the sky—but convinced the people that the terrible god of vengeance was only a myth. Jupiter Pluvius no longer waters the thirsty earth with generous showers, when he is in a good humor, or withholds the rain when angry. Science enables us to smile at the poetic, but childish traditions once held sacred, which tell us how Flora garlanded the earth with flowers; how Ceres, generous goddess, saved her favorite nations from famine; and how Pomona blessed the world through her bounteous gifts of luscious fruits. But have the sciences of meteorology, of botany or horticulture and agriculture, been promotive of infidelity?

The desolating pestilence our fathers bowed before as wrathful visitations of an offended Deity, is now known to have its origin in physical causes, and to be subject to sanitary control. But has a knowledge of the cause of disease banished religion from the earth, or the discovery of antiseptics destroyed faith in God? On the contrary, has not the increase of knowledge broadened and deepened our minds, and enabled us to enter-

tain conceptions of the only living and true God such as our ignorant and superstitious ancestors were not capable of receiving or comprehending?

Nature may justly be styled a revelation from God. It is a physical manifestation of His wisdom, power, and beneficence. But it remained a sealed book until science loosed the seal of mystery and dissipated the fogs of superstition which enshrouded it, when lo! its heretofore darkened pages glowed with the light of truth divine. In the light of science the history of the past is unfolded. Before the geologist, the heretofore meaningless footprints of old Time stand in alphabetic order, and he reads the wonderful story of creation, and if a philosopher as well as scientist, his deductions give pinions to his unfettered mind and prophetic vision to his enlarged consciousness; he rises to the level of spiritual realities, and from the lofty summit of the mount of celestial wisdom, he descries by the eye of faith the beautiful headlands of that paradisiac realm of which Eden was the type, and which has been the common theme of the ancient seer and modern poet.

There are scientists whose sole mission is to observe; who see facts, but deduce from them no conclusions. It is but natural they should be materialists. It were unreasonable to expect such men to have faith in the unseen, "the yet to be." They are but the mud-rakers, the stone-breakers of the profession. They are the sappers and miners who do the difficult and rough work before the army of progress; useful in their sphere, but as far beneath the level of the philosophic scientist as is the coral insect beneath the fish that cleave the waters of the briny deep with tireless fin, or the bird that soars in the blue ether above it.

An eminent scientist and thinker said to a friend of mine: "Science were worthless did it not enable us to predict the future." This man uttered a great truth. Of what use were astronomy did it not enable the astronomer to calculate eclipses and predict other future changes

in the conditions and positions of the celestial bodies? What interest could rational men have in meteorology did it not enable the signal-service officers to predict the sort of weather we should have, and warn us in advance of approaching storms? Of what practical use is physiology if it simply described the functions of the various organs of the human body and stopped there? You must all, I think, agree with me that our sole interest in it lies in the fact that a correct knowledge of its laws enables us to preserve our health, increase our pleasures and powers of usefulness, and prolong our lives. It is faith in the future, and faith in the future alone, that gives value to the facts of science. Without faith, reform is but a word without meaning, progress utterly impossible. It is faith in the future that inspires the heroes of reform, and under its sublimely hopeful inspiration the mountains of doubt and difficulty dissolve and disappear before their onward march. Those who move the world forward are always men and women possessed of a grand and living faith; but it is a faith for which they can give a reason. It rests on established principles, logically deducible from indisputable facts already discovered, or by analogy known to exist.

Col. Ingersoll is reported to have said that had he been consulted in regard to the affairs of this world in the beginning, he would have advised the making of good health and not disease contagious. In the light of science as well as religion this becomes a very foolish remark, but it involves a criticism upon the laws of God to which no unscientific theologian can give a satisfactory reply, because to him the science of health is unknown; the cause of disease among the inscrutable mysteries of Providence. The intelligent scientist, however, would find no difficulty in defending the wisdom and beneficence of the Infinite Mind, as manifested in the present order of events, against the objection of the famous champion of materialism.

Disease is the result and penalty of

disobedience to the divine and wisely ordained laws of our physical nature; health the result and reward of obedience to those laws. The scientific physiologist knows this to be true, and he alone does know it. Knowing this, what are the deductions that logically force themselves upon his mind? Why, they are these:

1st. The law of compensation or justice is universal in nature.

2d. Man has been created with the intellectual capacity to discover and comprehend, and the will-power to observe or obey the laws of his being.

3d. The effort, physical and intellectual, necessary to the discovery is essential to his development, and the discipline of his appetites, passions, and propensities involved in resistance to the numerous temptations to which he is subject, can alone lift him above the plane of the brute and fit him for the companionship of angels.

Science demonstrates the fact of infinite life. The universe throbs with the rhythmic pulse-beat of immortality. The living energies of nature are ever giving birth to new forms of life from what seemeth dead matter. From out the old the new is born, and the seasons, as they roll on in their never-ending course, repeat the wondrous story of the resurrection and confirm the faith in eternal life.

"Whoever plants a seed beneath the sod
And waits to see it push away the clod,
Trusts in God."

Of all men, the true scientist should be

most devoutly religious; the measure of his reverence for the truths of God being the measure of his power to comprehend the wisdom of the Infinite One as displayed in the marvelous phenomena of nature. "Even in the grass at our feet that to-day is, and to-morrow perisheth"; that to-day lies buried beneath chill winter's snow, and to-morrow springs into new life, the scientist discovers powers and energies that suggest God, and lifts the tiniest blade into kinship with humanity. Science the foe of religion, the ally of materialism? No; a thousand times no. Science vindicates every known law of God. Science is the bulwark of true religion. It is the foundation upon which the Church of the future must and will rest. It will be the basis of the sublime and living faith that will inspire to noble lives the men and women who shall grace this planet in that millennial time "foretold by seers and sung in story": that good time when the few shall no longer grow rich by imposing on the credulity and taxing the ignorance of the many; that good time when the physician's occupation shall be changed from a tinker or cobbler to that of a school-teacher; when science shall have purified the air by destroying the germs of disease, reconstructed our habits of diet and clothing and exercise; in a word, when science has taught the people the value, the sanctity and uses of life, and the beautiful laws governing its inception and continuance.

M. CORA BLAND, M.D.

LUKE GRANT AND HIS SOAP-GREASE.

"YOUR speaking of old Luke Grant's sign, 'This ere road goes to my mill,' reminds me," said my friend Adair, "of a very amusing scene I witnessed in the old war-times. In order that you may fully appreciate the humor of it, I will premise by telling you something of Luke's antecedents and habits. He was the third son of one of the stingiest old misers that ever chased a goose to re-

cover an apple-core to throw into a cider press; never had any schooling, and through boyhood was kept at the plow-handles. Yet he married early, and by a decent life established his claims to respectability. He turned out a thrifty farmer, and was regarded as a neighborly neighbor according to his lights; honest, but by no means overburdened with sense. On his father's death he came

into possession of two or three negroes, and these he treated exactly as if they were members of his family. His wife cooked for them, he himself worked in the field shoulder to shoulder with them, and they ate with him at his table.

"In the course of events, that awful break in our national history, the Civil War, arose. Luke was a Union man from the beginning. According to his own statement, he 'knowed nothin' 'bout the natur' of the Secession fuss, ceppin' so fur as the freein' of the niggers was enwolved, and bless God, he didn't want to know.' He had always managed to make both ends meet *in* the Union, and he prayed God he'd 'never see them ar Stars and Stripes tore asunder.'

"Notwithstanding Luke's views—moderate, sensible, and conscientious as they were—the poor man, in the last desperate days of the Confederacy was 'conscripted,' and with some other middle-aged farmers of his neighborhood was sent to the defense of Petersburg. Having some choice allowed him as to what arm of the service he should enlist under, Luke selected the cavalry, and started on the faithful old sorrel with which he had plowed many a long furrow on his poor stubble hillsides. The very sight of Luke, who, having a long, lean, lugubrious countenance, scant hair, small eyes, set far back and close together under shaggy brows, and his seat on the old sorrel, set the boys in camp to laughing, and thenceforth he was the butt of all their jokes. The poor old fellow was very pious—of the sect known as 'Hardshells'—and he had a way of singing his prayers aloud. Three times a day he got down on his knees in front of the little mud fire-place he had built to his tent, and when his shrill and mournful tones, with the peculiar song-like rising and falling inflections came to the ears of the 'devilish' boys, they would have interrupted him if death had been the penalty. Zrip-zrip would hiss a damaged cartridge, as it fell into the fire, and startled poor Luke from his prayers or overthrow his pot of peas,

filling it with ashes and his own face with smut. Luke was of a very saving disposition; his father's miserliness modified in him to an eager desire for honestly accumulating. In lieu of anything else to save, he regularly picked up all the bits of leather, broken horse-shoes, cast-away kettles, and portions of blankets he found about the cavalry camp, while with much pains and trouble he manufactured soap from improvised lye, and the 'grease' so plentiful, which he could not bear to see wasted. By dint of great industry he had filled several gourds with this '*soap*,' which he looked upon as 'spiles' of the war, which he would carry home in triumph to his wife. But after a long 'rest,' for the better drilling of the 'conscripts,' the company was ordered to move one bitter morning in January. Now, of all the wild boys who delighted in amusing themselves at old Luke's expense, not one was such a persistent tease as Fred Linton, a jaunty, trim, neat little fellow, equally ready for a fight or a frolic. He had made friends with old Luke, and did the poor conscript many a kindness, though forever laughing at him. When, therefore, he came into Luke's tent and found the old fellow dropping tears into his pot of soap-grease, he condoled with him affectionately, adding in his teasing way: 'Why don't you carry 'em along, uncle Luke.' No sooner suggested than Luke went to work and *loaded* his old sorrel, first hanging the large dinner-pot, full of *soap-grease*, round the horse's neck, and securing the soap-gourds under the girth of the saddle, while a mountain of bed-clothes, which in color would have been improved by a judicious use of his soap, were heaped on the saddle; his own gaunt figure draped in a couple of dirty blankets, his *head* bound in rags, giving the finishing touch to a *tout-ensemble* grotesque to the last degree. Soon the company reached a roaring, rushing river. In plunged the cavalymen, all but old Luke; there he sat—a picture of terror on the strangest monument ever seen. General D. caught sight of him,

standing on the other shore—a spectacle for the brigade! ‘Ho! you man there, with the *rag* on your head, I say, ford the river.’ ‘I’m afeard, General, this here ford looks mighty dangerous; I mout git drowned. I’m gwine up higher and try to git round it, or mebbe thar’s a bridge somewhar.’

“General D. thereupon fell into such a volley of oaths and threats, that poor Luke lost no further time in attempting the passage. In went old sorrel; away went Luke, mountain of bed-clothes,

and soap-gourds, while horse and big pot of soap-grease disappeared.

“Fred Linton seeing the unfortunate conscript breasting the icy waves, entreated to be allowed to go to his assistance, and succeeded in getting him ashore, more dead than alive. Old sorrel and his *load* were never seen again; but Luke had in their place a rheumatism that got him first a furlough, which ended in an *exemption* from further service during the war.”

V. D. C.

AUTUMN.

FADING, trembling, fluttering leaves
In russet clouds go by,
Bruised and torn by the pitiless winds
And left on the ground to die.
Alike the gorgeous robe that hung
Upon the kingly oak,
And the delicate frill of the daisy
Have sunk beneath the stroke.

No longer laughs the mocking-bird
Within the dreamy dell,
Where thro’ the golden summer days
He played the mimic well.
To warmer climes and brighter skies
The jocund warbler flew,
Before the frost-king killed the buds
That by the hedges grew.

Low-whistling quails still haunt the field
Where late the waving grain
Upcreased its myriad golden spears,
The glory of the plain.
The hickory and the chestnut-tree
Now shake their yellow locks,
And ebon crickets pipe and run
Amid the solemn shocks.

Before the blaze the farmer basks,
From harvest toil set free,
And in the wood the squirrel peeps
From out the hollow tree.
While one complains of scanty yield,
With all his barns aglut,
The other in his sunless lodge
Contented cracks a nut.

Along the roofless woodland aisles
The robin sadly calls,
And monkish rabbits leap and stare
At every leaf that falls.

Here palsied beech and naked elm
Will stand in silent woe
Till scowling clouds grow pitiful
And cover them with snow.

So fade the flowers of hope and joy
Before the frost of grief,
And manhood’s power and beauty’s glow
Still fall like fading leaf.
The hero’s sword, the poet’s crown,
The grass, and tender bud,
All sink beneath the snow of years
And time’s unfathomed flood.

—AUGUSTUS WATTERS.

A WOMAN’S DREAM.—The Bath (Me.) *Times* states that a lady in Bath was recently much alarmed by dreaming that some one was holding her wrist. Vainly endeavoring to scream for assistance, she succeeded at length in whispering just loud enough to awaken herself. After a few minutes relief at being no longer under the influence of the dream, she became conscious that some one was really holding her left wrist, and all her strength was inadequate to release it. Her terror now rendered her as speechless as she had been before awakening. After awhile, however, she recovered her senses sufficiently to look down, and she found the relentless grasp was that of her own right hand, and not easy to withdraw from its twin companion, so desperate had become its hold.

"THE CHILDREN AND THE FLOWERS BELONG TO GOD."

MRS. H. was sitting by a vine-embowered west window, on a hot summer morning, reading one of Macdonald's stories. Suddenly she was startled by a scuffle in the entry, angry voices, and the cries of a child. The door opened, and Mrs. Crowel came in, dragging her three-year-old Harry. Her apron, which was gathered up in her left hand, was full of a mingled mass of verbenas, pansies, fuschia buds, monthly rose-buds, geraniums, mignonette, and various other flowers. The mother was very much excited, and could not refrain from scolding and shaking the little fellow as they crossed the room.

"See, Mrs. Harris," she said, "what this bad boy has done. I have whipped him soundly, and I am going to shut him up down cellar with the rats, and make him go without his dinner."

Here Mrs. Crowel opened her apron, showing the spoils, and Harry burst into a loud wail, and began vigorously kicking in his frightened attempts to get away.

"All your flower-beds stripped bare, every one," said Mrs. Crowel, giving the boy another slap. "It will be a month before they will be in blossom again."

In the meantime the victim of this wholesale flower-pillage seemed in no-wise agitated, but sat looking with pitying eyes upon the little culprit, a half smile upon her lips.

"Well, you beat all, Mrs. Harris, and I always said so," exclaimed the mother, sinking into a chair, and giving Harry a push that sent him reeling in Mrs. H.'s direction. "Here, I am just worn out over your flowers, and you don't seem to care at all."

Mrs. Harris caught Harry, and lifted him into her lap.

"The little fellow is tired," she said. "Let me get him to sleep; then we will talk about the flowers."

"Well, I never!" ejaculated Mrs. C., going to look after her dinner, and leaving "that dreadful child" in the arms of her summer boarder.

By and by Mrs. Harris came out to her where she was shelling peas in the breezy porch.

"The baby is asleep," said Mrs. H., "and I came out to say that I am very sorry you were so worried about the little fellow's accident."

"But your flowers! I thought you set great store by them. You have spent hours fussing over them."

"Can we not love a thing without being angry at it and revengeful at its loss? Believe me, Mrs. Crowel, I have loved my flowers so well that I can afford to lose them. In the first place, they have seemed to me always to be God's flowers, and when I have worked for them, they have so filled me with happy thoughts and blessed suggestions, that I am a thousand-fold repaid for all my pains. Like attracts like. Flowers attract sweet and harmonious conditions. Harry is but a baby, and it was only natural for him to wish for such pretty things as flowers. You have never taught him that he must not touch them."

"But wouldn't you punish him at all?" answered the bewildered mother.

"I would do something to impress him with the idea that he must not disturb other people's property. And if pain is necessary for the impression, I would inflict pain. But you have no reason to be angry with a baby for picking flowers when God gives them to us so lavishly."

"But I don't see how you can take the loss of them so coolly. I shouldn't get over it in a month."

"I am afraid many people love their flowers and their children—in fact, all their possessions—not so much for their own sake as because they are property. 'This is mine. Because it is mine, it is consecrated, precious, sacred!' This is the feeling in most hearts. But the flowers and the children belong to God—we, and all that we possess."

"But what shall I do with Harry?" asks Mrs. Crowel, coming to the necessity of the present.

"Talk with him lovingly about the

rights of others. Keep him in the house long enough to impress him with the sense of denial coming to him in consequence of his taking the flowers, and give him a little flower-bed of his own."

"It is all so much trouble," sighed Mrs. Crowel.

Mrs. Harris did not reply. She was cautious about "preaching" too much.

But she said to herself, looking at the rosy face lying on his pillow, "Ah, if mothers would take as much trouble for the spirit, its true training and development, as for the body and its clothing."

Yet her heart was soft for these same mothers. "It is because they do not see the truth," she said, kissing Harry, and smoothing his pretty dress. *

HOW SHE LEARNED HOUSEKEEPING.

MRS. CARLYLE, the wife of the eminent author, knew next to nothing about household economies when she was married, but soon set bravely to work to make home endurable to her husband, and that she succeeded fairly is to be inferred from the grief her death occasioned to the brusque philosopher. She has given us a glimpse of her early experiences in a very pleasant vein—for instance:

"My father was very anxious for a boy. He was disappointed that I was born a girl. However, he brought me up as much as possible a boy. I was taught as a boy. When my mother remonstrated he would say, 'At eighteen I will hand her over to you, and you can teach her all a girl ought to know.' But Carlyle came, and it was forgotten. I did not know how to tack on a button when I got married, but I could write Latin. When we got married he took me to a farmhouse, far from the busy haunts of men. A strapping, red-armed wench waited on us. 'It is market-day to-day,' said she to me one day, bobbing in an uncouth courtesy. 'I am going to market; what meat shall I get?' I was reading at the time. 'Oh, anything you like,' was my reply. 'No, ma'am, not as I like, as you like.' Well, we decided on something. But the cooking was execrable. Day after day our dinner was uneatable. 'My dear,' said Carlyle gravely to me at length, 'I am a philosopher, but I must have butcher's meat properly cooked for dinner.' I had a good cry after that. Then getting a cookery book I shut myself up with my pots and pans, and soon

mastered the details of practical cookery. In the same way with sewing. Carlyle was away from home, and I made him a waistcoat. It fitted him perfectly. I was very proud of it. 'You want praise for it,' said he, 'but this is only what every woman ought to be able to do. You do not want praise for doing your duty.' But I did, though. Now I am happy to say I can bake bread, cook a dinner, or make a shirt with any one."

ROYALTY'S BAD GRAMMAR CORRECTED BY A CHILD.—The beautiful Miss Port, her grand-niece and adopted child, sitting one day writing in Mrs. Delany's drawing-room, heard a knock at the door; she, of course, inquired "Who's there?" "*It's me*," replied a man's voice, somewhat ungrammatically; but grammar appears to have been much disdained in our great-grandmothers' days. "*Me* may stay where he is," answered Miss Port, on which the knocking was repeated. "Me is impertinent, and may go about his business," reiterated the lady; but the unknown party persevering in a third knock, she rose to ascertain who was the intruder, and, to her dismay, found it was no other than King George himself that she had been unwittingly addressing with so little ceremony. All she could utter was, "What *shall* I say?" "Nothing at all," replied his Majesty; "you *was* very right to be cautious *who* you admitted." This royal disregard of grammar seems to have furnished a precedent for that of the Court and of society in general.—*Fraser's Magazine*.



SHADE-TREES PROMOTIVE OF HEALTH.

THE usual object in setting shade-trees is to secure their pleasant shade and to ornament the grounds. They have a value, however, far greater than this. They are efficient promoters of health. He who sets shade-trees about his buildings not only adds the most alluring ornaments, but also hedges his family about with efficient protectors of their health. It is not intended to claim that shade-trees will prevent all kinds of disease, but merely that in certain ways they aid materially in preserving the health.

Trees act in several ways in promoting health. They improve the drainage and render the soil less damp. Dampness is one of the most common causes of ill health. Dampness is promotive of rheumatism, neuralgia, consumption, catarrh, and various diseases. Dampness promotes the decay of filth and the generation of noxious and disease-generating gases. It predisposes the system to various diseases, and needs to be carefully guarded against. Trees, if properly placed about the buildings, will diminish the dampness arising from the soil. If the trees are placed too near the house, they will keep out the rays of the sun and prevent the free circulation of air, and thus increase the dampness within the house. To obtain their best effects, they should be set at such distance from the house as will allow the free access of

the rays of the sun and free circulation of the air about the buildings. When thus placed the trees penetrate with their roots through the soil deep into the subsoil, extending in every direction. Wherever a root penetrates the subsoil, a way is opened through which the water on the surface soil can find its way to the earth beneath, instead of being held in stagnant accumulations on the soil, as is often the case. Where there is an impervious subsoil, the effect of trees in improving the drainage and diminishing the dampness is very well marked.

There is another way in which trees improve the drainage. They draw up continually large quantities of water in the form of sap, which passes into the leaves and is evaporated. The amount of water thus removed daily from the soil by one large tree, with foliage sufficient to cover three or four acres of surface, is considerable; and when there are several, the effect would be proportionately greater. This effect of trees in rendering the soil and subsoil more easily penetrated by water, and the removal of considerable water in the form of sap, materially improves the sanitary condition, and prevents many evils arising from stagnant water.

A more important service performed by trees is the removal of filth. The soil around buildings contains more or less filth. In some places the soil is saturated

with it, and when the weather is warm hurtful emanations are sent up from this decaying filth. Shade-trees flourish in just such filthy places. The filth furnishes them abundant food, and is rapidly taken up with the sap, and promotes the growth of the tree. A few trees planted at the terminus of sink spouts will naturally assist in removing the filth and in keeping the air pure. The roots absorb large quantities of the liquid filth, and the leaves take up some of the noxious emanations and destroy others.

The most important sanitary services performed by trees is the purifying effect which they exert on the air. The air is constantly becoming charged with carbonic acid produced by the combustion of wood and coal, by the decay of animal and vegetable substances, and given off from the lungs of animals. This carbonic acid gas is poison to man and other animals, but is food for trees and plants, and is absorbed by their leaves and roots. The leaves absorb the carbonic acid, and give out in return oxygen, which is a powerful agent in purifying the air by oxidizing or burning up deleterious substances. Oxygen is also the substance removed from the air during the process of breathing by man and animals, and is necessary to the maintenance of life. Plants and animals evidently were designed to thrive side by side. The substances thrown off from the lungs of animals furnish food for plants, and the oxygen given out by the leaves of plants is just what is required to purify the blood of man and animals. Where the habitations of men are most thickly placed, there the need of trees and plants is most needed to purify the air, yet there they are fewest in number.

Not only do trees remove carbonic acid from the air, but they also remove poisonous miasms. In the malarious regions of the West it is sometimes noticed that the intervention of a belt of forest trees prevents the spread of malaria in that direction. At Palo, a railroad station near Rome, in Italy, a piece of woods had stood for many years between the

settlement and a malarious district to the south, and the inhabitants were free from malarious diseases. Finally the trees were cut down, and then malarious diseases became prevalent. Manziana, Italy, was almost wholly free from malarious diseases, until the shepherds, by setting fire to it, destroyed the adjacent olive forest, after which malarious diseases became prevalent. Lancisci relates that the insalubrity of Rome was notably increased in the days of Gregory XIII. by the destruction of a forest which was infested with brigands. The Abbey of the Three Fountains, near Rome, which for a long time had been regarded as one of the most insalubrious and fever-breeding places in all the campagna, was decidedly improved by having a plantation of eucalyptus trees set out. In Algeria, the pestilential emanations from marshes are counteracted by planting eucalyptus trees. It is supposed that those trees protect, partly by absorbing moisture from the soil, and partly through the complicated exhalations from their leaves which purify the air.

Some have attributed the purifying effect exerted by trees upon the air to ozone, which is found in the air near trees. Ozone is a name applied to oxygen when it is in a highly electrified condition, which renders it especially vitalizing. The ozone undoubtedly is, in fact, the purifying means afforded by trees, but the oxygen is another. The removal of carbonic acid from the air by the leaves of trees is also an important element in the same process. Whatever the means by which trees exert their purifying effect, it is well established that their sanitary influence is decidedly important and well worth the trouble of planting. A house surrounded by trees, a village or city with its streets lined with long rows, not only is made beautiful and attractive, but becomes more healthy. Tree planting should be largely increased.

HENRY REYNOLDS.

THE MANAGEMENT OF SICK CHILDREN.—The vicissitudes necessarily inci-

dent to an outdoor and primitive mode of life are never the first causes of any disease, though they may sometimes betray its presence. *Bronchitis*, nowadays perhaps the most frequent of all infantile diseases, makes no exception to this rule; a draught of cold air may reveal the latent progress of the disorder, but its cause is long confinement in a vitiated and overheated atmosphere, and its proper remedy ventilation and a mild, phlegm-loosening (saccharine) diet, warm sweet milk, sweet oatmeal porridge, or honey-water. Select an airy bedroom and do not be afraid to open the windows; among the children of the Indian tribes who brave in open tents the terrible winters of the Hudson Bay territory, bronchitis, croup, and diphtheria are wholly unknown; and what we call "taking cold" might often be more correctly described as taking *hot*; glowing stoves, and even open fires, in a night-nursery,

greatly aggravate the pernicious effects of an impure atmosphere. The first paroxysm of *croup* can be promptly relieved by very simple remedies: fresh air and a rapid forward-and-backward movement of the arms, combined in urgent cases with the application of a flesh-brush (or piece of flannel) to the neck and the upper part of the chest. Paregoric and poppy-syrup stop the cough by lethargizing the irritability, and thus preventing the discharge of the phlegm till its accumulation produces a second and far more dangerous paroxysm. These second attacks of croup (after the administration of palliatives) are generally the fatal ones. When the child is convalescing, let him beware of stimulating food and overheated rooms. Do not give aperient medicines; costiveness, as an after-effect of pleuritic affections, will soon yield to fresh air and a vegetable diet.—*Popular Science Monthly*.

RALPH VINCENT'S FIRST PATIENT.

RALPH VINCENT had just returned home after an absence of three years, during which time he had completed his "*college course*," as the phrase goes, though not as the majority of college boys finish their course, but as a few do, who dig and delve deep in the mines of science and literature, and store away precious jewels that shall sparkle and shine with grand light and beauty throughout their after lives. Bravely he had met, grappled with, and conquered every obstacle that had risen in his pathway, and he had come home with more exalted ideas of his duty to mankind, and a great longing in his heart to do something to benefit society; and he sighed as he thought how really limited his knowledge was, as compared with what remained for him to learn. As he stood by the window musing thus, the door of his room opened softly, and he sprang with joy to meet and fold in his arms the darling sister from whom he had been separated so long; but he look-

ed with surprise upon the pale, delicate girl who stood before him.

"Why, Nellie, what is the matter?" he said. "Have you been ill, and did not let me know of it?"

"No, Ralph, I have not been ill, yet I have not been really well for some time," she said, as she laid her head languidly upon his shoulder.

"Now, my dear sister, there is surely some cause for this, and as the wise men have seen fit to bestow upon your humble brother the title of M.D., you shall be the *first* patient, and give a strict account of yourself."

Then followed a kind catechism in regard to her life since he left her; and as he heard the story of fashionable dissipation, of balls, full-dress parties, etc., in which his young sister had mingled, the look of surprise left his face, and one of pain and annoyance took its place, and he said:

"Nellie, I am disappointed in you. The other girls have grown up in the round

of fashion and gayety, and have married fashionable men, and are even now, though yet young, faded women; but you always seemed to care so little for such things, and when I left home no rosier, prettier maiden could be found than my little 'Rosebud,' as I called her. I even boasted to the college-boys of my bonnie sister, with the bright, laughing eyes, cheeks like the heart of a rose, where the dimples played hide-and-seek, and lips whose ruby red would shame the cherries that grow in our garden. And I tell you, Nellie, that vision has done much to help me in my hard work, it was so bright and restful. But what do I find upon my return home? A tall, slender girl of eighteen, with eyes that show only too plainly the dark bistre circles, with cheeks upon which only artificial roses bloom, lips pale and spiritless, and a brow already lined just a little with *ennui*."

"Oh, do not say anything more, Ralph. A despicable picture you make of me, surely. Am I to blame that I can not retain the freshness and health of my young girlhood? Surely I regret their loss as much as you can; but I can not help it."

Passing his arm tenderly around the wasp-like waist, he said:

"Nellie, supposing when those beautiful ever-green trees were young and tender, we had encircled and covered them with a net-work of iron, where would now be their beautiful branches and well-proportioned limbs?"

"I guess they would be either dead, or present a very curious appearance," said Nellie, laughing.

"Or supposing you should gather one of the hardiest of those lovely blossoms, and hold it tightly in your hand for one day, do you think that at night it would lift its head as proudly and as brilliantly as now?"

"Why, Ralph, what an absurd question. You know that I could not press it in my hand for one hour, without its withering and dying from the heat and pressure of my palm."

"Equally absurd, no doubt, would you think me, if I should walk to yonder clock, and grasp its pendulum firmly in my hand, and hold it still, then wonder why the clock did not tick forth the minutes as when left to its own devices. Yet, Nellie, you do think it strange that a bright, healthy, blooming young girl should be shut up in a hot-bed of luxury, should be constantly deprived of her natural rest, should eat late suppers of cake and wine, should dance in heated ball-rooms, or read light, trashy novels until the small hours of early morn, and should confine herself in darkened rooms for fear of getting sun-browned and coarse, and yet should not be just as bright and gay as when out in the bright sunlight, free as the air she breathed. You think it strange that the wonderful *life-clock* that ticks forth our minutes and seconds, should not beat just as regularly and truly with the cruel hand of dissipation laid heavily upon it as when nothing hindered its strokes to and fro. You think it strange that the soft, dimpled limbs and rounded form of early girlhood should not retain their fair proportions, even when encased in a network of steel braces, whalebone, and laces; and when the latter are drawn so tightly that all the delicate and wonderful mechanism of the tender, youthful form is pushed and crowded out of order, until the chest, lungs, and heart are overburdened, and the digestive organs can not accomplish their mission, which is to help the others in their work; and yet you deem it a strange thing that the young life gets to be a burden to itself and others. And do you never think, my sister, that not only is the *body* injured, but the *soul* is hurt by contamination and indulgence? The sense of purity and modesty is sometimes dulled by constant contact with fashion's devotees, who bow at any shrine the capricious goddess may set up, even at the risk of maidenly decency and modesty. A *sin* is committed, which may show its effects through many years to come; for many of these fashion-manacled maidens become wives and

mothers, and transmit to their offspring their weak and disordered natures."

"Why, Ralph, I never thought of it in this light before. I really do not enjoy this round of gayety, and if you can help me back to the freedom and joyousness of the dear old days, I will gladly avail myself of any prescription you may offer."

"That is spoken like my brave little Nell, and now for the prescription. First, you must discard entirely the use of a corset. If stays must be used, purchase some firm drilling, and make a neat-fitting waist, with small light whalebones, if necessary, but be very careful to have it only *comfortably* tight. Then get your riding-habits ready, and we will away with the morning breeze for a gallop over the hills. We will ride and walk, boat and skate; we will bathe in the waters of the blue sea; we will, in fact, drink in all the fresh air and sunlight we can, bidding defiance to Dame Fashion, save when her decrees coincide with our health and comfort. And we will see if, when the rose-buds come again, my own dear sister will not be the fairest and sweetest among them."

We will not follow Ralph and Nellie in their gay rambles; still we have a curi-

osity to know the results of his *first* prescription, so we will visit them after the lapse of three years. Ralph is an established physician in his own town; he has married a gifted and noble lady, who is too proud to bend her neck to the cruel yoke of fashion, and too humble and loving to turn a deaf ear to any cry for help from the poorest of her husband's patients. And Nellie, what of her? If we open the parsonage door (situated very near her brother's house), we shall see her flitting to and fro; and although but a few short months have passed since the orange blossoms sparkled upon her brow, still her husband (one of Ralph's college friends, and an earnest working minister of the Gospel), declares her to be a *helpmeet* indeed in his pastoral work. Under the dispensation of plenty of fresh air, sunlight, and healthful exercise, she has blossomed into what her early girlhood gave promise of, a grand and beautiful womanhood. She often says that she does not "wonder at Ralph's rapidly increasing practice and popularity, if all his patients improve as rapidly under his treatment as did the first one three years ago."

MRS. ETTIE H. DAVIS.

LADY MACDONALD A TEETOTALER.

OUR Canadian neighbors have one strong example of practical temperance in the wife of Sir John Macdonald, so long Premier in the Dominion Ministry. The story of her adoption of total abstinence principles is exceedingly interesting, especially as we have it in her own words in a letter written to a friend in Georgia, as follows:

"I was myself led to give up wine-drinking after some reflection, suddenly, at last on Christmas day, 1866. I had thought a good deal on the subject, but never made any decided resolution until this day, when, at dinner with a large party, the conversation turned on total abstinence. One of our guests, himself a strictly temperate man holding high

office in our country (then and now), said that practically total abstinence was impossible for any one in society. I said, laughingly, 'What a dreadful statement! I quite differ from you.' He took me up warmly, and several joined in, all without exception agreeing with him in saying that the requirements of modern society were such that no one could be so singular as to become a teetotaler without being more or less ridiculous, and that the fatigues, excitement, and wear and tear of political society life especially made the use of wine, in great moderation of course, absolutely a necessity. I entered the lists, I scarcely know why, and declared I did not believe this theory.

"At last the question was pressed

more closely. My friend, who had begun it, said that he did not believe. 'You yourself, Lady Macdonald, could or would not give up your glass of sherry at dinner.' I asked, 'Why not?' and he went over with great force and clearness all the specious and dangerous arguments that are urged in support of drinking wine in moderation, ending with the remark that in Sir John's public position my being a total abstainer would do him great harm politically. This seemed too monstrous, so I said (emptying my half glass of sherry into the finger glass as I said so), 'Well, I will try; henceforward I enter the ranks of total abstainers, and drink to our success in water.'

"Since then, thank God, I have never found any necessity for wine. In health I can do my life's work without any aid from dangerous stimulants; in sickness I have invariably and positively refused to touch it. I have sometimes, for weeks together, days of constant occupation, nights of almost all sitting up. Politics are exciting and fatiguing, and every temptation to try stimulants is to be found in the late nights of listening to anxious debates, and the constant neces-

sity of being up to the mark late and early. I have had a great deal of nursing to do with a delicate husband and child, and this often during our busiest society season; and yet I have never sought strength from wine at any single moment, and my health is far better than that of so many of my friends who take a glass of wine, or a little beer, just to give them a little strength.

"Thus I give you my experience, as far as it goes, to show that stimulant is not necessary in the station of life where it is unfortunately most commonly used. So far as mental and bodily fatigue go, I have tested the possibility of doing without stimulants to the fullest extent, in long anxious hours over sick-beds, in sudden disaster, in long watchings and journeys where food was uninviting, and in many fatiguing and very uncongenial society claims. When I told my husband my decision, and that our friend said that it would hurt his prospects politically, Sir John answered with a laugh, 'Oh, I will risk the prospects; you can be a total abstainer if you like.' My example can and ought to help many similarly situated."

TO A LADY DOCTOR.

Yes, Doctor, your physic I've taken,
That surely should conquer my ills;
The bottle was solemnly shaken,
I dote on those dear little pills.
I've followed your rules as to diet,
I don't know the taste of a tart;
But, though I've kept carefully quiet,
That pain's at my heart.

Of course you've done good; convalescence
Seems dawning. And yet it is true
I fancy the light of your presence
Does more than your physic can do.
I'm well when you're here, but believe me,
Each day when fate dooms us to part
Come strangest sensations to grieve me—
That must be the heart.

Your knowledge is truly stupendous,
Each dainty prescription I see,
I read "*Hausus statum sumendus*,"
What wonder you took the M. D. !
I hang on each word that you utter
With sage Æsculapian art,
But feel in a terrible flutter—
It comes from the heart.

Have *you* ever felt the emotion
That stethoscope ne'er could reveal?
If so, you'll perchance have a notion
Of all that I've felt, and still feel.
Oh, say, could you ever endure me?
Dear Doctor, you blush and you start.
There's only one thing that can cure me—
Take me—and my heart!

—Punch

NOTES IN SCIENCE AND AGRICULTURE.

The Spectra of Stars.—According to *Wiedemann's Annalen*, Herr Vogel has lately struck out a fresh line of observation—that, viz, of the ratio of intensity of the colors in the spectra of stars. The photometer he used (which could be easily adapted to a large telescope) worked on the principle of producing measurable variations of light intensity by polarization. The constant light of a petroleum lamp furnished a comparison-spectrum. In his paper to the Berlin Academy on these researches, just published, Herr Vogel presents a table containing, in the first column, a number of specified wave lengths, and in several others the ratios of intensity of petroleum to fixed stars for those wave lengths, and for seven prominent stars. The intensity ratios of petroleum to electric light are given in another column. It appears that certain stars may be grouped together as showing nearly the same spectrum—i. e., Sirius and Vega; Capella and the Sun come in another group; while the red stars, again, show nearly the same ratios of intensity with each other. In the white stars, Sirius and Vega, the more refrangible parts of the spectrum have much greater intensity than in the yellow stars, Capella and the Sun, and in the red stars, Arcturus, Aldebaran, and Betelgeuse. It is noted that the ratios of intensity of the electric light to petroleum differ little from those of the red stars, indicating, perhaps, a state of glow in these stars comparative with that of the voltaic arc. Herr Vogel further infers confidently that whole stars are in a much higher condition of glow than the sun, with which the yellow stars compare in this respect; while the temperature of the red stars is greatly under that of the sun. The data are also thought to confirm the view which finds the stage of development of stars revealed in their spectra. Herr Vogel made another series of observations of the same nature on the moon and several terrestrial substances, illuminated at right angles by the sun's rays. The moon's surface (which has but little color) may well, he concludes, be formed of such substances as occur on the surface of the earth; a yellowish gray sandstone gives the best agreement with it.

How Long One may Live.—Insurance companies are aware of the credulous weakness of those whose lives they assure, and have therefore compiled numerous tables of expectancy of life for their own guidance, which are carefully referred to before a policy is granted. These tables have been the result of careful calculation, and seldom prove misleading. Of course, sudden and premature deaths, as well as lives unusually extended, occasionally occur; but the average expectancy of life of an ordinary man or woman is as follows; A person 1 year old

may expect to live 39 years longer; of 10 years, 51; of 20 years, 41; 30 years, 31; of 40 years, 28; of 50 years, 21; of 60 years, 14; of 70 years, 9; of 80 years, 4.

Parasitic Worms in Fish.—Mr. Frederick W. True, of the Smithsonian Institute, a rising young student who has taken up the little known subject of intestinal and other parasitic worms, has lately endeared himself to the Ichthyophagous Club by his statement, in *Forest and Stream*, that fishes are more or less populous with these tenants. The salmon has 16 different kinds; the pike at least 20, and the carp so many as a dozen in its native waters. None of them, however, resemble trichinæ "except as a garter-snake resembles a copperhead"; and they are as harmless when eaten as worms in cherries, being out of their element in the stomach of the warm-blooded human. Mr. True, wishing to follow up the useful if not pleasing investigation, invites anglers and sportsmen generally to advance the study of American helminthology by preserving in spirits and sending to him at Washington, D. C., any specimens of parasitic worms which they find in game, fish, and other animals.

A Good Apple.—In the agricultural correspondence of the New York *Tribune* we note some reflections of an old authority, Mr. Josiah Hoopes, on trustworthy apples. He says: "If ever a fruit did better in Eastern Pennsylvania than the *York Imperial* apple in the few years it has been tested, then it must be as near perfect as we can expect. It is as regular in bearing as the return of the seasons; as large as the favorite old Pennock, and as handsome in color as was that variety in 'the good old times' of our fathers; has no imperfections to speak of to mar its glossy red surface; and in quality just that nice commingling of acid and sugar sure to please the majority of judges of good fruit. It is not so rich as the Smokehouse, and yet it is by no means deficient in flavor; nor so spicy as the Newtown Pippin, although it possesses a fragrance peculiarly its own. In the orchard, the outline of the tree is not to be commended, and yet it is a remarkably healthy and vigorous grower, with rich dark green foliage. It will not produce so many apples as Smith's Cider, but there will be more bushels per tree; and as regards value, the *York Imperial* is immeasurably its superior, and always commands a much better price."

Heat Without Fire.—It is said that a machine has been invented in Boston for generating heat without fire. It is simply an iron cylinder about a foot long and a foot in diameter. The bottom of the cylinder is a

hardened plate, upon which another plate of the same diameter turns, the pressure being regulated by a screw, according to the power that is to be applied and the amount of heat desired. All of the space not taken up by the wheel and shaft is filled with water. As soon as the wheel is set in motion, the water is brought up to a high temperature and the cylinder becomes a stove, which radiates heat from the whole of its exterior surface. Of course this machine can only be used in buildings where there is steam power that can be availed of to run the friction wheel. There is entire security against accidents by fire, which is a strong point in favor of the friction heater.

So-called "Fancy Farmers."—A

Pacific coast journal would have the people set right with regard to the honor due to scientific or fancy farming. It says: "They have tested theories, while others raised crops for markets; they have given a glory to farming it would not otherwise possess. Fancy farmers have changed the wild hog into the Suffolk and Berkshire, the wild cattle of Britain into shorthorns, the mountain sheep, with its lean body and hair fleece, into the Southdown and Merino. They brought up the milk of cows from pints to gallons. They have lengthened the sirloin of the bullock, enlarged the ham of the hog, given strength to the shoulder of the ox, rendered finer the wool of the sheep, added fleetness to the horse, and made more beautiful every animal that is kept in the service of man. They have improved and hastened the development of all domestic animals till they scarcely resemble the ones from which they sprang. Fancy farmers introduced irrigation and under-draining; also grinding and cooking for stock. They have brought guano from Peru and nitrate of soda from Chili. They introduced and domesticated all the plants we have of foreign origin. They brought out the theory of the rotation of crops as a natural means of keeping up and increasing the fertility of the soil. They first ground up gypsum and bones, and treated the latter with acid to make manure of peculiar value. They first analyzed soil as a means of determining what was wanted to increase its fertility. They introduced the most improved methods of raising and distributing water. Fancy farmers or fancy horticulturists have given us all our varieties of fruits, vegetables, and flowers. A fancy farmer in Vermont, a few years ago, originated the Early Rose potato, which added millions of dollars to the wealth of the country, and proved a most important accession in every part of the world where introduced. Another of these same fancy men originated the Wilson strawberry, and another the Concord grape. But it is unnecessary to enumerate; any one who will take the trouble to investigate a little or reflect will readily see and will cheerfully accord the praise that is justly due to men that are called 'fancy farmers.'"

How Small Birds Migrate in Europe.—According to a writer in *Nature*, the small migratory birds that are unable to perform the flight of 350 miles across the Mediterranean Sea are carried across on the backs of cranes. In the autumn many flocks of cranes may be seen coming from the north, with the first cold blast from that quarter, flying low and uttering a peculiar cry, as if of alarm, as they circle over the cultivated plains. Little birds of every species may be seen flying up to them, while the twittering songs of those already comfortably settled upon their backs may be distinctly heard. But for this kind provision of nature, numerous varieties of small birds would become extinct in northern countries, as the cold winters would kill them.

How to Preserve Winter Apples.

—Fruit, to retain its good flavor and keeping qualities, should be gathered as soon as perfectly matured. Some varieties, like the Hubbardston and Nonesuch, that can hardly be classed among the winter apples, if picked before overripe, will remain crispy and luscious through the winter months; on the other hand, if the Roxbury Russet was gathered in at the same time, it would not be perfectly matured, and would soon become withered and tough. Our practice has been to pick the apples as soon as ripe, when perfectly dry, rejecting all unsound and green specimens—prefer packing at once in clean sound barrels, press moderately when the head is inserted, and keep in a cool dry place until there is danger of freezing, which is not as early in the season as most people would expect. We next store them in the coolest part of the cellar; if so cold as to freeze water at times in the immediate vicinity, the fruit usually remains unharmed. When the fruit is well assorted and picked, the barrels should not be opened till wanted for use, if it is not till mid-summer of the following year. We know of no better way to dispose of refuse fruit than to use it for feeding purposes for domestic animals.—*Golden Rule*.

More about the Moon and the WEATHER.—M. de Parville has published in the *Journal des Debats* a paper on the temperature of the present year, in which he says certain things more worthy of attention than the old notions respecting the moon's phases. In the course of the article he raises the question as to whether the dryness of the present summer could have been foreseen, and answers it in the affirmative. Having, then, referred to the influence of solar action on the atmosphere, he says: "A very long series of observations has also shown that the moon, which passes every month from one hemisphere to the other, influences the direction of the great atmospheric currents. The changes in those currents, in consequence of the prevailing moisture or dryness, are intimately connected with the relative position for the time being of the sun

and moon. The distance of the moon from the equator—that is, the inclination of the moon's path to the plane of the equator—varies every year, passing from a maximum to a minimum limit; and the meteorological character of a series of years appears to be mainly dependent upon the change of inclination when those extreme limits have been touched. Observations prove that the rainy years, the cold winters, and hot summers, return periodically, and coincide with certain declinations of the moon. In our latitudes the rainy years occur when the moon's declination has touched its extreme limits of 21, 26, or 18 degrees respectively. They are separated from each other usually by periods of about three years, and then six years." M. de Parville then gives a list of rainy years running back to 1783, the most recent being 1879, 1876, 1872, 1865, 1859, 1856, and 1853, in each of which the moon's declination was either 28, 26, or 18, beginning with 26 degrees in 1879 and running back in the order named. The severe winters, he says, coincide, as a rule, within a year of the same declinations. The dry summers come naturally in the middle of the period which divides two wet years. The next wet year ought to coincide with the declination of 18 degrees, therefore with the year 1884, as the last was in 1879 with the declination of 26 degrees. Between the two years comes the period of maximum dryness, and it may be expected therefore that the year 1882 will be another dry year.

Sound Advice.—Among the changes going on at the South, the most noteworthy is the demand for skilled mechanics and engineers, growing out of the development of manufacturing industries. The New Orleans *Picayune*, noting the great rewards given to this class of workers, urges Southern gentlemen to have their sons educated in mechanics and practically taught the handling of tools, instead of training them to the professions, as is the old-time Southern custom.

To Keep Tires on Wheels.—A practical man writes on this subject: "I ironed a wagon some years ago for my own use, and before putting on the tires, I filled the felloes with linseed oil, and the tires have worn out and were never loose. I also ironed a buggy for my own use, seven years ago, and the tires are as tight as when put on. My method of filling the felloes is as follows: I use a long cast-iron heater made for the purpose. The oil is brought to a boiling heat, and the wheel is placed on a stick so as to hang in the oil. An hour is sufficient for a common-sized felloe, of which the timber should be dry, as green wood will not take oil. Care should be taken that the oil does not get hotter than the boiling heat, else the wood might be set on fire and burnt. Timber filled with oil is not susceptible to water and is much more durable. I was amused some

years ago when I told a blacksmith how to keep the tires tight, by his telling me that it was a profitable business to tighten tires; and the wagon-maker will also say that it is a profitable business to him to repair wheels; but what will the farmer, who helps to support the wheelwright and smith, say? A. S. T.

"Chicago, Ill."

Weight of Skull and Skeleton.

—Some relations between the cranium and the skeleton of human beings have been discovered by M. Manouvrier. The weight of the skull varies in a general way with the weight of the skeleton, but not proportionally as the weight of the brain. The weight of the skeleton without the cranium varies nearly in proportion to the weight of the femur. The weight of the cranium is greater relatively to that of the femur the lighter the latter is. The weight of the cranium is much more considerable relatively to that of the femur in woman than in man—a difference so pronounced, that it constitutes one of the best secondary sexual characteristics. About eighty-two women in one hundred have the cranium heavier than the two femurs, while eighty-two men in one hundred have it lighter. The lower jaw is heavier relatively to the cranium in the anthropoids than in man.

A Substitute for Plaster of Paris.

—German physicians and builders, after a series of practical tests, speak very highly of the properties of "tripolith," a substance manufactured to replace plaster of Paris for surgical operations, and for stucco plaster and other work in the building trades. It is manufactured by Messrs. Gebruder von Schenk, of Heidelberg, and is remarkable for the rapidity with which it sets, its lightness, strength, and polish. It is said to resist the action of water very well. It is made of impure gypsum, three parts of which are ground together with one part of silicate of lime, nine parts of the mixture being ground together with one part of coke. The material is then heated and stirred, without the addition of water, at a temperature of 248° F. As soon as the water of crystallization of the gypsum has been expelled, the temperature is raised to 500° F., the product being a gray powder. The color of the dry mass is silver gray, and besides setting in a pure state in four to five minutes, it can be made to harden after five to six hours by the addition of water in which some glue has been dissolved. By comparative test, it was found that after setting it took plaster of Paris 147 hours longer to dry than tripolith. The latter is also 14 per cent. to 16 per cent. lighter, an important advantage for surgical operations and for use in stucco-work. After it has been given a coat of oil, it holds color very well. As it grows older, set tripolith becomes firmer. Tripolith is said to be 30 per cent. cheaper than plaster of Paris.



FOWLER & WELLS, *Proprietors.*

H. S. DRAYTON, A.M., *Editor.* N. SIZER, *Associate.*

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EXTINCT AGAIN!

JUST about three years ago an English magazine published an article with the title "The Old Phrenology and the New," which was copied by a well-known scientific periodical in this country. This article attacked the doctrines of Gall and Combe in a spirit very like that exhibited by their opponents in the days of Thomas Brown, Francis Jeffrey, and Sir William Hamilton, and its objections were much the same as those of the critics in No. 49 and No. 81 of the old *Edinburgh Review*. In the June Number of this magazine for 1879 a clear and candid answer was made to that article; its misrepresentations, errors in technical science, inconsistencies, and illogical deductions were pointed out. There was so much of unfairness in the method of discussing the "Old Phrenology," and so much ignorance of the facts of nervous physiology shown by the aggressive writer, that it, in connection with the answer, would have made a good pamphlet for general distribution—a sort of campaign document for the perusal of the educated public.

In a recent Number of *Belgravia*, an English monthly, the same writer has

published an article on physiognomy, in which he poses as an advocate of that as yet vague and unformulated *moles* of generalities. He can not refrain from a hit at Phrenology; as if forgetful of his tremendous assault upon it a few years ago, he blandly tells his readers: "Phrenology has vanished in the general advance of research regarding the functions of the brain; a region which, apparently without a cloud in the eyes of the confident phrenologist, is even yet unpenetrated in many of its parts by the light of recent experiment and past discoveries. . . . But the knowledge of the face . . . has been more fortunate than the science of brain pans in respect of its recent revival under new aspects and great authority."

More than fifty years ago Mr. Combe had occasion to allude, in a humorous vein, to those of his opponents who insisted that Phrenology had been exploded, utterly routed and destroyed, but who were now and then coming forward to assist it with all the powers of ridicule and satire of which they were masters. To-day we are told the same thing, not, however, by one who is thoroughly competent by his scientific knowledge to judge fairly of the state of the case, but by a stock writer on scientific subjects, by one who does not add to his excellence as a dialectician the personal information of the close investigator.

He certainly can not be very familiar with the literature of his own country, for although nearly three thousand miles distant, we frequently notice in prominent newspapers of England and Scotland allusions to movements of a specially phrenological sort. We know, also, that a magazine devoted to the interests of the "Old Phrenology" is published in

London, with a respectable and growing support; that there is no apparent interruption in the outflow of books on the subject, whose authors are men of good intellectual and social rank; that a very respectable "phrenological museum" has for years occupied a prominent place in Edinburgh, and its trustees are among the "solid" men of that British Athens.

In this country, perhaps, a stronger testimony could be given to the vitality of the phrenological "corpse," but it is unnecessary to go into particulars. The fact is, that most of the truths announced by the early teachers of Phrenology have been gradually absorbed by general physiology, and so become the common stock of science. Here and there among the learned is one who, like Reil, Abernethy, Lewes, and Ferrier, will accord a grateful meed of honor to Gall and Spurzheim for their contributions to our modern knowledge of nerve structure and function; but the rank and file of observers and authors are endeavoring apparently to re-discover the old truths for themselves or to formulate new systems of mental action.

ON POLITICAL MATTERS.

OUR recent national calamity and the changes in official relation which it brought, the special session of Congress and the autumn elections, have produced an extraordinary agitation in political affairs. There have been disruptions, reorganizations, attempts to form new parties and to "improve" the working of old parties. We have heard of movements to cast out alleged renegades from the ranks of this wing, and to suppress arrogant bosses in that wing of active partisanship. Republicans who operate

the old machinery; Democrats who style themselves regular, have stood in fearful suspense awaiting developments which threatened to destroy old party lines and distinctions, and to introduce new measures and new men into the field of party management.

Generally the machinery of the two leading political organizations has been under the control of a few strong and cunning men, and whatever might be the skirmishing in the outer ranks of their followers the working of that machinery has been kept in one general direction. Now those few men who have usually chuckled in glee over the sureness of their hold upon the party helm, have been made to perceive the insecurity of their tenure, in some cases that tenure having been entirely wrested from them despite great and protracted struggles.

Every party contains within itself the elements of its destruction, and it is only due to the sagacity of its leaders that these elements do not become dominant and accomplish their work. High patriotic principles lie at the basis of original party organization, but these ere long are made subordinate or entirely ignored, and demagogism controls. Men ambitious to rule, greedy of wealth, usurp the leadership, and change the whole tenor of the movement. Love of country, of public order and community welfare give place to desire for office for the sake of its emoluments, and from the leader down the spirit of selfishness controls.

This spirit produces jealousies and bickerings among the party workers, and leads to bolder and bolder assaults upon private right, until the public patience is worn out and a sudden reaction crushes the unscrupulous politician under its indignant tread.

The late movements in political circles have been due to agitations originating within themselves, we think, rather than to external influences; but they have been of so marked a character as to draw public attention to the men and the methods by which civil affairs are controlled; and thus people who have been in the habit of letting politics altogether alone or merely voting when elections were in order as a sort of quasi recognition of citizen duty, have been awakened to some sense of the danger to the State which corruption in politics threatens and to which their indifference has indirectly contributed.

Let this awakening be thorough. There could scarcely be a more fitting time than the present. Our country, in so far as its industrial and commercial interests are concerned, has entered upon a new era of prosperity; let this prosperity be made positive and substantial in its effects upon the whole people, in its relation to popular morality and general integrity. Let us see to it that our civil affairs in their administration reflect this prosperity, that men with sound views and decent characters are entrusted with office and authority, men who can understand this prosperity and make it subservient to the moral and social benefit of the community, and conducive to permanent national growth in true greatness.

WHERE CIVIL SERVICE REFORM SHOULD BEGIN.—It must be realized that reform in the civil service, which has become a staple topic in certain literary and political circles, can only be made thorough and permanent through educational methods greatly differing from those in vogue in most of our advanced educational insti-

tutions. Young men are not taught that "The post of honor is the private station," but that a place under Government is the chief of desiderata. So when our young men emerge from college too large a proportion look to public life and engage in the scramble for office, being willing to take any stall in which there may be an opportunity to draw from the public crib. Little or no thought is given to the great army of place hunters already standing at the gates of the hostelry, and still less to the fact that the departments are overcrowded already, and that their efficient working is embarrassed by numbers on the official and clerical staffs.

Office-seeking appears to have become a disease or mania, and it has certainly reached a degree of virulence requiring prompt and vigorous doctoring when people are so affected that they will give up a profitable business to enter the uncertain employment of Government, with but small expectations in the way of salary; when grave and reverend Senators will throw themselves out of their seats because their men do not receive certain appointments, or because new departments are not created in which their favorites may find comfortable sinecures.

We must begin at the bottom and teach our children that the honorable employment of their faculties is to be found in the walks of private life, and that he or she that is diligent in his or her own calling, and upright and successful in that, will win the consideration of the public, and that for such a person the transition to public duties would be easy, and their performance efficient. Let the youth be trained to a knowledge of his capabilities, and impressed with the need of making his way in life by his own efforts. Let him be taught that true independence

and manliness of character are largely dependent upon ability to support oneself, while weakness and effeminacy are outgrowths of dependence. Parents and teachers, instead of presenting to children heroic portraits of eminent statesmen and bidding them to follow these as high examples of success in life, should point to the fact that honest work is not easy in any sphere, especially in a Government office; furthermore, that at present the influence of public service lowers the moral tone, since it brings the incumbent into association and habits which, in a comparatively short time, unfit him for steady and useful work.

Public service should be meritorious, not disreputable, as it certainly is. What merchant cares to employ a clerk who has been in a Government department for a few years and then has been suddenly dismissed? Look around and observe the number of drifting, discontented, corrupt, vicious, and despairing men who were once Government employés! They form a large body among the politicians and street idlers who haunt the dram-shops and pack the primaries. Their chief hope is some petty berth as a reward for their services in behalf of a successful candidate; while they are ever alert for an occasional tip from the demagogue for whom they are always ready to cheer lustily and to drink deeply. The spectacle of these vice-bound wretches should prove a lasting admonition.

WHICH?

A CERTAIN much-advertised "pad" company issues a circular of "instructions" to its patrons, which it enjoins them to follow if they shall expect "to receive the necessary benefit" from

the use of the article. Among these instructions are, that women who have worn corsets shall adjust their clothing so as to "leave plenty of room" about the waist. Those who are constipated, are advised to eat boiled figs in the morning before breakfast; and those who are affected with malaria or bilious disturbance are to take "a hot, strong, clear lemonade each morning for a week or less, as the case may indicate, about ten to fifteen minutes before breakfast, or upon retiring, and take it cold during the day whenever it is convenient. The plain juice of the lemon may also be sucked, as it is most beneficial."

This is pretty good advice in the main, and as the patient is also urged "to make it his business to get well," and to be "as consistent as possible in habits and diet," we can not doubt as to the results of the treatment in the majority of cases wherein the instructions are followed. The query suggests itself in view of the associated *régime*, whether it is the latter which cures or the pad?

WHAT MORTALITY STATISTICS SAY AGAINST WINE-DRINKING.—In urging the principles of Temperance on scientific grounds—a course which is coming to be regarded as necessary to their adoption by the educated—we think that one of the strongest arguments may be drawn from comparative tables of mortality. For instance, in the United Kingdom Temperance and General Provident Institution, which insures in separate sections abstainers and non-abstainers, during the years 1866 to 1879 inclusive, "the deaths among the abstainers were twenty-nine per cent. less than among the moderate drinkers." In the Temperance section 2,002 deaths were "expected"; only 1,433 took place. In the general section 3,450 deaths were "expected," and 3,444 actually occurred.

Our Mentor Bureau.

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.

TO OUR CONTRIBUTORS.—It will greatly aid the editor, and facilitate the work of the printer, if our contributors generally should observe the following rules when writing articles or communications intended for publication:

1. Write on one side of the sheet only. *"It is often necessary to cut the page into 'takes' for compositors, and this can not be done when both sides are written upon."*
2. Write clearly and distinctly, being particularly careful in the matter of proper names and quotations.
3. Don't write in a microscopic hand, as the compositor has to read it across his case, a distance of nearly two feet, and the editor often wants to make changes and additions.
4. Never roll your manuscript or paste the sheets together.
5. Be brief. *People don't like to read long stories. A half-column article is read by four times as many people as one of double that length.*
6. Always write your full name and address plainly at the end of your letter. *If you use a pseudonym or initials, write your full name and address below it.*

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.

AN INTERESTING CASE OF SKULL INJURY.—EDITOR PHRENOLOGICAL JOURNAL: A curious phrenological subject is at present in this place. The entire center of the lower portion of the forehead, comprising Form, Size, Individuality, and part of Eventuality being sunken in to the depth of three-quarters of an inch. The surrounding portion of his forehead is also injured more or less, the bone being fractured so as to protrude slightly as high up as Causality. In the interest of Phrenology I inquired into the cause of the disfigurement, and though I plied him with questions that I judged would bring into action the organs affected by the indentation, I found that so far from being faulty, they were, on the contrary, exceedingly active; for instance, he remembered everything connected with his receiving the blow which sunk in his skull, as stated, which was made by a hinge. He even remembered the shape of the hinge and the date of the occurrence, which was some two years before, and even the occurrences in the

court-room arising therefrom. Now if the phrenological organs are similar in their action to the organs of the body, why were they not affected? No bone was extracted from the wound, so that the indentation was entirely a displacement of the brain; the blow extended to the root of the nose, which presented a flat appearance, and the only change which the man had noticed, was a total extinction of the sense of smell. The person is apparently about thirty. I hope you can give a reason for the above incongruities, otherwise my belief in Phrenology will receive a shock.

J. S. H.

Brownsville, Tex.

Answer: We infer from your statement that the person who received the injury has quite recovered from it, it having occurred two years ago or more; we infer, also, from your description, that the blow as given, expended its force centrally or mainly a little below the root of the nose, and probably while it crushed in the comparatively slight nasal bone and the outer table of the cranium near the root of the nose, it affected but slightly the inner table or that which adjoins the membranous covering of the brain. It may be that this person possessed large frontal sinuses, and that the breaking down of the outer table constituted the chief damage to the lower part of the brain-pan. If you could examine an open skull and take into account the relation of the brain when in its place to the frontal bones and the nasal bone, you would see how a blow delivered at the root of the nose might do considerable damage to the head at that part, but aside from the shock do little or no damage to the brain itself; the frontal lobes might be forced back somewhat, more or less congestion occasioned, and yet if there were no fragments of bone dashed into its tissues to produce inflammation, the person would suffer awhile from congestion, but might quite recover, and wear ever afterward the signs of the injury in the manner of your subject.

Brain tissue is so yielding, so exceedingly soft that it sustains many shocks in the course of an average life without giving its owner more than a passing sense of heaviness or congestion, and the mere displacement of a brain part will not necessarily produce a more than temporary mental disturbance. No doubt that while your subject was suffering from the immediate effects of the injury, he showed considerable mental disturbance. We should be glad to receive from you an authenticated account of the case, if it be procurable.

NORTHERN PACIFIC RAILROAD.—

Question: Can you inform me, through the columns of the JOURNAL, to what point westward the Pacific Railroad reaches, and if there is any part of the Yellowstone Valley not liable to Indian troubles; and if any, what part?

Answer: We are not particularly conversant with the railroad construction of the Northern Pacific, but infer from what we have heard of it that the road is operated as far as the Little Missouri River, a point upward of 350 miles west of Fargo, and nearly on the border of Montana Territory. That part of the Yellowstone Valley which is neighboring to this terminus is now comparatively safe for settlement. Some of our readers in the Northwest can probably supply accurate information on this point, which if it be sent to us we shall promptly give in this department.

HASTY TEMPER.—J. R. D.—An active temperament, ill health, large Combativeness, rather strong Destructiveness, with comparatively weak Firmness, Caution, and Secretiveness, and not very well developed intellect, are associated generally with a hasty, excitable disposition.

THE CLIMATE OF OREGON.—A. S. T.—

The State of Oregon has, as you must know, a large extent of country and is very mountainous, hence it has varieties of temperature and soil. On the coast the climate is mild, no great extremes of temperature occurring; in the Cascade Mountains, with their peaks rising from four thousand to eleven or twelve thousand feet, there are regions of perpetual snow. Western Oregon has a moist and equable climate; Eastern Oregon is dry and variable. In the Southern districts snow falls occasionally, but seldom to any considerable depth, and ice rarely forms more than an inch or two in thickness. In the Willamette Valley flowers may bloom throughout the year, but in the eastern part of Oregon the moisture of the Pacific being shut out by mountain ranges, the temperature is subject to greater extremes than in the west; the winters are rather short and comparatively mild, the summers cooler than those of the Atlantic States.

We are unable to give you recent statistics concerning the soil, price of land, etc., but if you communicate with the State Government at Portland, you will probably receive pretty full information.

PRESIDENT ARTHUR.—H. N. S.—We can not give Mr. Arthur's pedigree on the mother's side; he is Irish, we believe, by descent on the father's side. We are not aware that Mr. Arthur denies the existence of Celtic blood in his veins, and we do not know that there is anything of discredit in that to him or

to anybody who endeavors to live up to a high standard of manhood.

GOOD DETECTIVE.—M. T. W.—To be a good detective requires a strong development of the perceptive faculties, a broad head, and large Destructiveness, Secretiveness, Caution, and Constructiveness; a rather high head in the region of Firmness and a full Occipital region. He needs an even balance of the temperaments so as to hold himself in an easy poise and be unaffected by excitable influences.

FIRESIDE READINGS.—L. M. B.—We do not remember the price of the book you inquire about, but think it is about 50 cents.

MAGIC WAND.—Question: Will you please explain why a forked peach-tree limb will turn in some persons' hands and not others over a vein of water.

F. L.

Answer: We confess ignorance on this subject. A great deal has been written and said in regard to this "magic wand" business; we have published several communications on it, but there seems to be no clearing up of the mystery.

THE LIFE ILLUSTRATED.—Emma C.—

Life Illustrated, a weekly published for a few years by Messrs. Fowler & Wells, was merged into *THE PHRENOLOGICAL JOURNAL*. Our older readers are familiar with the title *Phrenological Journal and Life Illustrated* on the cover previously to the combination with *The Science of Health*.



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 PHRENOLOGIST'S SECRET.—The following is an extract from a letter published in the *New York Sun* a few years ago. It is interesting because of its relation to a very conspicuous event in American crime, and also because it is told by Dr. E. Newberry, who was a practical phrenologist forty years ago, and is to-day a strong advocate:

"In the fall of 1843 I had a phrenological office in the granite building, Broadway, corner of Chambers Street. John C. Colt, the murderer of Adams, the printer, had an office on the floor below mine, where he taught arithmetic and the English language to foreigners. Immediately adjoining his office was Wheeler's Writing Academy, which was separated only by folding doors.

"One day while in my office, having just returned from a lecturing tour in Connecticut, a stranger called and asked me to sell him one of

my packing cases that stood outside near the door. Noticing a large collection of skulls in my office, he said he was not a believer in phrenology, but would like me to give him some proof of its principles. He requested me to tell him the leading traits of his character. He took a seat in the chair and I proceeded to examine his head. Placing my fingers on his head to determine the size of his organs, I perceived a great difference in the relative heat of the different portions of his head. So I abstractly remarked, 'I judge you are trying to get out of some scrape.' His features assumed an alarming expression, and he asked, 'Why do you say so?' I told him that his organs of fear, commonly called Cautiousness, Secretiveness, and Constructiveness, were much warmer than the other organs or parts of his brain. He sprang to his feet and paced to and fro, looking at the floor and at every corner of my office. He then stopped suddenly, and taking up the skull of a pirate, whose organ of Destructiveness stood out like the big end of an egg, he asked me what organ that was. I told him the character of the man. He said, 'If that man acted from organization, how could he be held responsible hereafter?' I replied that malproportion was an evil which punished others and brought punishment upon themselves.

"This led to a conversation upon the laws of perfecting offspring and education. He became quieter, sat down again, and I proceeded to finish the examination of his head. I told him he had a sanguineous, passionate temperament, with large Self-esteem, love of Approbation, and Destructiveness, which greatly dominated over his Cautiousness and Mercifulness, or Benevolence; that should any one offend his pride, he would be apt, at the impulse of the moment, to strike him a death blow. I advised him to use his large Firmness to conquer his passion. He told me that all his family inherited similar traits of character, and that his brother was Col. Colt, the inventor of the revolver. By his card, which he handed me, I noticed he had an office in the same building. He said that I not only proved to him the truth of phrenology, but that it was one of the most useful sciences for the perfection of humanity, and he was determined to devote himself to the promulgation of that science. He asked me to teach him phrenology; that he would compensate me, and feel obliged to me for it. I told him I would be glad to do so, not only for his sake, but for the cause of phrenology. He said he had to go out of town for a few weeks; that upon his return he would call upon me for instruction. As he called at my office to purchase one of the packing cases I had outside of my door, but which I declined to sell, he left, and I thought no more about the matter.

"About two weeks afterward there was a ru-

mor that a murder had been committed in the building. Being busy with my own affairs, it never occurred to me that the man whose head I had examined was the one who committed the murder. In the meantime I moved my office into the basement of the building, and the affair passed out of my mind entirely.

"When the trial was published in pamphlet form I bought it, thinking that perhaps the skull of the murderer would come into my possession, for I was then Warden of the New York Phrenological Society. Judge of my surprise when I found that the murderer was the man who had called to purchase a box of me, and whose head I examined.

"Colt had a work on arithmetic printed by Adams, whom he promised to pay some money within a specified time. Adams called to collect the money, but Colt failed to accomplish what he promised. This led to the difficulty between them. Adams, whose skull I afterward examined, had very small Self-esteem, large Acquisitiveness, and Fear or Cautiousness—the very opposite to that of Colt, the murderer. Such an organization never could appreciate or sympathize with Colt. Failing to pay him, Colt apologized for being compelled to disappoint him. Adams, in reply, made some uncomplimentary remarks that galled Colt to the very quick. Feeling his pride wounded, he seized a hatchet and threw it at Adams' head and broke his skull. The body fell against the folding doors that separated Colt's and Wheeler's offices. Colt, fearing that Adams might groan, struck him another blow on the head, breaking the skull in completely. Adams was missed; search was made after him, and his friends finally traced him to Colt's office. Upon inquiry at Wheeler's, it was ascertained that a fall was heard in Colt's office, and a box was shipped by him to some place out of town. The carman was advertised for and found. He had carted the box to a vessel bound for the South. The box was recovered, and the body in it identified as that of the missing man, Adams. Colt was tried, convicted, and sentenced to be hanged.

"Every effort was afterward made to procure Colt's pardon from the Governor. It was rumored that the Tomb, in which Colt was confined, had been set on fire, and during the excitement a dead body from the almshouse was smuggled into his cell. The report made public at the time was that Colt had committed suicide! But it was generally suspected that he escaped at the time of the fire."

CANDID.—In a recent letter from a valued friend who is devoted to teaching and the dissemination of Phrenology in Georgia, and who has really accomplished a great deal for the cause in his neighborhood, says: "Professor G.

C. L., President of Middle Georgia College, made a most excellent speech (at the close of the last term of our friend's school). After commending the most rapid and thorough advancement of the classes, and the perfect order and discipline and hard work by which it was effected, he said : 'A teacher should be thoroughly versed in the elementary branches of an education ; moreover, he needs to be well posted, and thoroughly understand philosophy, chemistry, geology, astronomy, etc., and most of all, physiology, anatomy, hygiene, and *phrenology*, in which science your honored teacher is an expert.' Thus a man who six years ago said *Phrenology*, etc., would forever ruin me and break up my school, has the man in him to acknowledge publicly his error and embrace the truth."

A very agreeable statement ; there are comparatively few who have the *man* in them sufficiently strong to acknowledge themselves in error publicly when they have taken conspicuous stand against a subject, and afterward been convinced of their mistake.

PERSONAL.

MISS LILLIE SLOOUM is the owner and manager of an omnibus line in Quincy, Mass., upon whose neat and commodious vehicles the people look with much pride and satisfaction.

STATE SENATOR BURTON, of Fort Bend County, Texas, was formerly a slave in Virginia. He was taught to read and write by his mistress, whom he afterward rewarded by supporting her till her death, the war having impoverished her, and sending her daughter a check for one thousand dollars on her wedding-day.

A FAMOUS California Indian named Tenocoe, but baptized Francisco, has just died. He was a young man in 1769, when the first friars landed at San Diego, and consequently very much more than a hundred years old.

MADAME THE MARQUISE DE CHAMBRUN, the great-granddaughter of Lafayette, has lived in Washington for many years, but is now in France. She is tall and very fair, with a marked resemblance to the famous bust of Antinous.

AN ex-Chief Magistrate of the Pitcairn Island colony is visiting San Francisco. He is Russel McCoy, a descendant of one of the mutineers of the ship *Bounty* who took possession of the island nearly a century ago. Only three names of the mutineers are now held by inhabitants of the island. Mr. McCoy reports that the island is the abode of virtue and morality. No intoxicating liquor is drunk there, and crime is almost unknown. In the three years of his magistracy only

two or three trifling disputes came before him for settlement. If "criminals" can make such an exhibition of practical morality, what should "virtuous" people do?

WISDOM.

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

WE take less pains to be happy than to appear so.—LA ROCHEFOUCAULD.

POVERTY, idleness, and honesty never travel together.—BILLINGS.

NONE but the guilty can be long and completely miserable.—GOLDSMITH.

It is one thing to have a house to live in, and quite another thing to have a home to live in.

It is only right that he who asks forgiveness for his offenses, should be prepared to grant it to others.—HORACE.

If you wish to be really happy, take a good deal of outdoor exercise, very little advice, and never run in debt.

COURTESY is a powerful refiner. Treat even a base man with respect and he will make at least one desperate effort to be respectable.

CHARACTER must stand behind and back up everything—the sermon, the poem, the picture, the play. None of them is worth a straw without it.

It is only by labor that thought can be made healthy, and only by thought that labor can be made happy ; and the two can not be separated with impunity.—RUSKIN.

If the world's a vale of tears,
Smile, till rainbows span it !
Breathe the love that life endears,
Clear of clouds to fan it.
Of your gladness lend a gleam
Unto souls that shiver ;
Show them how dark Sorrow's stream
Blends with Hope's bright river.

—LUOT LAROOM.

"HAPPINESS is a fine thing. You should always try to be happy. The happy are rich. They can be always giving gifts. A smile here ; a sweet word there ; a little nod that says, 'I see you ; go bravely on' ; an uplifted finger that says lovingly, 'Not that way ; this path is a better.' If you are really to be a helper, you must cultivate happiness. The sunshine it lives upon comes straight down from heaven. It will grow like a flower."

MIRTH.

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

"MAMMA, can't we have anything we want?"
"Yes, my dears, if you don't want anything you
can't have."

"I HOPE this is not counterfeit?" said a lover,
as he toyed with his sweetheart's hand. "The
best way to find out is to ring it!" was the quick
reply.

If a man really wants to know what the com-
munity thinks of him, all he has to do is to run
for some office, and then read the newspaper
items about himself.

"WHAT a fine, protuberant forehead your baby
has, Mrs. Jones! Did he get it from his father?"
"No," replied Mrs. Jones, "he got it from a
fall down-stairs."—*Boston Transcript*.

MUCH whisky doth your wits beguile,
Your breath defuile, yourself make vuile;
You lose your style, likewise your pyle,
If you erewhyle too often smuile.

It is said that kerosene will remove stains from
furniture. It has also been known to remove
the furniture, stains and all, with the stove and
a red-headed servant-girl thrown in, oftentimes.
—*Webster Times*.

AFTER *Punch*: Dreamy young lady in railway
carriage to cheerful and exceedingly healthy-
looking young man—"Oh, sir, are you aesthet-
ic?" "No, ma'am; I'm a butcher."—*N. Y.*
Commercial Advertiser.

A NEW BRUNSWICK (N. J.) four-year-old, on
seeing the cook take the baked potatoes from
the oven, was astonished at one which had burst
its skin. "Oh, Annie," he exclaimed, "there's
one all unbuttoned!"

A MILLIONAIRE who was looking at a level
tract of land which he had just bought at an ex-
travagant price, said to the agent who had sold
it to him, "I do admire a rich green flat." "So
do I," significantly replied the agent.

SAID TOM: "My friend, your salary's too scant.
But, come what may, I'll not see you in want."
He lost his place,—wrote Tom from need to free
him;

Tom kept his word; in want he ne'er would see
him.

A GOOD-LOOKING old German with long hair sat
down, or rather up, in the barber's chair, and
was asked whether he would have his hair shing-
led. He replied: "Donnerschlag no! I
want some hair koot off. Vy woot you put zum
shingles on it pecaue?"

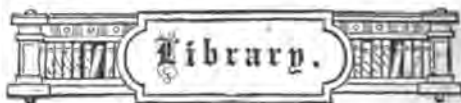
AN old judge of the New York supreme court
meeting a friend in a neighboring village, ex-
claimed: "Why, what are you doing here?"
"I'm at work, trying to make an honest living,"
was the reply. "Then you will succeed," said the
judge, "for you will have no competition."

PROF. GEIGER sat in an easy-chair on deck,
looking very pale. The compassionate captain
asked how he felt. "Miserable, miserable; I'm
sick, captain, I'm sick. I have paid tribute to
Neptune till I have lost everything." "But,"
said the captain, "I see you still have your boots
left." "Yes," said the professor, faintly, "but
they were on the outside."

A RURALIST seated himself in a restaurant, the
other day, and began on the bill of fare. After
employing three waiters nearly half an hour in
bringing dishes to him, he heaved a sigh and
whispered, as he put his finger on the bill of fare;
"Mister, I've eat to thar," and, moving his finger
to the bottom of the bill, "ef it isn't agin the
rule, I'd like to skip from thar to thar."

It is told that a celebrated artist once painted
an interesting picture of a rustic boy sucking an
orange as he sat barefooted intently watching
the village cobbler mending his boots. The
artist called the picture "His Only Pair." Two
stolid-looking persons gazed silently at the work
of art for some time, and then intelligence
beamed over the countenance of one of them as
he made a discovery, "Why, it isn't a pear," he
said, "it's a orange."

A TRAVELER in the South saw a harnessed
team in the field, and the negro hired-man sitting
on the grass and gazing steadfastly toward the
top of a tree. "What are you looking at?"
the stranger asked. "Does you b'long 'bout
hyar?" was the negro's response. The traveler
assured him that he did not. "Well, den, boss,"
said the colored laborer, "I wasn't 'zaetly look-
in' at noth'n up dat tree; I was just tryin' to
hurry up sundown."



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 satis-
factorily 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 vol-
ume 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 pub-
lications, especially those related in any way to mental
and physiological science. We can usually supply any
of those noticed.

THE VERBALIST: A Manual devoted to
brief discussions of the Right and the Wrong

Use of Words. By Alfred Ayres. Uniform with "The Orthoeplist." D. Appleton & Co.

We welcomed "The Orthoeplist" as a very convenient little monitor for the correction of our loose habits in pronouncing many words, and doubtless many others who are compelled, like ourselves, to do a good deal in the way of talking as well as writing, welcome it to their desks, for its circulation has extended beyond ten thousand. Now from the same practical pen comes a companion volume of even greater value to us. Trench, Gould, White, and others have labored to improve us in the usage of exact terms to express our meaning, and have our thanks for so doing. The writers named, however, appear to have had people of good education in their minds when preparing their books, rather than the rank and file of society. Mr. Ayres supplies us with a book which is adapted to the every-day business man, the practical man, and fruitful also in suggestions to the man of culture. He is concise and trenchant in his discriminations, and if we do not agree with him in a few cases we must accord him the credit of making a strong case in behalf of his opinion, and of clearing up much of the confusion which prevails with reference to the use of certain antecedent particles, adjectives, and substantives. For instance, with regard to the use of *an* before some words with the aspirate, as *historian*, *heroic*, the author deems it entirely out of place, a subversing the purpose fully of ease and euphony in articulation. The use of the word *above* as an adjective, is indicated as lacking in authority. The application of adjectives is briefly but well discussed, and an excellent hint given with respect to the position of comparatives in a sentence. Many good writers are very careless in this matter. The use of wrong terms like *administer for death*, *adopt for take*, *aggravate for irritate*, *alone for only*, *calculate for purpose*, *expect*, etc., is made an important topic of consideration, and the field of impropriety in this respect is quite thoroughly explored. We could devote a large space to quotations which we know would be interesting to the reader, but as it would be at the sacrifice of other matters demanding room in this department, we must conclude this brief notice by a general commendation of the book as a valuable little volume on the right use of words for constant reference.

BREAD AND BEER. By Mary Dwinell Chellis, author of "The Brewery at Taylorville," "The Temperance Doctor," etc. 12mo, pp. 381, price, \$1.50. New York: National Temperance Society and Publication House.

A writer who continues to give to the press volume after volume must receive a substantial encouragement from the public, and if that writer's industry is expended in behalf of interests which are productive of the public welfare, he or she is to be congratulated, not only for her

success as an author, but also for the good that her writing must be doing. A long list of volumes can be appended to Mrs. Chellis' name, all being of the character represented by "Bread and Beer." And as we have examined most of them, we know them to possess elements of attraction for general readers, especially the young and its practical instruction. "Bread and Beer" is a social tale in which the moral aspects of the two articles mentioned are contrasted—and healthful principles of living are inculcated—not so broadly as in some of the author's previous tales, but just as effectively, we think.

FASHION IN DEFORMITY. As illustrated in the Customs of Barbarous and Civilized Races. By William Henry Flower, LL.D., F.R.S., etc., with illustrations. 12mo, pp. 85. Published by Macmillan & Co., London and New York.

The spirit of this volume is eminently laudable, as it is in harmony with true social reform, which starts upon a physiological basis. Adopting the motto of a seventeenth century philanthropist, Dr. Flower presents the public with "an Enditement framed against most of the nations under the sun, whereby they are arraigned at the tribunal of Nature, as guilty of High Treason, in Abusing, Counterfeiting, Defacing, and Clipping her Coins instamped with her Image and Superscription on the Body of Man."

This "Enditement" consists in an instructive description of the customs prevalent among the peoples of Oceanica, Asia, Africa, Europe, North and South America, savage and civilized, which are strange abuses of the natural in us. For instance, we are pointed to the practice of tattooing among the native Polynesians, the bandaged feet of the Chinese ladies, the nose and lip ornaments of the Australian or Botocudo, the filed teeth of the Malay, the flattened crania of the ancient Peruvian and of the modern Chinook Indian, the squeezed feet and tormented waist of the representative of "advanced" modern civilization.

Dr. Flower makes a good case against the *refined*, *esthetic* devotees of fashion, and is by no means illogical in ranking us who tolerate painful and health-destroying practices, notwithstanding our boasted enlightenment, with the ignorant and brutal savage. We welcome the book as a help in the battle against error and prejudice.

PUBLICATIONS RECEIVED.

From J. S. Ogilvie & Co., publishers, New York, we have the following recent additions to their "People's Library":

HIS HEART OF OAK. By the author of "Dora Thorne," etc. Complete, paper. Price, 10 cts.—THE SHADOW IN THE HOUSE. By Eliza A. Du-

puy. Price, 10 cts.—**IN THE HOLIDAYS.** By Mary Cecil Hay, author of "A Shadow on the Threshold," etc. Price, 10 cts.—**THE PRIVATE SECRETARY.** By the author of "The Dilemma," etc. Price, 10 cts.—**ROUND THE MOON.** By Jules Verne. Price, 10 cts.—**SHE WOULD BE A LADY.** By the author of "Bridged by his Love," etc. Price, 10 cts.—**THE DOCTOR'S DAUGHTER.** By Mrs. Henry Wood, author of "East Lynne," etc. Price, 10 cts.—**BACK TO THE OLD HOME.** By Mary Cecil Hay, author of "Victor and Vanquished," etc. Price, 10 cts.—**PROPOSING TO HER.** By Emma S. Southworth. Price, 10 cts.—**JANE EYRE.** By Charlotte Brontë. Price, 20 cts.—**A GREAT ATONEMENT.** By the author of "A Girl's Mistake," etc. Price, 10 cts.—**INTO THE SHADE, AND OTHER STORIES.** By Mary Cecil Hay, author of "The Sorrow of a Secret," etc. Price, 10 cts.—**THE FUGITIVES.** By Mrs. Oliphant, author of "An Old Couple," etc. Price, 10 cts.—**A CUNNING WOMAN.** By the author of "Ladybird's Penitence," etc. Price, 10 cts.—**HER FACE TO THE FOX.** By Mary N. Holmes. Price, 10 cts.—**FIGHTING HER WAY; OR, THE BANISHED CHILD.** By Rose Ashleigh (of South Carolina), author of "The Widow's Wager," etc. Price, 20 cts.

NEVER GO BACK ON A TRAVELING MAN; OR, THE BOYS ON THE ROAD. A Commercial Ballad.

"To the Traveling Men of America—the great fraternity who earn a livelihood by their constant 'Grit,' this song is affectionately dedicated.

"Very truly yours,

"ROBT. LORELL."

Published by F. W. Helmick, 180 Elm Street, Cincinnati, O. Copyrighted, 1881, by Charles Baker.

THE CHURCH AND TEMPERANCE. A paper by Hon. William E. Dodge. Read before the Pan-Presbyterian Council in Philadelphia, Sept. 29, 1880, is an eloquent plea for more earnest effort on the part of ministers, in behalf of temperance reform. We hope that it will have a generous circulation among ministers, for there is great need of activity on their part. Did one-tenth of the seventy-five or eighty thousand in this country awake to a practical sense of their duty, a marked change would very soon be brought about in the liquor habits of our people.

THE CRITIC. A weekly publication scarcely six months old, but which should have become well established in the good opinion of the reading public. The Number under consideration contains an admirable portrait of the late Dr. J. G. Holland. The reviews and notes on new books are what they ought to be, as a general thing, short and specific. *The Critic* is published in New York.

ELECTRICITY IN MEDICINE AND SURGERY. With Cases to Illustrate. By John W. Caldwell, M.D., Baltimore, Maryland. This is a publication of a specialist, and contains brief allusions to cases in his own practice, which show that for some diseases electricity is an admirable remedy, and its use in connection with other treatments is beneficial.

CONSTITUTIONALITY OF PROHIBITION. The Law as laid down by the Great Jurists of the Country. By Hon. Oliver P. Mason, ex-Chief Justice of Nebraska. A useful pamphlet for those who are employed in temperance work; convenient for the pocket. It contains a brief exposition of the legislation affecting prohibitory enactments. A wide range of legal opinions and discussions are cited. Price, 10 cts. Published by the National Temperance Society of New York.

INDICATIONS OF CHARACTER. 'Fowler & Wells. The Jersey City *Herald* says in a notice of this book: "Until we give our attention generally and individually to the exploration, scrutiny, and analysis of our mental faculties, we can not claim to have properly prepared ourselves for the battle of life, or for progress in the higher elements of our spiritual and material civilization."

THE JOURNAL OF COMPARATIVE MEDICINE AND SURGERY. Devoted chiefly to the anatomy, pathology, and therapeutics of the lower animals. Published by W. L. Hyde & Co., of N. Y. This quarterly improves with age; its general articles and collected items must be of great value to a veterinary surgeon; while general practitioners can derive many useful hints from its perusal.

THOMAS BROTHERS' MUSICAL JOURNAL. Published at Catskill, N. Y. An attractive monthly adapted to general circulation; published at a low price.

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