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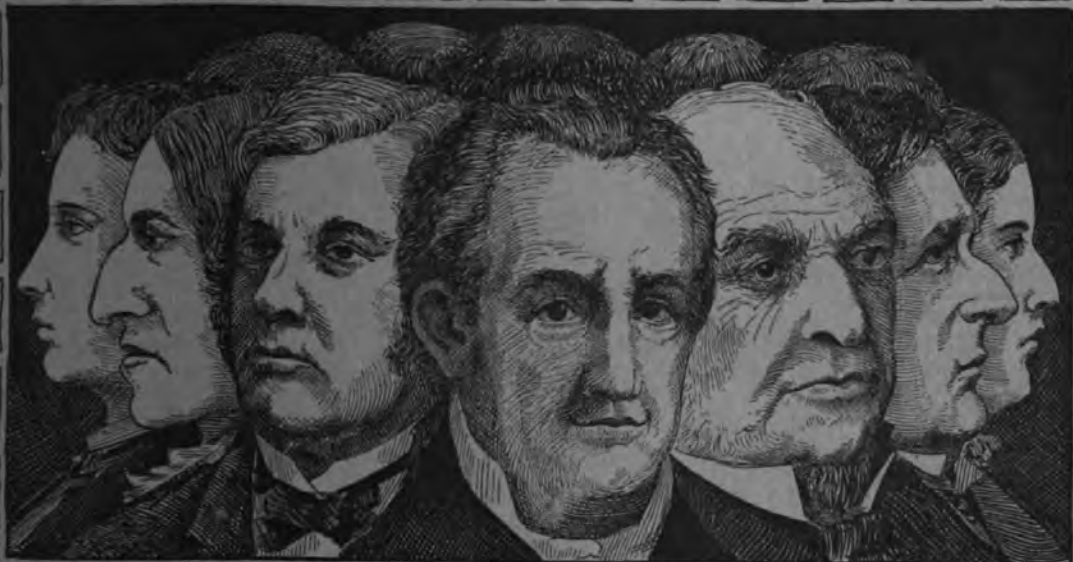
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THE
PHRENOLOGICAL JOURNAL
AND
SCIENCE OF HEALTH.

NUMBER 1.]

JANUARY, 1889.

[WHOLE NO. 601.



GENERAL PHILIP H. SHERIDAN.

GENERAL PHILIP H. SHERIDAN.

THE death of General Sheridan has removed from life another veteran leader whose military career has been that of high distinction. The few that remain North and South may well receive the earnest consideration that talent and high moral qualities in the old soldier should command. General Sheridan was one of the youngest commanding officers of the army in the late war, but early in its course he won a brilliant reputation for courage and executive capacity. As one of the veteran officers of the regular army, and yet scarcely beyond middle life, the announcement of his illness in the spring of last year operated like a shock upon the public. The disease being a valvular affection of the heart that usually proves fatal, there was at once a strong expression of sympathy and regret from all parts of the country. Medical skill availed only to mitigate his sufferings and to retard the fatal result. On Sunday, August 5th, in one of the attacks that accompanied his malady, the man who never flinched in the face of danger and counted no exposure too great for his physical powers, succumbed, and died at Non-quitt, Mass., whither he had been taken on a Government steamer, and where for a few weeks he had appeared to improve.

In a discussion of Mr. Sheridan's character over twenty years ago, Mr. S. R. Wells said :—

“What do we see in the organization of this gentleman?”

This: “A snugly built, compact, and hardy physical system, and a well-proportioned brain. The chest is full, and the lungs, heart, and other internal organs sufficient for the elaboration of vitality with which to supply an active, wide-awake, and vigorous mind.

“His is a healthful organization; and his pursuits of late have been such as to develop his power of endurance, as well as to quicken and intensify his mental

operations. There is no excess of adipose matter in this temperament; it is fairly mixed. The nervous, sanguine, and bilious predominate, with only enough of the lymphatic to lubricate the machinery. Nor is there any marked disproportion in the phrenological developments. The brain is high from the ear to the top, and sufficiently broad at the base, and long from Individuality to the occiput. There is, therefore, a high degree of ambition, stability, moral sense, and trust; together with great executiveness and tenacity of purpose, with just cautiousness enough to give prudence without fear or timidity.

“There is sufficient self-esteem to give assurance and self-reliance, and sufficient intellect to give practical common sense. That he is decidedly prompt and plucky, is evinced by both his phrenology and physiognomy. The eyes are set well apart, and are prominent and expressive. The nose is long, full, and pointed, with no beef about it. The upper lip, long and full. The chin long and prominent, the jaws strong and massive, and the neck rather short and large. The hair is fine, but wiry and tough.

“The perceptive faculties, as a class, are large, and so are the reflectives. Causality, Comparison, Mirthfulness, Constructiveness, Form, Size, Weight, Order, Individuality, and Calculation are all large.

“As a soldier, he would do his work quickly and thoroughly—leaving no stone unturned to accomplish a desired object. If he is not the most scrupulous of men, neither is he cruel or vindictive. On the contrary, he is kindly disposed. He is also confident and self-relying, respectful and affectionate. As a surgeon, he would do his work thoroughly and quickly, notwithstanding the groans of his patient. He has no vindictiveness or malice, but is governed in his action by his best judgment, sanctioned by the moral sense, as to what is right and ex-

pedient. He is eminently a man for an emergency.

"Acquisitiveness is not large, so that he may not fully appreciate the true value of property, but he would never keep the shilling so near the eye that he might not see the dollar beyond.

"Had he been educated for a learned profession, law would probably have been the first choice, or the most appropriate; surgery and medicine the second. It is, however, certain that he would have made an admirable navigator or explorer, or a good railroad man. His organization and temperament are somewhat like those of General Grant; and we are not surprised that he should have been selected by that officer for the station he now fills. He will not disappoint his friends or the people; while his opponents will give him credit for being true to his trust, and for doing his work thoroughly and well."

Philip H. Sheridan was born in Somerset, O., on March 6th, 1831. His parents were Irish, and had come to America only three years before his birth. He was sent out to earn his living in a dry-goods store when he was thirteen years of age, and served four years in that station, and then at last succeeded, very unexpectedly, in getting a nomination to West Point. He was graduated in July 1853, and appointed immediately to a post in the army with the brevet rank of second lieutenant of Infantry.

When the war broke out he was serving as Captain of the Thirteenth Regiment of the United States Infantry, but his superior ability had already been recognized, and he was appointed Quartermaster to Gen. Halleck in the Mississippi campaign of 1862. His qualities as an inspiring leader on the battle-field marked him out for rapid promotion, and before that campaign ended he was made Colonel of the Second Michigan Volunteer Cavalry. After the memorable engagement at Boonville, Gen. Rosecrans reported his "fearless gallantry" and recommended him for further pro-

motion. President Lincoln gave him the commission of Brigadier-General of Volunteers. His career after that was one of great activity and usefulness to the Union cause. He led the advance in Kentucky at the head of the Eleventh Division, took part in the battle of Perryville, and was in the subsequent notable march to the relief of Nashville. He was assigned to the command of the Cumberland, and with his division did brilliant service in the Tennessee campaign, particularly at the battle of Murfreesboro', where his splendid work secured his promotion to the rank of Major-General. He was a conspicuous figure in the actions in and about Cold Harbor, and on August 4th was put in command of the Army of the Shenandoah.

It was in October, 1864, that he made the famous ride on his war horse to Winchester that is the subject of Thomas Buchanan Read's familiar and stirring poem, "Sheridan's Ride." He dashed into the panic-stricken ranks of Union soldiers who were fleeing from General Early. His presence acted like magic in restoring the hope and spirits of the fugitives. They rallied around the gallant little commander, and he charged upon Early's force, who hadn't dreamed of his coming to the front, and drove them back in disorder. He practically turned a sorry rout into a notable victory. This feat won him the familiar title of "The Hero of Winchester," and the honor of an appointment of Brigadier-General in the regular army, and the special thanks of Congress.

From February 27, to March, 1865, he made a great raid from Winchester to Petersburg. He was in the Richmond campaign from March 25 to April 9. On April 1 he defeated the Confederates at Five Forks, which battle compelled the abandonment of Petersburg and Richmond by the enemy. He gallantly led the pursuit of the Confederate commander, General Lee, and was present at the final capitulation, April 9.

After the war he held several import-

ant and responsible positions, and finally on the retirement of General W. T. Sherman in February, 1884, he was made Commander-in-Chief of the United States Army, which position

he held when he died. General Sheridan married late in life, and by his death leaves a widow and four children, three girls and a boy, the latter about seven years old.

TO-MORROW.

WHAT if we walk the wastes of life to-day—
Weighed down by cares and sick of heart
with sorrow;
There waits for us across the dreary way
The golden dawn and splendor of To-mor-
row.

To-morrow
Our path shall blossom like the meads of May.

From Heaven's peace we feel to-day outcast,
We marvel if God marks the falling sparrow,
And to the shorn lamb tempers the fierce
blast—

Ah well! We shall get back our faith To-
morrow.

To-morrow
Our doubts and fears and travails will be past!
To-day we hug our chains and nurse our
smarts,

And have no courage to pluck forth the ar-
row

Pressing with venom'd point into our hearts—
But we shall be more firm and brave To-
morrow.

To-morrow
We shall more nobly, wisely act our parts.

To-day our souls are torn with death-like
throes,
But in the furrows scarred by torturing har-
row,

The Master of Life's seed-fields patient sows
The harvest we shall reap with joy To-mor-
row.

To-morrow
Our wilderness shall blossom as the rose!

ANNIE L. MUZZEY.

UNFULFILLED ASPIRATIONS. — Many
Theresas have been born who found for
themselves no epic life wherein there
was a constant unfolding of far-resonant
action; perhaps only a life of mistakes,
the offspring of a certain spiritual gran-
deur ill-matched with the meanness of
opportunity; perhaps a tragic failure
which found no sacred poet, and sank
unwept into oblivion. With dim lights
and tangled circumstances they tried to
shape their thought and deed in noble

agreement, but after all, to common
eyes, their struggles seemed mere incon-
sistency and formlessness; for these later
born Theresas were helped by no co-
herent social faith and order, which
could perform the function of knowledge
for the ardently willing soul, their ardor
alternated between a vague ideal and the
common yearning of womanhood; so
that the one was disapproved as ex-
travagance and the other condemned as
a lapse.

GEORGE ELIOT.

BE FREE.

IF a reserved seat in heaven could be
bought for a few thousand dollars;
or if good health and happiness could be
had for the money, there would be an
immense demand for tickets entitling
the holder to healthy, happy life here
and hereafter.

All the energies of one's being would
be bent to make enough money to pur-
chase at least one ticket for himself, and,
maybe, another for wife or child, in-

fluent friend or weakly neighbor.
But he wouldn't help his enemy up
there to a seat beside him. O, no. But
for himself there would have to be a
ticket without fail; he would work for
it, and maybe starve or steal for it.
Every Irishman and Englishman would
readily fight for it; and all the people
would come forward ready to do a great
deal to obtain it. But just stop them and
say, the tickets are not to be had in that

way. It is not the *doing* so much as the *being* something that is required. You must be free men : the people are enslaved, and the longer they remain in bondage the harder do their taskmasters become, and the more hopeless and helpless are the efforts made to escape.

The people ask for health. O, yes, they say they want bodily vigor, and will gulp down, greedily, bottle after bottle of noxious drugs for the purpose of making them feel well "after taking." But tell them to live temperately, carefully observing nature's laws, and they turn away sorrowful.

Something has the mastery over them, and it requires too much of an effort to break away into right living. Give them bitter doses and they will swallow them ; only let indulgences be had for the buying, and people will contentedly sin away. Their conduct says : Appetite or passion is my master, and I do not possess moral strength enough to break loose.

Whatever a man does that his knowledge, reason, and conscience disapprove of, has enslaved him to that extent. If he eats what he considers injurious, or takes one mouthful of food too much, or one swallow of a drink when conscience says, "Don't" ; or if he thinks a thought or performs an act that he deems not right, or assents to a wrong, he does a double evil, a wrong action, and a hurt to his inner consciousness ; he weakly yields a point, and evil has gained one step more in the mastery over him.

There are those who live in subjection to the will of others who control them in nearly all they do ; but there are many more persons who have enslaved themselves and are so blind they will not see, or the will power is so weak that they tamely submit to be ruled by whatever their senses crave or ask for. Custom, or somebody's opinion, controls their outward acts, and maybe ignorance and indolence have bound shackles upon them, and they are as submissive to

wrongdoing as though strong irons were clinched upon them and they did not know the iron to be old and rusted and breakable. There is nothing in life so sweet as freedom, and surely no human creature has a right to enslave or be enslaved by another.

In nature there is a charm where the wildness and freedom and beauty of hill, stream, and forest are far from haunts of man ; and one trammelled by society and hampered by others' opinions can but feel a secret gladness to sometimes make an escape here ; and he almost envies the birds and squirrels as they frolic about in outspoken glee. Well may a man stand amid nature's boundlessness and, drawing himself up to his full height, shout aloud : "Give me liberty or give me death !" while a feeling of invigorated life goes tingling from his finger tips down to the bottom of his boots : maybe they are tight boots, that give an unpleasant tingle to corns and bunions, and the man's feet are not free, they have been bound and warped out of symmetrical shape.

It is said that you can not take an Indian from his natural wild state of living and in any way tame or enslave him. The delight of freedom is too strong in his nature to allow himself to be bound in civilized fetters.

White men, in their boasted superiority, should have an innate love of liberty so deep and abiding that they could stand with a straight independence and declare themselves free in every best sense of the word.

In Palestine there is a turtle-dove that, if kept in a cage, will droop and die. It is of so free spirit that it can not bear imprisonment. There are some human caged birds drooping and dying because their best powers and faculties do not have free play ; and when they would spread their wings and fly out in one direction, they strike against the wires of poverty, ill health, other people's opinions, social custom, or some hindrance they do not feel strong

enough to break through, and finally lie drooping in the bottom of the cage, benumbed and dead to all life's best things; they have not watched for a crack in the door, or, by a course of fasting and prayer, made themselves lean enough to crawl through some opening between the wires.

Work and worry are often bad masters, but an active, worthy doing is an excellent servant and safe body-guard. The most domineering masters will make the most slavish underlings, and to determinedly assume the mastery of a wrong, will make it crouch to the dust.

How many persons will say: "I know this is not quite the right thing to do, but others do it, and it is no worse for me than for them." Satan, I think, gently pats us on the head when he whispers to our conscience: "Others do the same, and it is no worse for you."

Healthful activity is healthful life; and brain, heart, and body should be so fully occupied that there would be no room for evil to creep in and secure an abiding place.

Right living, combined with the best possible use made of all our faculties, implies the noblest, happiest, broadest freedom to which man can attain; the grandest freedom to all healthful bodily functions, freedom to the best uses of the intellect, a free play to the moral and spiritual nature, and the most harmonious social life attainable. There is nothing in life sweeter and dearer to a noble nature than freedom.

Be strong in whatsoever is right and best, be free from every wrong entanglement, and you will have a ticket that will pass you into an eternal heaven.

LISSA B.

THE LESSON OF CONTENT.

EACH day on unreturning wings
Its task of honest duty brings,
And he who like the lark that sings
 With rapture on its spiral way,
Performs his work with hopeful cheer,
However small or vast his sphere,
Will find that heaven is always near
 The songful soul that cheers the day.

The modest minstrel of the sky,
Soaring to heaven's windows high,
Flooding with music far and nigh
 The rapt heart in the human breast,
Aims not at portals in the sun:
But when its airy task is done,
Unconscious of the honors won,
 It flutters to its lowly nest.

Could I put heart-pulse into speech,
This is the lesson I would teach:
Whatever is beyond thy reach
 Strive not with anxious soul to get.
When pride misleads, at last we find
That we have lost sweet peace of mind,
Kindled the envy of our kind,
 And made ourselves the slaves of debt.

The sparrow can not soar and sing,
Like the sky-lark on vibrant wing;
And yet the small, brown, twittering thing
 Falls not unnoticed from on high.
Its mission is among the leaves;
Its home beneath the cottage eaves;
And not where rain and sunlight weaves
 A bow across the arching sky.

GEORGE W. BUNGAY.

NOTABLE PEOPLE OF THE DAY.—No. 15.

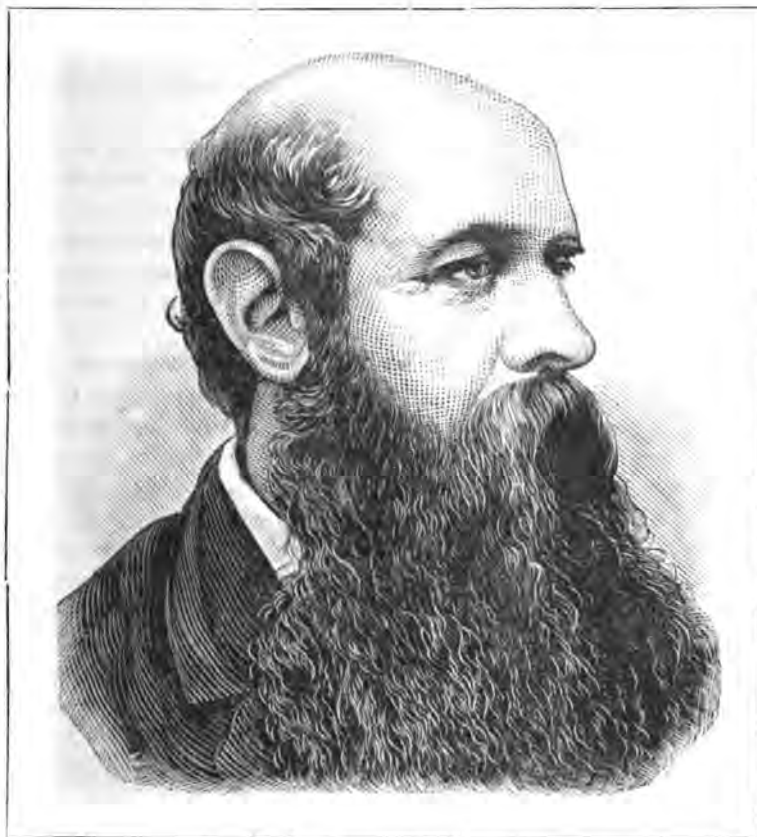
SIR WILFRID LAWSON.

A POSITIVE, emphatic organization this, suggestive at first glance of the stanch old Covenanter, and we trow that a glance backward in his genealogy will bring to view the alliance of his blood to one of those stern old fellows who staked his all for opinion's sake. The

temperament is of that sort which gives solidity to a mental constitution whose bias is toward steadfastness and resoluteness. With so marked a crown and that type of body, Sir Wilfrid should be like the rock of Gibraltar when his mind is made up. He is the man to sup-

port an unpopular measure; opposition braces him up and stimulates the action of his faculties. In a quiet atmosphere he is like the sleeping lion. He has a decided character that is known to all, but the energy that is his requires occasions above the commonplace for its development. Small matters do not awaken more than a passing attention. He is not, however, unmindful of de-

tions, sharp in drawing the line between the good and indifferent, whether it concerns moral or physical affairs, and therefore, considering the apparent breadth of his head, severe in censure. He would be a judge whose rulings would have the character of a rather severe impartiality as his intellect and conscientiousness sustaining that great Firmness are not offset by so marked a de-



SIR WILFRID LAWSON.

tails, for his perceptive organs are by no means small, but he is organized for a broad field of action, for the wholesale rather than the retail department. His intellect appreciates principles, and is philosophical in its range. To plan, to organize, is native to him; to inspire others, to superintend their performance of the work his proper field. We infer from the expression of his face that he is critical, and close in his discrimina-

velopment of Benevolence as to give him an undue bias toward generosity. His sense of duty prompts him to deeds of philanthropy that are based upon a broad plane of principle and have a wide effect, and thus commend themselves to his impressions of expediency.

Sir Wilfrid Lawson is the son of the late Sir Wilfrid Lawson, of Aspatria, Cumberland, a family that has been prominent in the county for nearly

three hundred years, and received its baronetcy from James I. He was born September 4, 1829, and succeeded to the title and estates on his father's death, in 1867. From an early age he has been an advocate of the Temperance movement, and is now the leader of the United Kingdom Alliance, organized to promote temperance legislation in Parliament, and its recognized spokesman in the House of Commons.

At the general election of 1859 he ran in conjunction with his uncle, the late Sir James Graham, as a candidate for the representation of Carlisle, and was elected by only a very narrow majority over his opponent, a gentleman of great influence in the locality. In March, 1864, he first moved for leave to introduce the measure now so well known as the Permissive Bill, the main principle of which is the giving to two-thirds of the inhabitants of any parish or township of Great Britain an absolute power to prohibit the issue of licenses for the sale of intoxicating liquors within their districts. This measure at first was supported by only forty members out of six hundred and sixty-five.

In 1865, Sir Wilfrid was displaced at the general election by his former opponent, Mr. Hodgson; but at the election three years later, on appealing to an enlarged constituency as a supporter of Mr. Gladstone, he was re-elected. He succeeded on June 18, 1880, in gaining a vote of the House of Commons indorsing the principle of his measure. It carried no legislative power, but it was an expression of the opinion of the House that such a measure would be beneficial. It was known as the Local Option Resolution, and was passed by a majority of twenty-six.

In 1885, he was a Parliamentary candidate for the new Cockerthorpe division of Cumberland, but was defeated by a Conservative majority of ten. In 1886, as a Gladstonian Liberal, he gained the seat by a considerable majority. He is a familiar figure in the House of Com-

mons, where, as in the country districts, he is very popular. His speeches, enlivened with humorous touch and racy anecdote, are appreciated even by those who differ with him. He is inclined to pacific measures in the government policy; hence his opposition to war and perpetual pensions, is well known. He also consistently opposes every year the custom of the House of Commons to adjourn on the day of the Derby, the great English horse-race, though he is never successful in inducing the House to sit.

When members see him rise they expect some expression that involves an adherence to duty and religion, some resolution that may strike at a favorite usage, and so they are prepared for a laugh: that does not at all disturb his well-kept equipose.

Sir Wilfrid is a member of the established church, but a broad or evangelical churchman. At the late meeting of the Baptist Total Abstinence Association he was made chairman, and conducted the proceedings with ability. In the course of the discussions he frequently participated in them and called attention to a debate that had just occurred in the House of Commons when fourteen speakers condemned the extension of the liquor traffic to the native races of India. He was glad, he said, that they had got as far as protecting the native races, but they should also protect their own countrymen. He wittily remarked also, that "the House of Commons had declared that no man should deal in alcohol unless he had a good moral character, and that put the liquor dealers on a separate footing from other people, and the magistrates were very particular. Well, he was sure if he applied to a bench of Tory magistrates, he would not get a license. The licensed victuallers were respectable—they said so themselves. They congratulated themselves at all their anniversaries and dinners that they had got through another year respectably without getting into jail."

DANIEL HAND.

THE NEGRO-CHILD'S FRIEND.

"How very Southernish," one might be inclined to say on looking on this portrait. It certainly reminds us of the old style Southern gentleman, one of the Calhoun or Polk style, especially in the expression and pose, while the dress is old-fashioned enough.

Mr. Hand, however, is of New England parentage, and if the physiognomy

and intimate an organization of superior quality. The nervous elements are marked, but there is vital capacity enough to supplement them, and impart to brain and body an unusual degree of elasticity and tenacity. Such a man is constitutionally active, resilient, enduring; his mental faculties are alert and susceptible. The twinkle in those



DANIEL HAND.

be suggestive of the man born below Mason's and Dixon's line, it must be that nearly fifty years of residence and active employment in a Georgia city before the opening of the late war, are to be credited with the production of such natural changes as climate and association will in time effect.

The features are clear-cut, delicate,

keen eyes, which the engraver has well brought out, shows a bright, prompt mind on both the intellectual and moral sides. We should say that his disposition has much of the cheerful and happy in it, so that obstacles, accidents, and misfortunes have never pressed so heavily upon his spirit, that he could not discern a ray of sunshine on some side or from

some point of view. He is an ambitious man; always entertained rather high aims, and enjoyed success much. A large degree of acquisitiveness is evident in his portrait, but the elevation of the head with its full, strong, moral nature shows that the motives to gain must have been colored by principles of a sort that removed him from the sphere of a mere self-seeker. Very decided in opinion, and perhaps to strangers appearing reserved and haughty, he nevertheless possesses a strong social disposition, and enjoys the inner, confidential familiarities that belong to true and tried friendships.

Daniel Hand's recent gift of a million or more dollars for the education of colored children in the South has brought him conspicuously before the public, and the fact of his Northern origin and long residence in the South renders his deed of philanthropy notable. He comes of a family that is traceable to Puritan origin, his earliest American ancestor being John Hand, of whom Dr. Alvin Talcott, in his record of the earliest settlers of Guilford, Conn., gives the following account: "John Hand was a leading member of a company that emigrated from Maidstone, Kent, England (about 1635) first to Lynn, Mass.; but not liking that place they sent a delegation to the east end of Long Island, then in possession of the Indians. Their report was favorable, and through the Governors of Connecticut and New Haven they purchased a tract of land for settlement for thirty pounds, naming the place Southampton. In 1648 John Hand was one of the original patentees of East Hampton, and resided there till his death, in 1660. John Hand's name stands first in the documents relating to the purchase of land from the Indians, and first in the list of civil magistrates.

Daniel Hand is also the last representative of the family name in Connecticut, excepting a brother, Judge Hand, formerly of Detroit, who, like himself, is without family, and a maiden

cousin of even greater age than himself. Hence with him dies out another of the old Puritan surnames, which have survived on Connecticut soil for upward of 250 years.

Born in 1801, in the neighborhood where his forefathers had lived for five generations, he was brought up in the simple manner of those homely Connecticut people and when old enough looked to the outer world for opportunity to achieve fortune.

At the age of seventeen he went to Augusta, Ga., in charge of his uncle, Daniel Meigs, an old Augusta merchant, whom he succeeded in business, and there he lived continuously till about the beginning of the war, in 1861. About fifteen years before the breaking out of the war, Mr. Hand had associated with him in his Augusta business George W. Williams, a native Georgian, who had previously been in his employ as clerk for some years. It is in regard to the relations of Mr. Hand and Mr. Williams that the newspapers have "muddled" matters unnecessarily, and we use the account of a *Tribune* correspondent in stating what these relations were.

Some years before the war, Mr. Williams had established a branch of the Augusta business in Charleston, under the firm name of Hand, Williams & Wilcox (Mr. Wilcox, the junior partner, being a nephew of Daniel Hand). When the war came on, Mr. Hand's capital was largely employed in the Charleston business, Mr. Wilcox having succeeded to the Augusta business and withdrawn from the Charleston firm. Mr. Williams, as a Southern man, continued the Charleston business during the war, having the use of Mr. Hand's capital, which the Confederate Government vainly endeavored to confiscate by legal proceedings against Mr. Hand, on the ground that he was a Northern man of pronounced Anti-Slavery sentiments.

Mr. Hand seems to have passed the ordeal of this inquisition, and quietly re-

tired to the mountains of North Carolina, and there spent his time in reading and waiting for the final result. After the war he came North and left it to his old partner, Williams, to adjust the business and make up accounts, voluntarily allowing him almost indefinite and unlimited time for doing so. When this was accomplished, Mr. Williams quietly came North and handed over to Mr. Hand his portion of the long-invested capital and its accumulations.

Of the truth of this statement the editor of the PHRENOLOGICAL is personally cognizant, as he has had from Mr. Williams himself, an old friend of the cause represented by this publication, a statement of like tenor.

It may be added that at a time when to all appearance the entire bulk of his

fortune was in imminent jeopardy of total loss by reason of unfortunate cotton speculations in which Mr. Williams became involved, and when creditors and suits were pressing him on every side, Mr. Hand stood aloof from any step toward pressing or securing his claim, and quietly remarked "If Mr. Williams lives he will pay his debts. I am not at all concerned about it."

Mr. Hand's philanthropic spirit has been shown in other ways, his aim being to devote to uses of a public and private sort the wealth that has become his—in the simple performance of an ordinary vocation. For several years he has lived in Guilford, near the place of his birth, where an academy bearing his name is one of his gifts to the people.

EDITOR.

THE EMIN BEY RELIEF EXPEDITIONS.

THE heart of Africa, for so long a period as to embrace this generation and the last, has been an unsolved enigma to the philanthropist and apostle of Christian science. With the lamented Dr. David Livingstone are associated the difficulties and the conditions described that embarrass the explorer, investigator, and teacher in any part of the regions known as pagan Africa: pagan because unknown to Christian nations.

Henry M. Stanley has shown to the world the circumstances into which one is plunged who undertakes to open up the absolute condition of the "dark continent," and to detail the barbarous propensities of its natives. Everyone can readily perceive with what perseverance and heroism the expeditions heretofore undertaken have been for the most part sustained, and the published reports show the principal needs and the principal obstacles to be overcome ere success is attained. These reports fairly considered from one standpoint and another, lead to the definite conclusion that the field for Christianizing the country be-

low the eastern equatorial region, is large, and abundantly supplied with materials for operation.

A few nations have looked into this state of affairs in Africa, and promoted expeditions of discovery and colonization; England, France, and Germany have been especially prominent. England has, perhaps, more home interest in Africa than her contemporaries, and she has, in her way, led in these movements. France, of recent date, has done nothing remarkably efficient, although she seems to have not forgotten the existing claims on her generosity, while Germany may safely put forth her hand for the palm of thanks and appreciation owing to very recent efforts in this direction.

The affair in which general interest is centered now is the expedition sent out a while since by the German Government, headed by a German physician and scientist of some eminence, Emin Pasha, as he is generally called, his real name being Schnitzer.

Of his attempt to penetrate far into the terrible wilds, everyone has to a

more or less degree, read or been told, and it is to relieve him from his embarrassed position on the upper Nile that the Stanley and other expeditions have been arranged and are now being carried into effect.

Dr. Schnitzer is a native of Silesia, and about forty-eight years of age, having been born March 28, 1840. From

returned soon afterward to Germany. In 1876 we find the adventurous German in the service of the Egyptian Government, that had sent him to negotiate with the Governor General of Soudan. He was then known by the name Emin Effendi, which he had assumed that he might the better act in his official capacity. With many years of experience



EMIN PASHA.

early youth he evinced a strong desire for investigations in natural science, and after completing a course in medicine he went to Turkey, where opportunity brought him to the notice of Ismail Hakki Pasha, with whom he visited Armenia, Syria, and Arabia. In 1873 his patron died, and Dr. Schnitzer

and life among the Turkish people, he had become so familiar with their language and customs as to pass for one.

General Gordon took him into his confidence and intrusted him with duties of a difficult nature. He made a journey of inspection through the country, and a mission to Uganda to meet the re-

nowned King Mtesa, and won a high reputation by his successes. He entered heartily into the effort of Gordon to

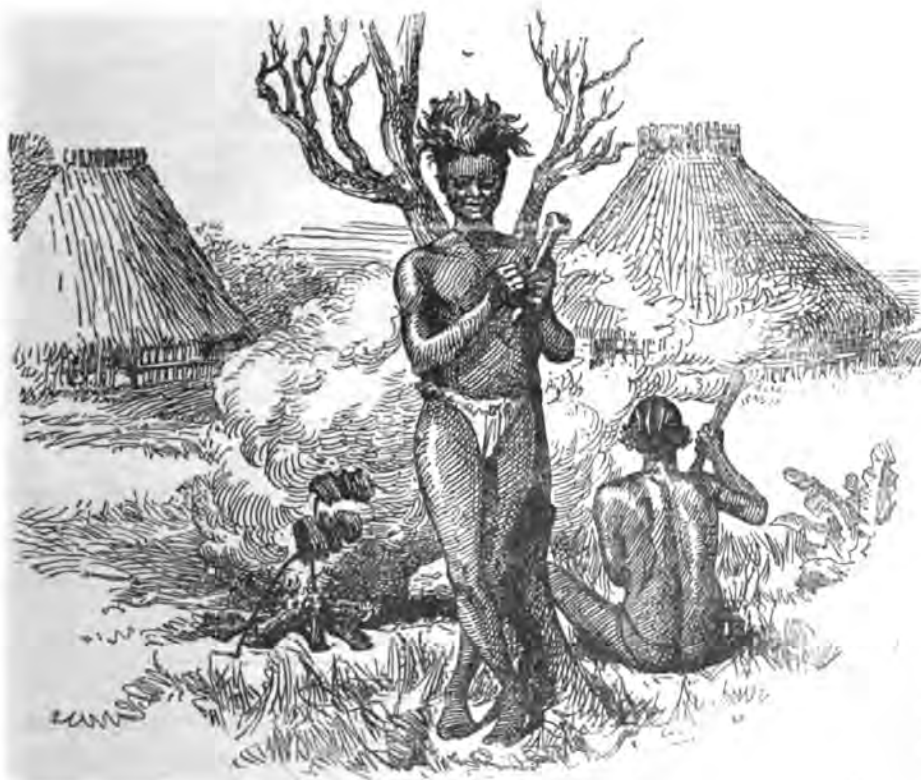


NATIVE OF DIVA.

suppress the slave trade that had grown into very large dimensions at Khartoum and, was prosecuted in the outlying country by slave dealers, who hesitated

not to use deadly violence in securing their wretched prey. With much difficulty and at great personal risk, Emin traveled here and there among the tribes and sought interviews with their chiefs and with the heads of provinces. The disturbed state of the country at that time, owing to the influence of the "False Prophet" Mahdi, added much to the labor of our German-Turk, but he accomplished more than might have been expected toward restricting the traffic in human lives, especially when the indifference of the Egyptian Government toward it is considered.

In the southern part of the Soudan, at Wadoli, Emin Bey set up his headquarters, where he has been very active in promoting the interests of the people. A letter written in April, 1887, says: "We sow, harvest, and live day by day here, as if it could last forever. I neglect in no respect my people. We have



CANNIBAL SCENE ON THE ARUWIMI. !

passed through sad and hard days together, and I should hold it as shameful now to desert my post. My people, in



ARAB SLAVE OWNER.

spite of many necessities, are brave and good." From this point it is that he has operated in his negotiations with the neighboring tribes, seeking to extend the range of his influence, and to open the way to the establishment of direct measures for the enlightenment of the negroes.

The face under the fez looks enough like a Turk's of the better stamp to deceive the inexperienced observer. It is the face of a thoughtful man. There is force enough indicated to confirm what is said of his spirit and courage, while at the bottom he must have a tender and sympathetic heart.

It is not a matter of wonderment that most people look upon these bold enthusiasts with doubt and gloomy expectations of little good resulting from their adventures, for in the face of such great obstacles as they necessarily meet, success is won only at the greatest cost. The Stanley expedition, so far as can be believed from uncertain reports, has failed to reach Emin, and now occasions apprehension on its own account.

The Government of Germany, interesting itself also in the fate of Emin

Pasha and the others, has fitted out a party whose leader is Dr. Carl Peters, a graduate of Berlin University, a man of some thirty-two years, and one endowed with a good allowance of push and mental capacity. Dr. Peters has had some official experience in Africa, in the interests of his own country, and so has obtained a fair knowledge of the requisitions of such an enterprise as he has undertaken. The relations which the Arabs hold with the natives of the Congo neighborhood are anything but friendly. The most marked and, it may be said, hereditary characteristic of this barbarous, nomadic people is their prosecution of that most brutal of traffics, the slave trade. Stanley, in his books on the Congo, gives thrilling and sympathetic accounts of the terrors of this trade. The Arabs, in their numerous raids on the native villages, do not



NATIVE POTTERY AND HOUSE UTENSILS.

always have their own way, and many of them sometimes fall, and their bodies go to furnish the substance for a cannibalistic feast. But as a rule the Arabs

are more successful, and though they become somewhat decimated at times, a speedy and complete revenge is looked for certainly.

The entire country seems to be in a continual ferment of petty feud and warfare that is chiefly owing to the results of the Arab raids, and to the still powerful influence of the Mahdi.

That there are millions of natives in Central Africa who are capable of being influenced by civilization, has been shown by Livingstone, Grant, Stanley, and others, and the illustrations given herewith of their native arts and industries, plainly show a capacity for self-development that has only to be encouraged by such means as European leadership can bestow. Some forms and devices of carpentry, of pottery, and of the different sorts of utensils used by them, express no slight degree of ingenuity and native skill in workmanship.

The relief expedition which was under the supervision and leadership of Stanley, Barttelot, and others, has furnished the drawings from which these illustrations are taken, and we have exhibited, in a graphic and realistic manner, something of the life that prevails on the banks of the Congo.

The officers of this expedition have been compelled to depend largely upon the natives for information, but the intercourse thus compelled has resulted in obtaining a great deal concerning the customs and character of the wild people.

The portraits, as given by the expeditionary artists, do not show so low an order of organization as to confirm the notion affected by some, that the interior of Africa contains the lowest grade of mankind, or that class whose cranial development is but an advancement on the highest brutes. Between the Arab slave-owner and the native of Diva, it might be difficult—as they are represented by the artist—to decide as to which possesses the higher capability.

The Divan, however, is certainly the better looking, and very likely has more claim to amiability. The cannibal scene furnishes an idea of the huts of the natives, as well as delineating their mode of cookery.

The river scene depicted indicates one of the industries in which the Congo people are generally expert, fishing, their canoes being well constructed for the purpose.

A. I. D.

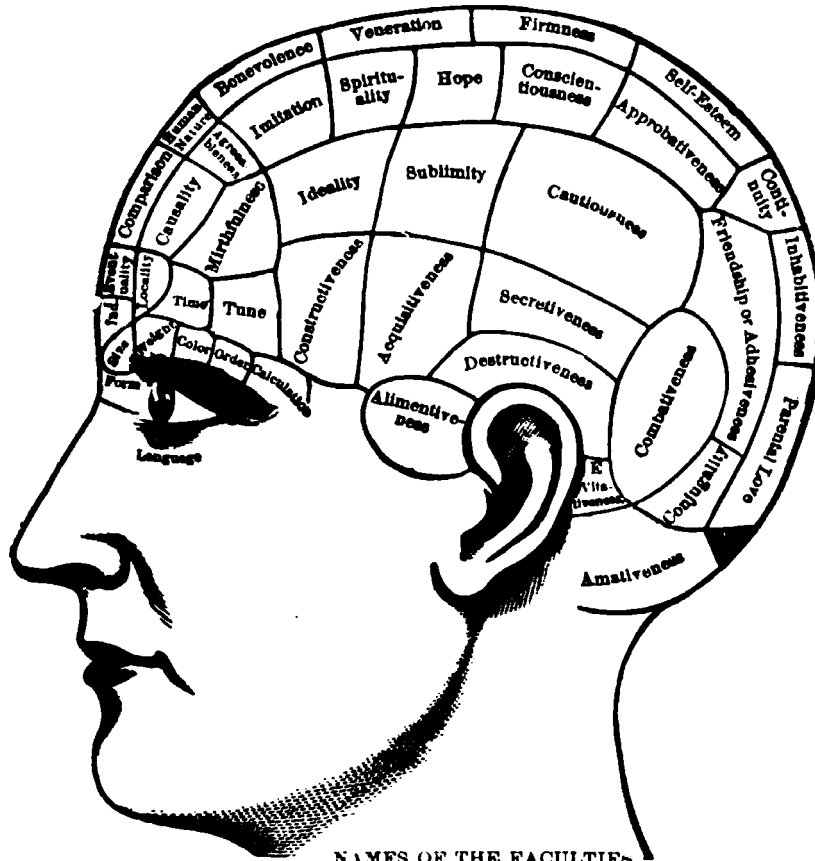
CONTAGIOUSNESS OF EMOTIONS. — Every day's experience may supply fresh illustrations of the immense influence of contagion in the development of all human emotions. Nor is it by any means to be set down as a weakness peculiar to, or characteristic of a feeble mind, to be blindly susceptible of such contagion. Even the strongest wills are bent and warped by the winds of other men's passions, persistently blowing in given directions.

We know that original minds are, perhaps, indeed, affected rather more than commonplace people by the emotions of those around them, because their larger natures are more open to the sympathetic shock. Like ships with every sail set, they are caught by every breeze.

Moreover, be it carefully noted, it is only by contagion, and not by any kind of authority or command, that emotions can be communicated. It is a matter of common observation that any effort to direct the emotions to order has a tendency to produce the opposite effect to the intended. To challenge a man to be brave is to make him nervous; to bid him admire a person or a work of art is to suggest to him to be critical; to command a young man or woman to love the elect of their parents is to chill any nascent inclinations in the desired direction, and to make it a duty for Montagues to hate Capulets is to start the loves of Romeo and Juliet. We must give the feeling we desire. We can not impose it.

PRACTICAL PHRENOLOGY.

CONDUCTED BY PROF. NELSON SIZER.



NAMES OF THE FACULTIES

1. AMATIVENESS.—Connubial love, affection.
- A. CONJUGAL LOVE.—Union for life, pairing instinct.
2. PARENTAL LOVE.—Care of offspring, and all young.
3. FRIENDSHIP.—Sociability, union of friends.
4. INHABITIVENESS.—Love of home and country.
5. CONTINUITY.—Application, Consecutiveness.
- E. VITATIVENESS.—Clinging to life, tenacity.
6. COMBATIVENESS.—Defense, courage, industry.
7. DESTRUCTIVENESS.—Executiveness, severity.
8. ALIMENTIVENESS.—Appetite for food, etc.
9. ACQUISITIVENESS.—Frugality, economy, thrift.
10. SECRETIVENESS.—Self-control, policy, cunning.
11. CAUTIONNESS.—Guardedness, safety, fear.
12. APPROBATIVENESS.—Love of applause, ambition.
13. SELF-ESTEEM.—Self-respect, dignity, pride.
14. FIRMNESS.—Stability, perseverance.
15. CONSCIENTIOUSNESS.—Sense of right, integrity.
16. HOPE.—Expectation, anticipation, cheerfulness.
17. SPIRITUALITY.—Intuition, prescience, faith.
18. VENERATION.—Worship, adoration, respect.
19. BENEVOLENCE.—Sympathy, kindness.
20. CONSTRUCTIVENESS.—Ingenuity, mechanism.
21. IDEALITY.—*Taste*, love of beauty, poetry.
- B. SUBLIMITY.—Love of the grand, vast.
22. IMITATION.—Copying, aptitude, conformity.
23. MIRTH.—Fun, wit, ridicule, facetiousness.
24. INDIVIDUALITY.—Observation, desire to see.
25. FORM.—Memory of *shape*, looks, persons.
26. SIZE.—Measurement of quantity, distance.
27. WEIGHT.—Control of motion, balancing.
28. COLOR.—Discernment, and love of color.
29. ORDER.—*Method*, system, going by rule.
30. CALCULATION.—Mental arithmetic.
31. LOCALITY.—Memory of place, position.
32. EVENTUALITY.—Memory of facts, events.
33. TIME.—Telling *when*, time of day, dates.
34. TUNE.—Love of music, singing.
35. LANGUAGE.—*Expression* by words or acts.
36. CAUSALITY.—*Planning*, thinking, reasoning.
37. COMPARISON.—Analysis, inferring.
- C. HUMAN NATURE.—Knowledge of character.
- D. SUAVITY.—*Pleasantness*, blandness.

THE HUMAN TEMPERAMENTS.



MOTIVE TEMPERAMENT.



VITAL TEMPERAMENT.



MENTAL TEMPERAMENT.



TEMPERAMENTS COMBINED.

By the Temperaments are understood the states of the body and mind with respect to the predominance of different qualities. They are divided into (1st) Motive or muscular, (2d) Vital or nutritive, (3d) Mental or thinking, instead of *Bilious, Sanguine, Lymphatic, and Nervous*.

Those who have the Motive temperament are powerful, tough, enduring, fond of pursuits which require energy and authority.

Those who have the Vital are healthy, fond of pleasure, enjoy good living, active occupation, and social life.

The Mental temperament gives sensitiveness, mental activity, desire to think and study; and the moral feelings and refining sentiments are generally well marked in those who have this temperament in predominance.

When the temperaments are combined in equal or nearly equal proportions, the person is by nature adapted to study, labor, or to business of any kind.

PRACTICAL PHRENOLOGY.

THE study of human character is both useful and interesting. The world is eager for story, and story finds its chief interest in the statement of the character and disposition of the hero of the tale. What men are, what they aim to do, what means they adopt to achieve results, belong to the study of biography, and biography is a picture of men's lives. We have always noticed when a learned Doctor in Divinity is rearing in his sermon a massive structure of moral and religious law, a few manifest interest, some are passively and patiently attentive without eagerness, and others are utterly indifferent. But let him, by way of illustration, describe the character of one of the old prophets and every eye will be on the speaker. Attention, earnest and eager from the child of ten to the octogenarian, will repay the speaker for his digression, and when he falls back to the body of the discourse, all but a few relax their interest.

Every man, woman and child has characteristics and these characteristics are dependent upon organization. The

character is indicated by development and those who understand development of head, and face, bodily temperament and constitution, are able to read more or less correctly their fellow men. The efforts different people make to learn the character of others, shows how hungry mankind are to read mind, study character and understand disposition. A few will enter upon an extended and careful analysis of mental philosophy, as a few will study to understand the philosophy of theology. Thousands of people are anxious to know how to estimate people whom they meet, practically; to understand who has force and who lacks force, who is prudent and who is deficient, who has integrity and who is not quite up to the mark, who will be true in friendship and who may not be trusted.

Previous to the discovery of Phrenology by Dr. Gall, on which he commenced giving public lectures in 1796 in Germany, his native country, the study of mind had been vague and uncertain, based almost wholly on speculative theory and personal consciousness. Hence

the systems of mental philosophy put forth by different writers varied according as their individual characters and talents varied. If one had a weak sentiment of justice, he did not admit conscience into his system; another having it strong, would insist on giving it a prominent place. Dr. Gall studied the brain in connection with character and regarded the brain as the organ through which the mind acts, and he learned to look for similar character in heads which were alike in form and quality, and thus, step by step, he gained positive knowledge in regard to the relation between developments of brain and character. Thus he laid the frame work of what is to-day Phrenology.

As most people have their own business to attend to, they may not have the time or inclination to go extendedly into the subject of theoretical phrenology, yet all would be benefitted by becoming familiar with the practical application of phrenology to the study of character. A gentleman came to our office once and said he was going to remain in town nearly a week and he would like to have us give him instruction while he remained. He said he did not wish to become a professor, but all he wanted was, if a man presented himself in front of his counter, to look him *right through*, to *read him like a book*. He did not care about the locations and names of the organs, he only wanted to be able when he saw a head as a whole, to know what it was good for, whether he might trust or should distrust it. In other words, he was trying to grasp in a day the best results of the most patient and extended study.

In this department such topics as will awaken the interest of the general reader and will give him the ability to appreciate strangers by knowing how to look for traits which belong to human nature, will be constantly kept in view. Fifty years ago people were inclined to ask, "Is Phrenology true, has the brain any relation to mental manifestation?"

Now they incline to ask in regard to its *use*, and how it can be made to benefit mankind. The people, in this country, are anxious to ascertain facts, they have an idea that they can make proper inferences. Those of us who are constantly studying the relation of temperament and brain to character and talent, see cases that are full of interest, and which, if explained, might be made very profitable to teachers, mothers, and those that have the mastery of men and clerks; and if the public could but know a tenth part of the interesting incidents which come to our knowledge, they would cease asking, "What is the practical use of Phrenology?" Scarcely a day passes in which we do not hear the history of some remarkable case, some man has been reclaimed from a restless, vagabond life, and led to honor and self-respect. Another has been advised to give up a business not suited to him, and has been put upon a better path, and the happiness which success brings, has come to him and his family. Orphan boys have been guided to usefulness and honor when they had no one to advise and protect them.

We propose to call attention to the singular development and combination of people who are called queer and peculiar. There are such varieties in human genius, talent, weakness and eccentricity, as would, if properly stated, be the source of endless entertainment and instruction.

Besides, this department is open to communications, brief, spicy, and pertinent in regard to the advantages which Phrenology has been to those who have availed themselves of its teachings. Lecturers who are in the field frequently meet with strange or peculiar people, or wonderful manifestations of genius and talent in special directions. Contributions on practical Phrenology will find cordial hospitality in this department. Half a century of continuous effort in this field, and the examination of perhaps a third of a million of people, can but

afford a rich store of reminiscence and instruction, and this long experience will be laid under contribution to enrich these pages.

LATE TO RIPEN, BUT SURE.

I RECENTLY had a young man seventeen years of age under my hands and described him as a winter-apple; in other words, a person who ripens slowly. His head was twenty-three inches and he was sufficiently developed in body for his age to match so large a brain. He had a healthy, ruddy appearance and he had muscular power sufficient to grapple with labor or business, and yet he had brain enough in the department of intellect to make him a capital scholar; his physical forces had ripened earlier than his intellectual; he felt a strong desire to get out of school and get into business; and at sixteen, though backward as a scholar, he seemed to outgrow the desire for business, or seemed to be divided between business and books. We told him that he would ultimately come to the desire for an educational and professional career; that his brain, being large, would come to dominate over the body as the body had previously dominated over the brain. His youthful energy had given him the desire to knock about and use the muscular and physical; he had seen his young associates drop school at fourteen and fifteen and get started in business where they could make so much a week, and his large Acquisitiveness made him hungry to go and do likewise. We told him that he should turn his thoughts to books and make himself a scholar and that he would ultimately become a good lawyer and statesman.

His father, who was present, exchanged knowing glances with the son, and, when the examination was completed, we were informed that he had teased his father from fourteen to sixteen to let him drop school and go to business; but the father knew he ought to have more education even for business, and he had a hope that he would be-

come a scholar and a professional man; but for the year past between sixteen and seventeen the young man had turned over a new leaf, in his feelings at least, and was now eager to master educational subjects and graduate, and he and his father had made it up between them to come and hear what Phrenology would say in respect to his talent and probable success.

There are some bright, clear-headed persons who are rapid in their acquisition of knowledge who cover a great deal of ground in the school, who distance all classmates of their own age, and they are like the harvest apple, which fills the orchard with its fragrance and tempts the boys, the chickens, and the grasshoppers. Meanwhile, the winter apples on the trees round about, of full size, but hard, unfragrant and unripe, do not tempt the boys or the predatory animals. Before the frost comes, the harvest apples have been gone and almost forgotten, the winter apples have taken in the autumnal sun and have come to a moderate state of ripeness; but when all nature is drear and forbidding, the winter apple fills the house with its fragrance and tempts the eater as the harvest apple did in its season.

We have winter-apple people, those that ripen slowly; and the young man in question was of the winter-apple sort, well-grown, strong, substantial, capable, and destined to make a high and permanent mark in the community; but he had been dull and backward in his studies, yet, being strongly developed bodily and executively, he wanted to go into business; and fortunately his intellect awakened up with a desire for education before he had passed the time in which education is generally obtained. The father's bright eyes gleamed with joy when he was assured that the pathway was open for the fulfillment of his previous hopes; and they left us rejoicing that we had turned the switch into the right track and they had only to make steam and run the machinery correctly in order to reach the proper goal.

THE ULTIMATE TRIUMPH OF THE TRUE AND GOOD.

WHEN we consider the perfection of the Creator, and the laws which he has ordained, it is almost impious to doubt that he has also ordained the means by which their end must surely be accomplished; but our belief in the ultimate triumph of the true and good rests not alone upon our reasonings from the attributes of the Creator, but upon scientific and historical evidence.

All the faculties tend to become active: hence, though passions are strong, morality and intellect must still exert a strong, if not controlling, influence upon the actions and destinies of men.

The mental and physical pain attendant upon the infraction of the laws, and the pleasure attendant upon obedience, along with the universal desire of pleasure, and the universal tendency to repeat and continue pleasurable operations, have a direct tendency to promote the welfare of the human race.

The incitement which these pains and pleasures give to intellect in determining their causes, and the conditions under which they are experienced, and the desire which urges man to communicate his knowledge to his fellow-man, tends to the diffusion of a knowledge which will enforce the necessity of obedience and the accomplishment of good.

The offspring of consanguinity, of dwarfishness, and disease, are puny and degraded, and possess too little vitality to procreate. Physical and mental imperfection is a bar to procreation, and only those who are measurably perfect are, by Nature, permitted to live in their children from generation to generation. In this principle is found the preservation of a higher standard of physical existence, and of mental and moral activity.

Ridicule and satire, though often misdirected and misapplied, are still potent instruments in the suppression of folly, for man instinctively shrinks from the disapprobation of his fellow creatures. The voice of the people of all nations, as embodied in their statutes, has been

raised against the commission of crime, and the severe punishments inflicted upon miscreants are instrumental in holding in check the propensities of persons otherwise criminal and vicious.

The triumphs of Christianity are marks of its superiority over all other religions, its perfect adaptation to the nature of man, and its ameliorating and elevating influence upon the mind.

Under the reign of James II., the people of England, through their House of Commons, were thwarted in every effort to preserve their freedom. The royal prerogative was exalted at the expense of plebeian liberty. The polity of bigotry was substituted for the polity of liberality. The infatuated king, pandering to his appetite for power, was blind to his true interest, for the interest of the people is the true interest of kings; and, when an opportunity for conciliating the people whose hearts he had alienated presented itself, he basely threw it away and wrought his own ruin. He fled to St. Germain, and his people called in a deliverer in the person of the Prince of Orange. Parliament remodeled the state, and adopted a Bill of Rights which bound the sovereign to the maintenance of the English laws and liberties.

The American colonists, dependent upon England for protection, asked only the rights of Englishmen. Constitutionally, the power of levying taxes belongs to the people. The colonies, having no parliamentary representation in England, would not quietly submit to the burdens imposed upon them for defraying the expenses of the war with France. They remonstrated; but the Commons, rather than retrieve an error, only reasserted the principle that a colony may be taxed without representation. Seeing only slavery and degradation before them, the colonies declared and maintained their independence. Slavery, which works the degradation of all who are under its blighting influ-

ence, held a place in the social fabric of our country till its own baseness wrought its downfall amid great suffering to the country. JOHN W. SHULL.

REMARKABLE FULFILLMENT OF A DREAM.

L. H. was a miss of unusual precocity, for one of twelve years ; delicate, with far more mentality and spirituality than physical development. On one Sabbath morning she said to her parents, "I dreamed last night that Uncle P.'s house was struck by lightning, and that Uncle, Aunt, and H. were killed." This made no special impression on their minds, as one remarked, "I guess that *this* dream will not be fulfilled." On the following Sabbath, July 14, 1883, the writer ("H.") was in the family of the young dreamer during a fearful thunder shower, two storms coming from different directions, meeting overhead, peal after peal of thunder following in quick succession, the lightning following with frightful intensity.

On looking out of the window a man was seen hastily approaching, who, as he entered the house, said to me, "Your house has been struck by lightning, your parents and Mr. Hobbs (a student) were struck, and two are dead !" I soon reached home, there to find that six children had suddenly become orphans, the oldest about fifteen years of age. Two bolts struck two poplar trees in front, passing down about half their length, leaving them and passing through the roof, making two circular orifices in the plastering, nearly an inch in diameter. Mr. Hobbs sat in a rocking chair, reading aloud to his fellow-students, probably the last speech of one about to be executed, the last words of the reader being, "My time has come !" He remained in an upright posture, and was approached by one who inquired if he was injured, but he made no reply ; he was dead. In the room below, my father was holding an infant of a few months, who was not seriously injured, still living. The mother had just visited

a room where the students, as she supposed, were too trifling and noisy for such an occasion, of which she reminded them, saying that she thought that there was danger. When leaving the room, her hand on the door post, still persuading them to be more judicious, the other bolt struck her, passing down through an unoccupied room. There being fourteen in the family at the time, including the boarders, still others were shocked and considerably injured, among whom were Col. T. Whipple, conspicuous during the war of the Rebellion, and the older son, now a superintendent of schools in a prominent N. Y. city.

On what principle shall we account for this remarkable dream and its fulfillment, almost to the very letter ? The writer is not superstitious, but still the facts remain. Was the girl in an unnatural state, or was it something nearly allied to what we call "thought reading," so intensified that she was able to see further into the future than those of a coarser temperament ? It is enough to say of her that she died young, like most of her class. G. H. H.

YESTERDAY AND TO-DAY.

LAST night my tired aching head
I laid upon my lonely bed,
And to my weary self I said,
"Life is not worth the living !"
For my sad heart so full of pain
Waited and longed for thee in vain ;
And doubting told itself again,
"Life is not worth the living."

But oh, to-day, dear heart, to-day,
The sky is bright, the earth is gay ;
With love, and love's sweet faith I say,
"Aye, life is worth the living."
For thou, my own, hast come to-day,
And doubt and cloud have flown away ;
My heart is glad, all earth is gay,
And life is worth the living.

MRS. DAVISON.

CHILD CULTURE.

ARE CHILDREN IMBECILES ?

IN a short article that is much to the purpose, a writer in the *Educational News* makes the following remarks on the so-called "improved method" in primary teaching :

There is very much of fine-spun theory in some of our primary-number teaching to which we can not attach any important value. Indeed, too many encumber the work and repeat so much that the wonder is that the child, in his eagerness to learn something new, is at all willing to keep feeding on the same dish of gruel day after day and week after week. "Pick up two books," "Show me two fingers," "Point to two buttons," "Clap your hands two times," "Open your mouth two times," "Point to two feet," "Lay two buttons on the table," "Pick two buttons up," "Whistle two times," and so on *ad nauseam*. Does any observing school officer suppose for a moment that all this is necessary to develop the idea of *two*? We hope not, and yet this is called improved teaching. The chances are a hundred to one that the child knew all about two not only before the exercise was given,

but even before he ever went to school. If he didn't he evidently was not fit to be in school. We can not conceive of a condition of mind at the age of six that needs twaddle like this, outside of a home for the feeble-minded.

Let us take it for granted that the children of this age are mentally as strong and capable as those of the past. The time has never been when it was necessary to feed our growing young minds with mental food suiting only the capacity of babes. Let those who need spoon victuals be fed with that diet, but let us all bear in mind that the great law of growth, physical and mental, is exercise. The teacher who makes everything easy for a child as well as he who wastes time in developing in its mind thought which is already the child's possession, simply hinders instead of assists mental growth. Much of modern primary teaching is chargeable with this fault. It ought not to be so, whatever be the directions of the manuals. Our children are not imbeciles, and we ought not to base our teaching on any such supposition, either direct or inferential.

SCHOOL-GIRL PERTINACITY.

A WRITER on the "Physical Health of our Girls," in the *Canada Educational*, reports the following conversation, given it is said *verbatim*, as an illustration of the way some girls, intent upon study and excited by the hot-house method commonly in vogue at most schools, and permitted to have their own will by parents, break down.

Alice, a pale, delicate, nervous girl,

who had a general look as if nobody had ever been kind to her, was discovered one day weeping.

Teacher—"What is the matter, Alice?"

Alice—"My head is aching."

T.—"Would you not like to go home?"

A.—"No, I don't want to go home."
(Weeping afresh.)

T.—"Why not?"

A.—“Well, if pa knew I had a headache, he would make me leave school, and I don't want to leave school.”

T.—“Is your mother at home?”

A.—“No; she is out of town and there is nobody at home.”

T.—“When will she be back?”

A.—“Next Monday, I think.”

Under the circumstances, especially as Alice declared that the house was locked up, she was allowed to stay. That was Thursday. She was absent on Friday, and on Monday the teacher called at her home. Miss Alice was “up for an hour,” attired in a wrapper, and looking very wretched, poor thing. She said, “I don't think I'll be able to come back to school till next week.”

Mother—“No, she is not strong, Miss B——; she has been in bed with malarial fever; indeed, she was delirious on Saturday night and I wanted to have the doctor, but she won't have the doctor. Her pa and I did not want her to go to school at all, but she would go. I told her when I went away, a week ago, ‘Now you are not to go to school,’ and she went the very next day.”

T.—“Has she been delicate long?”

M.—“Well, she had scarlet fever when she was eight years old, and she

has never been real strong since. I did not want her to go to school last winter, but she would go.”

T.—“I think she is hardly able for school work at present.”

M.—“Well, now, that is just what I have been telling her.”

A.—“No; I ain't goin' to leave school.”

M.—“Now, Alice, you know—”

A.—“I don't care, I don't want to leave school, and I ain't going to.”

T.—“I think you ought to do as your mother says.”

A.—“Well, I don't care, I'll ask pa first.”

The remedy for the state of things exhibited by this colloquy is in the hands of the parents, who are ultimately responsible for the maintenance and education of their children. Nothing—no system, no teacher, no outside advantages—can ever take the place of good home training, and the pulpit and the press, and the leaders of public opinion can find no more important matter to engage their attention than the necessity of that training and the preparation of the coming generation, so that they may impart it, in their turn, to their children.

A NEW THOUGHT.

“YOU see, mamma, it depends upon you whether my children know anything or not,” exclaimed an eight year old philosopher, after plying her mother with questions which she had been puzzled to answer. “What I know, you must tell me, and what my children know I must tell them. Don't you see?”

Yes, mamma did see, and though at first much inclined to laugh at the ridiculousness of the thought, as well as of the faulty grammar, she felt like anything but laughing when she took in the full import of her daughter's words, and realized the extent of her own responsibility.

It had always seemed to this conscientious little woman as though her trust and that of other mothers was the most responsible of any given to mortal being. The training of immortal souls seemed of itself a Herculean task, but when to this was to be added that of future generations, the thought was overpowering.

But was not the little girl nearly right? Can you see anything to laugh at in this, my sisters? Is it not a subject of vital interest to you and me, as promoters of good or evil in the generations to come?

If the intellectual part of our work were all that was to be considered, great

as it is, we perhaps need not feel such a weight of responsibility, but if this matter affects us in one way it does in all, and physically, intellectually, morally, and religiously are we in a measure re-

sponsible for the future of our children, and children's children. Truly "Lessons of tremendous responsibility are taught by the law of heredity."

SUSIE E. KENNEDY.

APPRECIATION.

LOVE of appreciation seems to be instinctive in the whole animal creation. Whoever does good work is encouraged and strengthened by merited praise. Well does the writer remember a good farmer, whose sleek, fat team horses were admired by all the neighbors round about. This good condition was not a result of their not being worked hard, for the farmer did much of the heavy trucking work of the village, over a hilly road. There was a long, steep hill between the station and the village, and here his horses were allowed several resting spells on their way up.

Mr. Small always carried a chunk of wood, with which to block the wheels during these rests. Before he started he always rubbed their noses, patted them encouragingly, and when he gave the word, up they went with a will, till the driver stopped them for another breathing spell.

When they pulled well, he always petted and praised them, telling them they were good fellows; and they seemed so pleased at this little act of appre-

ciation, that it is said they would hardly wait to rest, so eager were they to prove themselves worthy of the praise.

Children, and grown people, too, as a rule, are very susceptible to the influence of encouraging words.

A little fellow of five years of age was doing something which his father disapproved.

"My son, you must not do that," said his father.

It happened to be something which the child wanted to do, and for an instant he hesitated, as if questioning what would be the consequences if he persisted. Finally his better self triumphed, and he replied, "All right, papa; I won't do it any more."

Perhaps most of us would think that was all there was to be said about it, and so the father thought; but the little fellow evidently had different ideas, for not long after he spoke out:

"Papa, why didn't you tell me 'that's a good boy?' An' t'would 'a' been easier to be good next time."

WANT OF ORDER—HOW SOME BOYS ILLUSTRATE IT.

ONE who knows from personal experience has written thus:

"Where's my hat?"

"Who's seen my knife?"

"Who turned my coat wrong side out and slung it under the lounge?"

There you go, my boy? When you came into the house last evening, you flung your hat across the room, jumped out of your shoes and kicked 'em right and left, wiggled out of your coat and gave it a toss, and now you are annoyed because each article hasn't gathered it

self into a chair to be ready for you when you dress in the morning.

"Who cut these shoe strings?" You did it, to save one minute's time in untying them! Your knife is under the bed, where you rolled it when you hopped, skipped, and jumped out of your trousers.

Your collar is down behind the bureau, one of your socks is on the foot of the bed, and your vest may be in the kitchen wood-box for all you know.

Now, then, my way has always been

the easiest way. I had rather fling my hat down than hang it up; I'd rather kick my boots under the lounge than place them in the hall; I'd rather run the risk of spoiling a new coat than to change it.

I own right up to being reckless and slovenly, but, ah me! haven't I had to pay for it ten times over! Now, set your right foot down and determine to have order. It is a trait that can be acquired.

An orderly man can make two suits of clothes last longer and look better than a slovenly man can do with four. He can save an hour per day over the man who flings things helter-skelter. He stands twice the show to get a situation and keep it, and five times the show to conduct business with profit.

An orderly man will be an accurate man. If he is a carpenter, every joint will fit. If he is a turner, his goods will look neat. If he is a merchant, his books will show neither blots nor errors. An orderly man is usually an economic man, and always a prudent one. If you should ask me how to become rich, I should answer, "Be orderly—be accurate."

WANTED TO BE HOME.—Tommy was at boarding-school, and it had been decided that, for various practical reasons, it would be better for him to spend Thanksgiving with a neighboring aunt, instead of taking the longer journey home. This conclusion was announced to him, with as much gentleness as possible, and in a few days his father received the following note:

"**DEAREST PAPA,**—When the turkey's in the oven, and the 'tatoes in the pot, when the cranberry bubbles redly, and the pudding's smoking hot—when the nuts are cracked and waiting, and the raisins heap the plate, and you go on so awful hungry that you'd rather die than wait—then you'll remember me! O pa, mayn't I go home?"

"Your miserable
"TOM."

They sent for him by the next mail.

THE BEGINNING.—A schoolboy, ten years old, one lovely June day, with the roses in full bloom over the porch, and the laborers in the wheat fields, had been sent by his uncle John to pay a bill at the country store, and there were seventy-five cents left, and uncle John did not ask for it. At noon this boy had stood under the beautiful blue sky and a great temptation came. He said to himself, "Shall I give it back, or shall I wait till he asks for it? If he never asks, that is his lookout. If he does, why I can get it again." He never gave back the money.

The ending: Ten years went by; he was a clerk in a bank. A package of bills lay in the drawer, and had not been put in the safe. He saw them, wrapped them up in his coat and carried them home. He is now in a prison cell; but he set his feet that way when a boy, years before, when he sold his honesty for seventy-five cents. That night he sat disgraced and an open criminal. Uncle John was long ago dead. The old home was desolate, the mother broken-hearted. The prisoner knew well what had brought him there.

EVERY LITTLE HELPS.

SUPPOSE a little twinkling star

Away in yonder sky,

Should say, "What light can reach so far

From such a star as I?

Not many rays of mine so far

As yonder earth can fall;

The others so much brighter are,

I will not shine at all."

Suppose a bright green leaf that grows

Upon the rosebush near,

Should say, "Because I'am not a rose,

I will not linger here."

Or that a dew-drop fresh and bright,

Upon that fragrant flower,

Should say, "I'll vanish out of sight,

Because I'm not a shower!"

Suppose a little child should say,

"Because I'm not a man,

I will not try in work or play,

To do what good I can!"

Dear child, each star some light can give,

Though faintly gleaming there;

Each rose-leaf helps the plant to live,

Each dew-drop keeps it fair:



HEALTH PAPERS.—No. 9.

“A classification of medicines founded upon a similarity of action on the animal economy is more desirable and useful, and various arrangements of the *Materia Medica* have been attempted on this basis. They are all to some extent necessarily imperfect, owing partly to the diversified effects of medicines and partly to our ignorance of the real nature of many of the modifications which they produce upon the tissues.”—Prof. John B. Biddle, *MATERIA MEDICA AND THERAPEUTICS* (tenth edition), page 52.

“In relation to the process of alteration, it is highly probable that, in many instances, it is purely the result of chemical reaction set on foot by the remedy in the interest of the system; but we have little positive knowledge of the subject, and theoretical speculations can lead to little practical good, except so far as they may serve as a guide to inquiry and experiment. They should not be allowed to serve as a basis for curative methods until the chemical relations have been experimentally traced out and demonstrated beyond reasonable doubt.”—Prof. George B. Wood, *THERAPEUTICS AND PHARMACOLOGY* (third edition), vol. I., page 53.

“Various arrangements of the *Materia Medica* have been attempted on this basis.” Well, is that all? No. “They are all to some extent necessarily imper-

fect.” Not flattering to the vanity of a profession which boasts of being the embodiment of the concentrated wisdom of the ages. If decades of centuries of progress have failed to harmonize the diversified effects of medicines and to dissipate our ignorance of the real nature of many of the modifications which they produce upon the tissues, how much longer must we suffer and wait for the accomplishment of this very desirable object? Watt, Stevenson, Arkwright, Whitney, Howe, Goodyear, McCormick, Pullman, Morse, Bell, Edison, and a host of others have rendered their names illustrious by their contributions to the arts of an advanced civilization. Does any competent judge of the mechanical and scientific improvement made within a single century, or even within a score of years, talk or write about their necessary imperfections owing to their diversified effects, or to our ignorance of the real nature of many of the modifications which they produce? Everywhere else we expect certainty of results, and our expectations are rarely disappointed. But in the reputed “art of healing” we are constantly liable to disappointment, and its representatives do not greatly encourage the hope of better things to come.

If, with an open time-table in your hand, you take a train on any one of our numerous railways, you have many

chances to one that you will pass each intermediate station and arrive at your destination strictly on time. If the steam-gauge indicates too much or too little pressure, the engineer at once, with unerring skill, regulates it without a thought of necessarily imperfect machinery or ignorance of the application or modification of the power it represents. Why should a knowledge of the human machine make less progress in thirty, than Watts' invention in a single century?

4. "In relation to the process of alteration, it is highly probable that in many instances it is the result of chemical reaction set on foot by the remedy in the interior of the system!" Highly probable! It may be, or it may not be so! We can not tell. This we know: vital actions and reactions are subject only to the laws of vital chemistry. All else is anti-vital and antagonistic to life processes. We want no chemical reactions set on foot by inorganic elements or principles. We can not rely upon the guesses, the hypotheses, the vagaries of a profession which has, in three thousand years, reached nothing beyond proba-

bilities of things of doubtful utility and is still groping in the dark, vainly hoping to find something better. When drug medicines so often fail to meet the expectation of benefits to be derived from their use; when disastrous results so frequently follow their exhibition by the most cautious and skillful practitioners; when it is not demonstrated that the world is, in a sanitary view, better off than it would be if the unaided resources of nature were relied upon; when legal intervention is being invoked to crush out every individual and every school of medical and sanitary science which presumes to depart to the right or left from the course marked out by certain medical schools and medical societies, is it not time that the masses should rise in their power and demand better results, or, if these can not be had on the present basis, better methods as the only rational and legitimate means of securing them? No true science of healing can rest upon "highly probable" theories of chemical reaction of an anti-vital character, set on foot by inorganic re-agents in the interest of a system.

J. S. GALLOWAY, M. D.

GOOD ROLLS OF THE FERMENTED KIND.

A WRITER who has looked into this subject from several points of view, and who is evidently a practical cook, thus descants on that convenient breakfast article, the "roll."

The perfect bread "roll" differs from the perfect bread loaf only in size, shape, and name, except that, as a larger proportion of it is exposed to the air in baking, more crust is formed—a feature greatly to be desired in bread which is to be eaten hot. The flour, salt, yeast, water, and, in short, the dough, is the same for both; and one ounce of this last requires precisely the same management in proportion to size as if its weight were a pound or a ton.

While the actual process of making each is the same, the roll is liable to

somewhat greater risk of injury, because of the increased time required in manipulation. The loaf is quickly moulded and disposed of, but for rolls the mass of dough must be divided into small pieces, each of which is to be handled separately. Special rapidity and skill are necessary to avoid the serious changes liable to occur in the condition of these while awaiting the work of moulding and then baking. Delay at this stage is dangerous, whether occurring by accident or, as is more common, by design.

An instance within almost everyone's observation is that of what are supposed to be very fine "hot breakfast rolls." They are made, according to directions, by dividing the dough into pieces "the size of an egg," forming them into balls

lightly greased or floured, and packed as closely as possible in the baking pan. They are then kept until the stage of proper and healthy fermentation has reached its limit; after a minute in the oven an acid is developed which is scarcely observed while hot, and is disguised by a liberal supply of butter, honey, or syrup.

When cold, however, these rolls are found to be damp, stringy, and ill-favored; and their narrow, top-heavy, crooked aspect agrees well with an odor which by this time is perceptible by any respectable nose. These are the hot rolls against which medical men are accustomed to direct their warnings. Gentlemen of that profession, whose acquaintance with them is usually limited to the moment when they come fresh from the oven, doubtless suppose that they are a fair representation of all hot bread; and when they find themselves as well as their patients stricken with the curse of indigestion after a dose of such spoiled dough, they are in a humor to make war against everything within three days of a bake oven.

In fact, it is not *hot* rolls, or hot bread at all, which cause the widely prevalent disorders of stomach and liver—the greatest, meanest, and least understood curse of civilized humanity. It is *bad* bread—loaf, roll, or what not. It is dough over-fermented, soured, wrongly baked, doctored (after spoiling) with a “spoonful of lard,” a “pinch of soda,” a “handful of sugar,” a “half-cup of milk,” or anything supposed to compensate for the original mistake or carelessness of the cook.

Good rolls are neither indigestible nor in any way injurious to health. They do not call for bitters, pepsin, or any of the patented or unpatented medicines advertised or prescribed as remedies for disordered stomachs.

We give directions for making loaf bread as follows: A sponge in proportion of two pounds of flour to three pints of water and one cake or

cup of yeast is set and kept at an even temperature of 98 degrees, and protected from currents of air. In an hour another pound of flour is added. When raised properly, it is kneaded with about two pounds more flour and one ounce of salt. Much depends upon this kneading, and it should be very carefully done. The dough is allowed to rise again to about double its first bulk, which brings it to the time for moulding either into loaves or rolls.

When the quantity is small, the most convenient plan is to cut pieces of the proper size from the mass of dough in the pan or trough, quickly work and shape each, and place them in the bake pan. After standing there, carefully protected against currents of air, for about twenty minutes, or until they have raised up well in the middle without cracking or spreading flat, they are to be baked promptly. The time in the oven depends on the size of the rolls, from ten to twenty minutes usually being sufficient.

When a considerable quantity is to be made, a large board and plenty of “table room” must be provided in a situation free from currents of air and at a temperature of about 98 degrees. The board, the hands, rolling pin, and cutters, are all to be warm, free from grease, damp, or flavor of soap, and must be well dusted with flour. The bake pans, also, are to be ready, smooth, dry, and evenly greased. Ordinary “dripping pans” of sheet iron or granite ironware serve well for every kind of rolls.

An old-fashioned roll which has no superior is made thus: A small square of dough is held firmly between the thumb and finger of the left hand. With the right hand one corner after another is folded over and secured under the thumb, continuing with new corners as they form. These rolls are laid on the board or a floured cloth, covered until raised, then lifted carefully and set in the pan upside down,

at least one inch apart, baked immediately. They will be round balls, and

nearly all crust, of the finest possible flavor.

CATARRH.—No. 4.

AN ANALYSIS OF A "COLD."

A COLD of the common type, with its swollen mucous membrane of throat and nose, its annoying soreness and irritability and expectoration, is an acute catarrh, and if we devote our space this time to the physiological analysis of a "cold," we shall probably interest the reader. The essential nature of a cold is an unbalanced vascular condition, i. e., the circulation of the blood in the capillaries of the skin and of the mucous membrane is uneven and disturbed, there being overmuch pressure in the vessels of the latter, which occasions the congestion and inflammation.

The deep red color of mucous membrane is due to the network of blood vessels that ramify on its surface, and are usually distended with the vital current. A rather high temperature is, therefore, maintained in the cavities lined with such membrane. The fulness of the capillaries is one reason for the congestion of the mucous tissue following a slight disturbance of its blood supply, and it is because of this vascularity 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, or a liver that has been put out of function, as Dr. Trall insists.

The chief function of the mucous membrane is to secrete the viscid fluid known as *mucus*, which is a provision of nature for keeping the parts soft and free so that they shall perform their normal functions. The office of the skin is to protect and cover the delicate nerves, tissues, etc., of the body, to assist in excreting waste substance by means of the perspiration, thus freeing

the blood of its watery excess and regulating the temperature of the system. This process of evaporation is constantly going on in health, and its suppression is quickly followed by trouble internally.

Whatever may be the immediate cause of checking or suppressing this action of the skin, it is followed by a contraction of the vessels and an increased blood pressure interiorly. If a person sits in a current of cold air for a time, he will be likely to be more or less affected by a disturbed circulation and a catarrhal expression somewhere. If this exposure occur at a time when he is very warm and the skin is saturated with moisture, he is most likely to have a severe onset of catarrhal inflammation, especially if he has not been prudent in his habits for some time previously, and so allowed the system to become filled with effete matter, and liver, kidneys, and lymphatics are turgid and torpid.

If a person with such a "predisposition" as the systemic state described intimates should sit in a draught that strikes upon the back of his head and neck, the probability is that a "cold" will result, the effects of which are most pronounced in the pharynx and nasal passages. The process by which this effect is produced is a nervous one, and termed "reflex action," but it is the same unbalanced state of the blood distribution, that has been described that is brought about by the reflex action of the nerves.

It is well here to explain briefly the nature of this reflex action, since it performs a most important part in the movements of the blood in all parts of the body. The nervous system is the source of all activity, the reader need not be told, and this activity is controlled at

certain *centers* in the brain and spinal cord, and in the sympathetic system that lies along the spinal column. From these centers nerve fibers go to all parts of the body. A nerve center in the neck, for instance, sends filaments to the back of the head, the throat, and mucous membrane of the nose. One function of these centers or ganglia is to regulate the supply of blood to the surfaces, organs, and tissues, and it is done through minute fibers that ramify around the arterial coats, and tend to keep them in a state of contraction. If these nerves are severed, the blood vessels at once expand to their utmost, blood flows in, pressure, with a higher temperature and congestion is the result. If these nerves are paralyzed, the same effect is produced. Sometimes a slight shock, a surprise, for instance, will occasion the temporary paralysis of these nerves, when a rush of blood takes place into the expanded artery and we have a reddened skin, as in blushing, or when a person is made suddenly angry. But a shock may produce the opposite effect, such as that caused by fright, or the receipt of bad news; then the nerves may exercise a constricting influence upon the arteries and expel the blood from them, giving the skin a pallid hue. In this case the heart is chiefly affected and ceases to pulsate with its usual power.

The effect of reflex action may be simple, or it may be compound, merely affecting the part to which a particular nerve is related, or it may, through the extent of the superficial irritation, greatly excite the nerve center and affect all the nerves connected with that center. "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. For the *vaso-motor* nerves, whose special office it is to control the action of the blood vessels, the common center appears to be the medulla oblongata at the base of the brain, while the sympathetic system plays an important collateral part." A writer in *Chambers's Journal* discusses this subject at some length, claiming that exposure for a long time to intense cold will not produce a catarrh, as the system has power to accommodate itself to the circumstances surrounding it.

It is a fact that in the winter, if people use average discretion in the matter of clothing, they do not "take cold," but enjoy better general health than they do at any other season of the year. Those in fair health are benefited by a low temperature that is constant. The experience of Arctic navigators certainly sustains this statement. Using now the language of the writer above mentioned: "Let us suppose a person to be sitting in a room, the temperature of which is 70 degrees of Fahrenheit's scale, 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, the probability is that he will 'catch cold,' and in nine cases out of ten this cold will be catarrh in the head, and, what may appear more remarkable still, only one nostril will at first be affected. If the catarrh were 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, disturbs 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."

Thus we have the conditions of acute catarrh, with the very disagreeable sensations and necessities that everybody in civilized life is familiar enough with : sneeze, choke, snuffle, and cough, with

brimming eyes and a pervading uneasiness. The sneezing provoked by the irritated mucous membrane is but a remedial effort of nature, another effect of reflex action for the purpose of restoring equilibrium at the centers, and enabling the nerves to recover their lost control over the blood supply of the part. It is therefore a good thing to sneeze in such cases, as this spasmodic and rather violent action of the muscles often counteracts the effect of exposure to a cold current, and the shock from which the nervous center suffers passes away gradually, and the blood-vessels again come under the control of the nerves which regulate their caliber, and so the catarrh or cold 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.

In this case the attack may be expected to run a prolonged course, perhaps setting up an inflammation extending into the bronchial passages and developing into a dangerous malady. H. S. D.

COUNT TOLSTOI ON RUSSIAN PHYSICIANS.

THIS distinguished statesman, novelist, and reformer, has given the following opinion of physicians as he observes them : " His fancied science is all so arranged that he only knows how to heal those persons who do nothing. He requires an incalculable quantity of expensive preparations, instruments, drugs, and hygienic apparatus. He has studied with celebrities in the capitals, who only retain patients who can be cured in the hospital, and who, in the course of their cure, can purchase the appliances requisite for healing, and even go at once from the North to the South, to some baths or other. Science

is of such a nature, that every rural physician laments because there are no means of curing working-men, because he is so poor that he has not the means to place the sick man in the proper hygienic conditions ; and at the same time this physician complains that there are no hospitals and that he can not get through with his work, that he needs assistants, more doctors and practitioners. What is the inference ? This : that the people's principal lack, from which diseases arise and spread abroad, and refuse to be healed, is the lack of means of subsistence. And here science, under the banner of the division of labor,

summons her warriors to the aid of the people. Science is entirely arranged for the wealthy classes, and it has adopted for its task the healing of the people who can obtain everything for themselves; and it attempts to heal those who possess no superfluity, by the same means. But there are no means, and therefore it is necessary to take them from the people who are ailing, and pest-stricken, and who can not recover for the lack of means. And now the defenders of medicine for the people say this matter has been, as yet, but little developed. Evidently it has been but little developed, because if (which God forbid) it had been developed, and that through oppressing the people, instead of two doctors, midwives, and practitioners in a district, twenty would have settled down, since they desire this, and half the people would have died through the difficulty of supporting the medical staff, and soon there would have been no one to heal."

Then he goes on to speak of what is needed in popular medicine: "Scientific co-operation with the people, of which the defenders of science talk, must be something quite different. And as this co-operation which should exist has not yet begun, it will begin when the man of science, technologist, or physician, will not consider it legal to take from the people—I will not say a hundred thousand, but even a modest ten thou-

sand, or five hundred rubles for assisting them; but when he will live among the toiling people, under the same conditions and exactly as they do, then he will be able to apply his knowledge to the questions of mechanics, technics, hygiene, and the healing of the laboring people. But now science, supporting itself at the expense of the working people, has entirely forgotten the conditions of life among those people, ignores (as it puts it) these conditions, and takes very grave offense because its fancied knowledge finds no adherents among the people. The domain of medicine, like the domain of technical science, still lies untouched. All questions as to how the time of labor is best divided, what is the best method of nourishment, with what, in what shape, and when, it is best to clothe one's-self, to shoe one's-self, to counteract dampness and cold, how best to wash one's-self, to feed the children, to swaddle them, and so on, in just those conditions in which the working people find themselves—all these questions have not yet been propounded.

"The same is the case with the activity of the teachers of science—pedagogical teachers. Exactly in the same manner science has so arranged this matter that only wealthy people are able to study science, and teachers, like technologists and physicians, cling to money."

THE MENTAL RELATION OF CERTAIN DISEASES.

IN a speech by Dr. C. P. Hart, at the late meeting of the Association of Science, he called attention to certain observations of his own with regard to the effect of certain diseases upon the mind. His own attention was fixed upon this by the circumstance of a patient suffering from a peculiar form of abdominal disorder, who expressed himself with extraordinary positiveness and bitterness on all subjects. His case was not hypochondriasis, however, and

this led him to examine into the correlation of mental and bodily conditions, and he found that patients suffering from chronic maladies whose seat was above the diaphragm were generally optimistic, and those who suffered from maladies seated below it were pessimistic. So lung patients were notoriously hopeful, and their certainty of recovery is actually one of the worst features of such cases, the danger being in proportion to the hopefulness.

He classified the percentage of mental feeling according to the disease. Thus bronchitis gave 95 per cent. of optimistic feeling, phthisis gave 97 of hopefulness, heart disease (not angina pectoris), 80 per cent., and asthma also 80 per cent. On the contrary, men suffering with

liver disease were troubled with 88 per cent. of pessimism, dyspeptics had 91 per cent. of misery, kidney sufferers 61 per cent. of unhappiness, and dysenterical patients 64 per cent. of gloom. Rheumatic patients, though optimistical also, were only to the degree of 63 per cent.

THE AMBULANCE SERVICE.

THERE are many of our country readers who would like some explanation of the duty performed by an ambulance. This indispensable adjunct of a city hospital is of comparatively recent date, as regards the character of its performance in cases of accident, and however familiar one may be with the black wagon, and its headlong run, it always starts his blood into a quicker movement. As a writer in one of our daily papers says: "It calls up so vividly ideas of accident or disaster, of desperate emergency, one would like to know what has happened, and wonders whether it is a serious occurrence.

"The surgeon knows, but the passer-by is left to speculate whether that rushing horse is carrying his freight to give speedy succor to the victims of some frightful calamity, and will go back to the hospital with a mass of mangled humanity moaning behind him, or whether there will be found merely some wretched toper, inert and senseless from drink. There is enough of accident and crime in a great city to keep the ambulance only too busy and make the service a responsible and serious one. Perhaps, therefore, readers will be interested to see a little of the inside of the ambulance service, what work it has to do, and how it does it.

"The ambulance surgeon has a special room in which the apparatus for communication — a telephone box, a messenger call, an electric gong—are conspicuous on the clean white wall. By them hang the rules for the ambulance service of the hospital and the list of stations and signals, a system of num-

bers which are rung out upon the electric bell. This is in connection with the same wires that constitute the police telegraphic and telephonic system, and that communicate with the different precinct stations and the little red boxes of the fire alarms.

"From police headquarters or the precincts can be sent the four sharp taps — — — —, two rings twice — that means 'ambulance wanted.' Then follow the taps that tell where each crossing of two prominent streets has its distinctive number, which is rung out on the bell. In case of great emergency, fire, or calamity, the 'hurry call,' 1-3-2, is rung over the police bell, or twenty taps on the fire bell, followed by the number of the box. That is when the horse lies down to his collar, and corners are swung at top speed; for sometimes five seconds make the difference of life or death.

"Each hospital has its own district in the city, covering from two to four of the police precincts, an area, on an average, of about four square miles. At intervals of about two blocks through the district there are fire alarm boxes, each of which has its distinctive number. Prominent buildings, such as school houses, theaters, etc., also have their box, by which a special signal may be sent out."

The writer tells of a ride he took one summer night in an ambulance sent down town on its mission of mercy. Using his language in the present tense:

We slide about on the smooth, leather-covered seat and hang on to the straps with swelling biceps as we rattle around

the corner. Clang! sounds the bell, and a heavy truck turns out of the way, while children scuttle out of the street and men and women fly to windows or pause on the pavement. As we near Spring street we collect a constantly growing train of followers, and the street becomes dense in our trail with boys of all sizes and ages, little girls and big girls, even men, and women with babies in their arms. They want to see something interesting, to have a sensation; they scent blood.

We pull up before a great brick tenement that is all alive in an instant with heads out of windows, and before the horse is turned there are 200 people about us. Children innumerable, the little girls with their bare heads and short calico dresses, more anxious to see even than the little boys: big girls, in loose gingham, holding up babies in their arms, big boys with bad hats, wives and grandmothers with anxious faces, men in shirt-sleeves or no sleeves at all, out for the cool evening air after their day's work, and a torrent of talk. What is it? Who's hurt? It is a drunken man; it is a woman fainted. It is a boy killed; it's a sunstroke; it's a fight.

A policeman comes to the door, by him a scared, sobbing girl, who is immediately hailed with questions by a dozen voices. She can not answer. "A boy

fell off the fire escape, three stories," the officer explains as we go upstairs into the little room where the boy, a dark-haired little lad of six or seven, lies on the bed, while the rest of the room is filled with women. All these, except the mother, the doctor orders out with brief vigor. Very still the boy lies, as the surgeon gently lifts and touches his head, his body, his limbs. No fracture to be found, no apparent wound or contusion. The ammonia bottle comes out of the bag, and a little on a tuft of cotton is held to his nostrils. The boy stirs, twists a little, opens his eyes and stares. "Where are you hurt, Johnny?"

"Ain't hurt anywhere," says he succinctly.

And as a matter of fact his diagnosis proves to be correct. Further careful examination reveals no injury, and he does not complain of any internal damage, and it seems that he has come out of a thirty foot fall into a paved court with nothing worse than a momentary shock. Young flesh and flexible bones he has to thank for his luck. He need not go to the hospital this time.

The crowd, grown twice as large, is waiting with admirable patience at the door. It shows disappointment on seeing us come down without a victim, but disperses slowly under exhortations from the officer to "move along now," and the horse trots briskly homeward.

TOOTHACHE.

LIKE a "cold," toothache always commands the respect of people when we discuss it, and give some hints for cure. A practical dentist drops some good advice which is inserted here. He says: "It is a great mistake to pay no attention to toothache. As for every other pain there is a cause, so there is for this. Sometimes it is only a reflex from some other organ, diseased, when it is really neuralgia and is apt to affect the whole side of the face. Again it is purely toothache, beginning and ending

in some decayed tooth. This is very seldom, however, as many can have their teeth decay down to a level with the gum, and never have a pain. Some other organ must have become implicated, then the sick tooth becomes the focus and objective point for the constitutional disturbance. Disorders of the stomach more frequently involve the teeth than disturbances of any other organ. The partaking of certain kinds of food also predisposes to toothache, even when the stomach shows no signs

of disorder. Some constitutions get toothache quicker than others; such as nervous people, or those where the nerve structure predominates over the muscular, having large heads and little bodies. Some people may have other troubles and no decay of teeth. The foundation of good teeth, in such cases, must have been from ante-natal influences and in early childhood.

Among the foods to induce toothache, candy and much sweets of all kinds stand first. They may also hasten decay, but as before observed, early decay is to be charged up to faulty structure of the teeth. When teeth begin to decay, even though they be the first teeth, it is well to have them filled with temporary filling, like amalgam or "os-artificial."

Children should be taught to wash out their mouth after each meal, and to use a brush. Always in taking a drink it is best to force the water well between the teeth, as the saliva of the mouth may be acid, and prey on the enamel. Do not extract every tooth that aches, no matter how badly decayed, as dentistry has reached very much higher grounds than formerly. Distrust a dentist that wants to pull every aching tooth. If the whole crown is lost, a new one can be built upon the stump; even a sound root may support a crown.

Plates are troublesome and unnatural. The lower plate seldom fits, as it simply lies upon the jaw and is not held in place by suction. Those who have experience can testify to this. You had better lose \$100 for every one of the lower teeth than to have them all extracted. Sometimes, if one or two on each side remain, they can be used for anchorage and a bridge extended around the dental arch that will sustain a set.

VEGETABLES ENOUGH FOR US.—The fact that vegetable food is sufficient for the nurture of man is a hard thing for the Englishman and Yankee to accept fully, and we must have new investiga-

tions frequently to demonstrate it scientifically. Now Dr. Rutgers, of England, has been making a series of dietetic experiments in which he compared the effects of a mixed diet, consisting of meats, milk, butter, white bread, biscuits, potatoes, rice, sugar, oranges, tea, and wine to a vegetable diet consisting of the same articles with the omission of meat, and the addition of Liebig's Extract of Meat (which contains no albumen), gray and green peas, and small white beans. He reported as the result, that he found a vegetable diet wholly capable of maintaining the strength of the body, and that vegetable albumen was equivalent, weight for weight, to animal albumen. Such experiments are no doubt interesting, but at this age of the world they are not really necessary, as the question of the capability of vegetable food to sustain life even in its highest vigor, was settled so long ago as the time of Pythagoras, who, with his followers, was a radical vegetarian. Indeed, we may say this question was experimentally settled by Adam and his immediate descendants, who proved that long and vigorous life may be maintained upon a diet from which animal food is excluded.

AN ALARMING TENDENCY.—One of the most alarming tendencies of the age is the loss among young men of that abhorrence for vice which is the greatest safeguard of virtue. A young man may be known to be a rake without seriously injuring his standing in what is called "good society." The average young man and young woman become so accustomed to contact with the vicious and the impure that they lose their natural repugnance toward evil, and finally come to look upon vice as a sort of necessary evil. Parents should awaken to this growing danger, and endeavor to meet it by training in the right direction, thus preventing the inevitable pain and sorrow which accompany a reckless life.

NOTES IN SCIENCE AND INDUSTRY.

Scientific Fun.—When a small piece of potassium the size of half a grain of corn is dropped into a tumblerful of water, some of the oxygen of the water leaves its hydrogen, owing to the intense heat which the chemical action produces, and combines with the metallic potassium, causing a violet bluish flame. When the piece of potassium is placed on the wick of a coal-oil or alcohol lamp, the flame is produced by touching the potassium with a bit of snow or ice or a drop of water will inflame it. Fire under water can be produced by placing a small piece of phosphorus in a conically-shaped glass filled with water and some crystals of chlorate of potash covering the phosphorus, and then pouring through a long tube funnel, or a glass tube, a few drops of sulphuric acid down on the mixture at the bottom of the glass. Tongues of flame can be seen flashing up through the water. The intense chemical action produces sufficient heat to inflame the phosphorus under water.

Where there is sufficient heat and oxygen, fire will burn, whether in air or water. The force of steam boiler explosions can be illustrated by getting a tube made by a tinsmith, say, $\frac{1}{2}$ inch in diameter, and closed at one end. Put a piece of ice the size of a cherry, or half a teaspoonful of water into the tube and cork the open end tightly. Suspend the tube over a flame, so that the ice melts and is converted into steam. The cork will be forced out with a loud explosion. Candle bombs held over a flame will explode in a similar manner. Water will produce 1,700 times its volume of steam.

Mining in the Arctic Circle.—It is not generally known, says the *Mining Review*, that important mining operations are carried on in the Arctic circle. Cryolite is carried from Greenland to Philadelphia by the shipload to be used in making candles. Extensive copper mines have been worked for a long time in Finland. Most of the work of mining has to be done underground, and the workmen in deep mines suffer much from heat; consequently it is apparent that mines can be worked as prof-

itably in these high latitudes as in our own country. Deep mines are warmer in winter than in summer. In such work as has to be done above ground there is scarcely any interruption. During the three dark months there is no lack of light to the accustomed eye.

The Manufacture of "Celluloid."—While everybody has heard of or seen or used celluloid, only a few know what it is composed of or how it is made. The following is a description of the process carried out in a factory near Paris for the production of celluloid:

A roll of paper is slowly unwound, and at the same time is saturated with a mixture of five parts of sulphuric acid and two parts of nitric acid, which falls upon the paper in a fine spray. This changes the cellulose of the paper into pyroxylin (gun cotton). The excess of the acid having been expelled by pressure, the paper is washed with plenty of water until all traces of acid have been removed. It is then reduced to a pulp, and passes on to the bleaching trough. Most of the water having been got rid of by means of a strainer, the pulp is mixed with from twenty to forty per cent. of its weight in camphor, and the mixture thoroughly triturated under millstones. The necessary coloring having been added in the form of powder, a second mixing and grinding follows. The finely divided pulp is then spread out in thin layers on slabs, and from twenty to twenty-five of these layers are placed in a hydraulic press, separated from one another by some sheets of thick blotting paper, and are subjected to a pressure of 150 atmospheres until all traces of moisture have been gotten rid of. The matter is then passed between rollers heated to between 140 and 150 degrees Fahr., whence it issues in the form of elastic sheets.

Hard and Soft Water.—All cooks do not understand the different effects produced by hard and soft water in cooking meat and vegetables. Peas and beans cooked in hard water containing lime and gypsum, will not boil tender, because these

substances harden vegetable caseine. Many vegetables, as onions, boil nearly tasteless in soft water, because all the flavor is boiled out. The addition of salt often checks this, as in the case of onions, causing vegetables to retain their peculiar flavoring principles, besides such nutritious matter as might be lost in soft water. For extracting the juice of meat to make a broth or soup, soft water, unsalted and cold at first, is the best, for it much more readily penetrates the tissues; but for boiling where the juices should be retained, hard water, or soft water salted, is preferable; and the meat should be put in while the water is boiling, so as to seal up the pores at once.—*Journal of Chemistry.*

A Great French Project.—Reference is made to the projected ship canal between Bordeaux on the Atlantic seaboard, and Narbonne on the Mediterranean coast; it is stated that the cost will be some one hundred and thirty million dollars, while its length would be about three hundred and thirty miles. The use of it would be a saving of nearly seven hundred miles by vessels going from southern France or northern Italy to the northern Atlantic. The plan, it is said, contemplates having a railroad run along the margin of the canal, and using locomotives to tow the vessels through, by which means, it is believed, a speed of seven miles an hour may be maintained both day and night, as during the hours of darkness the canal might be illuminated with electric lights. There would be, according to the plan, thirty-eight locks in the canal, and the depth of water, twenty-seven feet, would permit French armor-clad vessels to pass through the canal, thus uniting the two sea coasts of the country, and avoiding the passage through the Straits of Gibraltar. Far better, we think, had M. de Lesseps busied himself about such a project as this than the Panama Canal, which has brought confusion into French politics.

American Industries and the Brussels Exhibition.—The following extract from a note to the *Evening Post*, written by one of the jurors of the Brussels exhibition, shows that although the number of American exhibitors was not large, the reputation of American artisans for ingenuity and talent was fully sustained by those

who represented them. The writer, under date of the 5th of October, says: "I have just finished the duties of juror at the exhibition, and must let you hear of the returns. In the agricultural machines, on which division I was put, we got for the United States three diplomas of honor—the highest award—and one gold medal; in other words, a diploma of honor for each exhibitor but one, and he really only deserved the gold medal. The other exhibitors fared equally well, for out of 73 *exposants*, 54 got distinctions of greater or less degree. I think we have reason to congratulate ourselves."

Ways of Making Money.—A correspondent of the *Scientific American* points out two processes recently introduced which commend themselves to the user by their convenience while the little "dodge"—perfectly legitimate, you know—in them is a source of great profit to the seller.

Some parties are doing quite a business in different cities advertising and selling an "outfit" for copying letters without the use of a copying press or water. The "outfit" consists of an ordinary tissue paper copying book, a sheet of blotting paper, a piece of smooth pasteboard, and a bottle of special ink. The whole trick is in the ink. Any copying book will do.

I saw through the thing as soon as I saw a copy, and tried it at once with perfect success. I just took ordinary ink and mixed glycerin with it. I wrote a long letter with it, blotted the letter very lightly, then placed it under a tissue leaf of the copying book, and rubbed the latter with my fingers, getting a very fair copy and then a second copy. Of course a copying press and water are both unnecessary. All that is needed is to take any ordinary ink and mix glycerin with it, say one-fourth to one-third of the volume of the ink. The glycerin keeps the writing wet till a copy is taken, and on this account—its slow drying quality—this ink is not convenient for other than copying work.

There is another interesting trick in another line, whereby the advertiser sells ordinary head-light kerosene for \$10 a gallon, which is a pretty fair profit, as it only costs 71-2 cents. A compound in five-ounce bottles is extensively sold to printers under various names, as "Inkoleum," "Rollerine,"

etc., at 50 cents per bottle, or \$10 a gallon. It is used to put on printers' rollers, to thin printers' inks, etc., a few drops only being used. Every printer has plenty of coal oil in his house, and it looks funny to see him send fifty cents to get five ounces of it. But he never thinks of trying the coal oil he has in his can. The trick here is in disguising the kerosene so that the printer does not know that it is kerosene. The peculiar *fluorescence* of kerosene is destroyed by adding a small amount of resin oil. To make this resin oil mix with the kerosene, a little sulphuric ether is added. A little oil of cedar disguises the kerosene smell, and so the printer pays 50 cents a bottle when he already has plenty of kerosene in his house, five ounces of which cost him about one-fifth of a cent. The only useful element in the mixture is the kerosene.

Charming the Cobra. — Once a year, during the rainy season, the cobra lays from twelve to twenty eggs. In one specimen shown by Mr. Phipson, the young one is seen just as it is emerging from the egg. The tooth with which it cuts its way out is shed as soon as it has served its purpose. When born, the young cobras measured about seven and one-half inches long, and were very fat; at the end of a few months they were about nine inches in length, but had lost all their plumpness. It was very remarkable that the original nutriment got out of the egg should sustain them so long. On account of its timidity, and the great ease with which it can be tamed, it is the only snake with which snake-charmers will have anything to do. By attracting its attention with one hand, it may be easily seized round the body with the other; and so long as the hand or any object is kept moving before its eyes, it will never turn to bite the hand that holds it. This is the simple fact, the knowledge of which the charmers turn to such advantage in their well-known performances. The snake is taken from its basket, and a slight stroke across the back brings it at once into a defensive attitude. The constant motion of the musical instrument before the snake keeps it watchful and erect, and not the music produced. As a matter of fact, snakes have no external ears, and it is extremely doubtful whether the cobra hears the music at all. The charmers

say that the adder of the East, the Daboia, has no ear for music, because they can not operate on it as they do on the cobra. It is rather interesting to note that this has been the belief since David's time at least—"like the deaf adder that stoppeth her ear, which will not hearken to the voice of charmers." —*Nature*.

An Economical Contrast. — In 1816 one bushel of corn would buy one pound of nails. In 1888 one bushel of corn will buy ten pounds of nails. In 1816 a pair of woolen blankets cost as much as a cow; in 1888 a cow will buy five pairs of woolen blankets. In 1816 it required sixty-four bushels of barley to buy one yard of broadcloth; in 1888 sixty-four bushels of barley will buy twenty yards of broadcloth. In 1816 it took twenty dozen eggs to buy one bushel of salt; in 1888 twenty dozen of eggs will buy ten bushels of salt. In 1816 it required one bushel of wheat to buy one yard of calico; in 1888 one bushel of wheat will buy twenty yards of calico. With these figures before them, who can justly claim that farm products are not improving? The outlook for the productions of the farm is certainly hopeful. The farmer can exchange his crop for more of the necessities and luxuries of life than at any former period in the history of our country. Let farmers take courage; what they produce will always bring money or a large equivalent in needed supplies for the family.

The Peril of Eating More than we Need. — Growth and waste and repair go on in a nearly uniform way the whole year through, but the amount of food necessary for these operations or purposes is surprisingly small. The generation of bodily heat requires a most variable quantity of food. In winter, with the temperature of the external air at zero, the temperature of the blood in healthy persons is 98.4 degrees, and when the heat of summer drives the mercury of the thermometer near to or above that mark, the blood still registers 98.4 degrees. The marvelous mechanism by which this uniform blood temperature is maintained at all seasons is not necessary to consider, but it must be evident to every one that the force needed to raise the temperature of the whole body to nearly 100 degrees in winter is no longer needed in sum-

mer. The total amount of food needed for repair, for growth and for heating, physiology teaches us, is much less than is generally imagined, and it impresses us with the truth of the great surgeon Abernethy's saying, that "one fourth of what we eat keeps us, the other three-fourths we keep at the peril of our lives." In winter we burn up the surplus food with a limited amount of extra exertion. In summer we get rid of it literally at some extra risk to health, and, of course, to life. We can not burn it. Our vital furnaces are banked and we worry the most important working organs with the extra exertion of removing what would better never have been taken into the stomach. —*Manufr. and Builder.*



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THE OUTLOOK.

AT a recent meeting of the British Phrenological Association a paper was read by one of the members, Mr. A. T. Story, on the "Present position and future prospects of Phrenology," in which he said that Prof. Haidenhein had made "mesmerism" popular among all classes by the publication of a little book with the title "Hypnotism," whereas previously the subject of mesmerism had been under a ban, the scientific world generally being disposed to stigmatize it as humbug and charlatanry.

"So it will be with Phrenology," he remarked. "Some event, some book, or some person will make it fashionable, and then all the world will accept it, and begin to praise and belaud it. Then the schools will take hold of it, and we shall see great systems grow out of it—systems of philosophy, systems of metaphysics."

Our review of the present status of the subject is convincing that much of this very growth that Mr. Story regards as following the general recognition of phrenological doctrines, has already been made. Despite the obstacles raised by prejudice, ignorance, invidiousness, and selfishness, the principles involved in mental science as formulated by the advanced teachers of practical Phrenology have found their way into the thought of the age, and given to its every side, at least the intelligible sides, color and character that are among the chief features that constitute its progress.

In education, we note a growing movement for methods of study that are less arbitrary and mechanical than the old, methods that are suited to the natural development of the juvenile mind.

We note a tendency to regard the moral faculties as of equal importance with the intellect, and as necessarily requiring careful training.

We note the introduction into psychology the study of physiology, and the recognition of the latter as fundamental to an understanding of the former.

We note the marked increase of the number of scientific observers in the field of brain localization, and the growing belief in the psychic function of special areas.

We note in the every-day conversation

of people, in current literature, in utterances from the pulpit and the platform, the impression that phrenological truths have made upon receptive and considerate minds.

There remain anatomical links, we must acknowledge, to render the system perfect, but in the respect of imperfection does Phrenology differ from other departments of science? One may say it is at best merely tentative. Well, is psychology more? And how about medicine, is that not tentative, most conspicuously? This is what the editor of the *Medical Record* said only a few weeks ago:

"What can be said of the success of our art in its application to the relief of disease? We exclude, of course, surgery and hygiene, and assume only that the question, 'Is medicine a failure?' relates to the application of drugs and other remedial measures to actual disease. We have lessened the number of infective and septic disorders; but, when they attack an individual, are they any more perfectly under control? We refer our readers to the discussion on the mortality from pneumonia, which is asserted to be greater now than it was half a century ago. The mortality from diphtheria, scarlet fever, typhoid, phthisis, is, somewhat lower than it used to be, and a vigorous defense of modern therapeutics might be made in connection with these and a number of other common diseases. We must bear in mind, however, that the question is one that must be answered with reference to society in general rather than to the individual. And though we pull many weakly patients through attacks of illness by aid of modern therapeutics, is not the

result an increase of invalidism which tends to propagate itself, producing in succeeding generations an over-sickly race?"

When the editor of one of the most prominent medical organs in the country dares to use such language, he must feel quite sure of his ground.

But we can say with confidence, every advance in knowledge of nerve function, in the treatment of diseases of the mind, and in the surgery of the brain, has found no point of vantage against the canons of Phrenology—but on the contrary, has indicated a nearer approach to them. Dr. J. M. Carnochan, one of the most distinguished of American surgeons, and whose death in 1887 was widely regretted, said in a paper written and published not long before his death, "It is not necessary, at present, to claim for the doctrine of localization the precise limitation of the cerebral organs. What is claimed for the principle is that the brain, as a whole, is the organ of the phenomena of mind, that it is composed of an aggregation of organs, and that the organs are the functioning sources of the individual mental functions. It remains for the future to develop the system as has been done in other organs, by physiological and pathological research, as, for example, the localization of articulate language in the convolution of Broca. From observation and from comparative and pathological anatomy certain mental faculties under different terms, have been allotted to certain regions of the encephalon. To the frontal lobes have been assigned the organs of the intellectual faculties, to the posterior or occipital region the affective or social

organs, to the temporo-sphenoidal regions the animal propensities, while the moral sentiments are stated to have the organs developed in the coronal region of the brain. These assignments of place, whether altogether correct or otherwise, will serve as a basis for the further confirmation of the doctrine of cerebral localization."

A statement of this character in a paper the whole tenor of which is in sympathy with the phrenological position, made by a representative anatomist in the presence of men notable in New York for scientific attainment, is of more than passing significance to all interested in the system that Spurzheim so grandly enunciated.

The outlook seems very promising. The advocates of scientific Phrenology need not fear. Standing upon the strong ground of facts as human nature supplies them, they should be ready to meet criticism and sneers, and meet them calmly. The skeptic "who came to scoff," has often "remained to pray," when the irrefutable logic of truth was illustrated before his eyes.

A RECENT DISCOVERY OF ANCIENT CRANIA.

IN a short address before the Academy of Anthropology on the 4th of December, Mr. Frank H. Cushing, of Zuni fame, spoke of the excavations now being made in Arizona among the buried cities of that region. As Mr. Cushing is one of the most active of the Hemmingway company engaged in that most interesting field of archaeological research, his remarks had a value that was highly appreciated by those present. After speaking of the antiquity of the

ruins that had been discovered in the Salada country, and of the evidences they contain of a good degree of progress in the arts and industries being possessed by the people that built the cities, he spoke of the character of the cranial remains. Over one hundred skulls had been taken out of the burial places, all of which were of the brachycephalic or broad type, and not of the dolichocephalic type as had been stated by some authorities. There were narrow skulls found, but the form of these was due to the effect of long continued pressure. In all cases where such remains were found in stone cases or sarcophagi so that they were preserved from the pressure of surrounding earth and rock, the skulls were broad, the transverse and antero-posterior diameters being nearly the same.

This fact would appear to ally those people to the Indian of the present day, the Zuni especially, who retains peculiarities of custom that in themselves have a singular likeness to what of habit in industry and religion the ancient relics show.

It would appear now that the Arizona researches will help to resolve the problem of the ancient inhabitants of America, and set at rest the speculations with regard to the place of the Indian in the family of mankind.

WINE'S NEW MINISTER.

A LADY of some prominence in the fields of lectureship and journalism has been announced through the press to have undertaken a new apostleship in the interest of wineselling. As she hitherto had something of a reputation for influence in lines related to social reform,

this step intimates a change of attitude that many of her friends will regret.

No doubt those who employ her talents for the purpose of enlarging their business, have not overrated their quality, but it seems to us that she has made a very cheap bargain, whatever may be the price of it, for it is expected that the lady's "original" method of spreading "the gospel of the grape" will be effective, and this means an increase in the great army of liquor drinkers that burden society.

If the blazonry of her new banner be that defined as "the gospel of the grape," a strange ambition must have gotten hold of her, an ambition likely to prove the opposite of happy in its final effects.

The serious advocacy of wine bibbing is a deplorable mission for anyone. Gifts of intellect, a fine presence, fascinating

elocution are perverted in such a cause; and for a woman possessing these qualifications to offer herself as a devotee of Bacchus for a salary, when the country is filled with the appeals of mothers, sisters, and daughters against the demon of drink, is unspeakably lamentable.

HEARD FROM.—The latest reports from Africa, coming to hand shortly before this number was put to press, are to the effect that Stanley had reached Emin Bey and was in communication with him, and that both explorers were safe and in good health. The article on the Relief Expeditions will lose none of its interest to the reader, we are quite sure, for this bit of good news as it is significant of progress in the efforts that both these missionaries are making for the improvement of the condition of the tribes on the Congo and Upper Nile.

Our Mentorial 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.

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 small hand, or in pencil, as the compositor has to read it across the case, a distance of over two feet, and the editor often wishes to make changes or additions.

4. Never roll your manuscript or paste the sheets together. Sheets about "Commercial note" size are the most satisfactory to editor and compositor.

5. Be brief. People don't like to read long stories. A two-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 also.

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. Personal and private matters addressed to the Editor in his professional capacity will receive his early attention if this is done.

VENTILATING THE CELLAR.—J. G. S.—The gases and effluvia that may be generated in your cellar will be drawn into the current that a flue open to the roof produces, and if the air from the cellar be colder than the air in the room above, some of it will be likely to enter the room through the register. It would be better to have an independent means for ventilating the cellar. Meanwhile keep the cellar clean and give the outer air access to it.

HOW A JOURNALIST REGARDS PHRENOLOGY.—O. L.—Your clipping from the Albany paper shows clearly enough that the writer of it does not understand the subject he is so ready to criticize and judge. Anyone who puts forward the idea of "bumps" as being a fundamental part convicts himself at once of ignorance. Further the statement—"Everybody knows that as a rule idiots have very low foreheads, intelligent people good breadth between the eyes, and refined people a different cast of features than the gross and common"—is a fact that phrenological science has developed, and there is no "practical observation" of heads and faces that is worthy of the name scientific that does not owe its suggestion to the phrenological observers.

As for the opinion that "any parent who trains his boy as a shoemaker or a lawyer, simply because some strolling phrenologist advises it from an examination of the conformation of the head, is throwing common sense to the winds," it may be hard on some "strolling phrenologist," but it is met by the fact that hundreds of the more intelligent people believe that an examination of their heads has helped them greatly to do their part in life. Testimonials to that effect are in the possession of many of our professional phrenologists.

OXYGEN AND HEAT.—D. R. H., San Deigo.—*Question.*—The amount of heat produced in any given case is said to depend upon the quantity of oxygen and carbon consumed, which unite only in certain proportions. Chronic invalids often can not get warm although they breathe ever so much and exercise ever so violently; then again they are hot and feverish while at rest and breathing very little. This is true in all fevers, especially where chills precede, with the exception probably that in some fevers

there is much heavy breathing. But my observation leads me to believe that heat of body does not always depend upon the amount of breath. How do you account for this, or am I deceived in my conclusion?

Answer.—Fever is an abnormal condition, showing disturbance of the circulation, and interference with the excretory or secretory function of the skin. It intimates a want of respiratory tone and an excess of carbonaceous matter in the blood. Suppression of the perspiration, by preventing the escape of waste and excess of water from the blood through the pores of the skin, stops the most important provision of nature for cooling the blood and keeping the system at the normal temperature. You may not know that the blood in the hepatic vein is eight degrees higher than it is in the superficial vessels. Some chronic invalids are almost constantly feverish, while the majority feel cold or are very sensitive to exposures because of the low condition of their blood. They are anemic, not sufficiently nourished, and hence their blood is deficient in hæmoglobin or the red corpuscles. Unless there is good material in the blood for the oxygen to act upon, it will but promote the weakness of the body by increasing the combustion. Most people, however, are weak and the organic functions depressed or sluggish because they either do not breathe good air or they do not breathe deeply and fully enough to oxygenize and stimulate the blood function.



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 physician, of Joliet, Ill., writes under date of Dec. 10: The JOURNAL to me is one of the most refreshing things of this life. Its pages are carefully gleaned, and its arrival each month is eagerly looked for. There is a peculiar satisfaction derived from it that is not experienced in reading any other publication. . . . I attribute my success as a professional man, and my happiness in the social and domestic way, more to Phrenology than to any other thing. In my library stands a case of bound volumes

of the JOURNAL; near at hand, on the desk, sits one of your handsome busts; on the wall near by hangs a copy of your beautiful chart. Somehow it seems like a little taste of Heaven to find that I have an hour or an evening to spend in this corner.

The betterment of man, morally, physically, and mentally, should certainly be a subject of interest to every right thinking man or woman. This seems to be the leading object of the JOURNAL and its publishers, and I for one wish you success in every way, and may the coming 25th of December be a Merry, Merry Christmas, and may there be many returns of a like occasion.

W. R. M. G.

A Dream: a Future State.—Wednesday morning, March 14, 1888, just after broad daylight, while lightly dozing in bed, came to me a peculiar conviction of another state of existence after death, in a dream. In the dream, I was thinking—seemingly while on the street in the city, with people in sight and hearing—about a future state, and as to the reality or unreality of such a state, reasoning upon the matter, when there came like a flash to my mind, with a thrill of gladness, a conviction of its reality and a realization of its condition, which was that of great happiness and joyfulness in company with others, as in a sort of heaven or spirit land. Upon the realization of this conviction and experience, I shouted: "Glory! glory! glory!" accompanying the cry with an equally joyful clapping of my hands like a "new convert," as if I had just "got religion." (My parents were Methodists. I was reared in the atmosphere of "protracted meetings.") Immediately upon coming to this conviction, my mind reverted to what I had thought and written upon this same subject of future existence about twenty-five years before; which was that, inasmuch as we have a natural desire for a future or continued life after death, we will have it; and I then put it somewhat in this wise:

"All unvitiated natural desires
Are possible of access
To which the aspirant aspires;"

on the ground that otherwise nature itself, as embodied in ourselves, would be a cheat. Accompanying this thought was this other thought—I mean on the occasion of the

dream—that considering all the sublime wonders and possibilities of nature—as revealed to us through the telescope, microscope, solar spectrum, astronomical photography, and the study of the still greater wonders, if possible, of the psychical world—there is nothing impossible for nature to accomplish that it is desirable she should accomplish; and that, being, on the whole, or in the long run, beneficent, she will and does accomplish in some way in some time the desirable in this general and large sense.

So much as to the dream. Now, a few words as to the possible or probable immediately exciting causes of it may be interesting. I had read, the Sunday before, the autobiographical sketches of Miss Owen, and the address of Rev. Mr. Williams, lately delivered before the Nineteenth Century Club, on Sectarianism. Both interested me very considerably; and especially Miss Owen's experience in her skepticism, Spiritualism, and what she called her conversion to Christianity. I thought, and still think, her account of her "conversion" very remarkable, considering her, as I am bound to do by the way she impresses me, a very honest, sincere, as well as intelligent person. I was interested particularly in that portion of Mr. Williams's paper representing his views on the two forces or influences in religion, viz., of individual or isolated experience, and association or combination experience as in an organized church, or assemblage. Then I had just read, the evening before, a portion of an article in the *Fortnightly*, for February, by Frances Power Cobbe, entitled "The Education of the Emotions," which treats of the contagion of the emotions, showing that but a small portion of our emotions arise at first hand or from independent stimuli, and that the larger share come from the contagion of sympathy with the emotions of others. And upon the theory that our dreams are likely to come from what has occupied our thoughts most while awake, this dream of mine may have been incited in part by the reading of these essays.

As to the argument that the desire for a future life is evidence of it, I will add that such a desire may be a cause of it, on the principle that "the wish may be father

to the thought," and that the wish and the thought together may be the father of the deed or fact, that is, may create or bring about the reality of the condition or state desired. And are we not creators? Do we not every day make conditions and circumstances for ourselves and neighbors, or fellows? We are all indeed no less—except in degree—*makers* of circumstances than was Napoleon, or than we are, again—except in degree—*creatures* of circumstances.

"We are all creatures of circumstances,
Yet to them go to school,
Learning and helping,
All other things to rule."

Am I convinced of the reality of this future existence? No, not altogether. Not yet. Have I searched for further evidence? Yes; I have looked into Mesmerism or Hypnotology, and have practised it in its various degrees of clairvoyance, etc; also into Spiritism, for as many years; and have not neglected Rosicrucianism, or esoteric Buddhism, or Indian Theosophy. What is my belief? I am a Scientist. That is, I believe there is such a thing as truth; that it is possible for a man to discover it; that it is worthy of, or demands, our highest confidence or faith—concerning the here or hereafter, if there be a hereafter, or if there will be a hereafter when we shall have made one, or helped to do so; and that the way to find it, and to demonstrate it, and to be sure we have found it, is by the use of the scientific method.

These additional thoughts I am writing ten days after I had the dream. On the day following the morning of the dream, I undertook to narrate the dream simply; to have and to preserve a record of it, to relate it, for I then *felt* and thought it to be of importance. It added to my cheerfulness and happiness at the time. It does not now seem to me of so much importance, but still of importance. It is a well attested fact in psychology that persons have worked out difficult problems in their sleep which they had been anxious to solve, but had failed to solve while awake.

It just occurs to me to add that "a future state" does not necessarily mean "immortality." That is, if we grant a commencement; for

"A line that has one end must have two,
Is a thing as plain as it is true."

There must be an *end* some time or other to what *began* some time or other. The question here is, when this end? Does it come at the period of what we call death, or the ending of the body, or does there continue, till some other period, an individual consciousness of being? As to the time of the final end, may it not be that,

"When we have lived
Till all selfishness is dead,
Then we'll blend in
With the great fountain-head?"

The Buddhists seem to hold to this view in their doctrine of Nirvana. The theory of evolution would seem to demand this sort of return. Evolution implies involution, or dissolution. And this alone answers to the rhythmic law of Spencer. This sort of return to whence it came seems as natural and logical a necessity in the case of the "mental" or "spiritual" being or part of being as in the case of the physical.

Nor does any of this conflict with the doctrine of Monism. Body and mind may be but different aspects of the same thing, the two colors of the two sides of the same shield.

W. M. BOUCHER.

PERSONAL.

CASSIUS M. CLAY, nephew of Henry Clay, now in his seventy-ninth year, lives a retired life on his estate near Richmond, Kentucky. The thirty acres of big trees surrounding his house were all planted by his own hand. Mr. Clay is a fine-looking old gentleman, tall, with silver-white hair, and well-cut features. He still takes some interest in politics, making even an occasional speech.

MRS. O. C. CONVERSE, of Waterbury, Connecticut, who is seventy-eight years of age, in her early prime taught school at South Bend, Indiana. She taught President-elect Harrison his A B C's, and President Garfield was at one time one of her pupils. The latter, who was then driving a mule along the tow-path, found himself compelled to stay at South Bend for the winter, his boat being frozen in. This gave him an opportunity to study, which he did under Mrs. Converse's tuition.

LORD SALISBURY, the British premier, has certainly struck into a new line by his advocacy of woman's suffrage, and finds the warmest response in the Liberal ranks, as

was to be expected. The Conservatives do not relish an extension of the suffrage, but are being won over by arguments that women would have a tendency to vote the Tory ticket.

PROF. J. W. LOWBER's book, "The Struggles and Triumphs of the Truth," has brought him the dignity of LL.D., conferred by one of our universities. Prof. Lowber takes occasion in this book to give conspicuous attention to Phrenology, and to accord it a high place among the world's truths.

WISDOM.

"Thou must be true thyself,
If thou the truth would teach."

WE are taught, and we teach by something about us that never goes into language at all.

THERE are two things which grow stronger in the breast of man in proportion as he advances in years—the love of country and religion.

THEORY and practice often differ widely; so what is beautiful and apparently perfect on paper, may prove in practice to be utterly worthless.

BUILDERS.

WE are all builders in this earthly sphere;
And from our labors heavenly mansions rise,
As every noble deed adds shining stone
To future home, eternal in the skies.

Lay corner stone of purity and truth;
On this foundation sure uplift the home;
Yet bear in mind the structure will not stand,
If love build not from base to rounded dome.

MIRTH.

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

LEMON juice is cordially recommended for one kind of felon; the penitentiary for the other.

"I SAY, my man, are those grapes fresh?"
"Oh, yah; schust picked." "Well, now, how about the chickens?" "Dem is schust picked, too."—*Harper's Bazar*.

"SAY, Mister," said a tramp to an artist,
"gimme a dollar and I'll let ye paint me

picture. Ye can put a dandy frame on it and call it 'A Summer Idle.'"

AN Irishman on being admonished by his physician, who had just looked at his tongue and felt his pulse, that he should bathe regularly, replied, "I do, doctor. I go in swimming every Fourth of July."

GEORGIE comes down to breakfast with a swollen visage, whereupon mamma says to the four-year-old: "Georgie, don't you feel well? Tell mamma what the matter is." Georgie, full of influenza, replies: "No, I don't feel well. Bofe my eyes is leakin', and one of my noses don't go."



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 the Editor with recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

MESSIAH'S MISSION. A poem in nine books.
By John Waugh. 16mo, pp. 164. Rochester, N. Y. E. R. Andrews.

It is a large undertaking for a writer to attempt to-day an elaborate poem of the epic class. But in this volume we have such an attempt, and candid, appreciative criticism, we are sure, must pronounce it creditable. The poem is no sudden, transient caprice, but the work of years. Mr. Waugh has slowly evolved it in the retirement of his pastorship among the hills of Steuben County, N. Y., and he who reads the well devised lines can not but be struck with the vigor of the thought, and the maturity of observation and culture they involve. In Book II., entitled "Prison Wards," we have reflections on the elements of mental action as they are illustrated in human life. The poet delineates graphically the "Ward of Causality," the "Ward of the Intellectual," the "Ward of the Moral," and the "Ward of the Spiritual."

A few lines from this book :

"Here is the picture gallery of survey,
Imagination's home, where stands the shrine
Of the magician of the mental throne,
Waving his wand, transmuting Nature's
forms

To all varieties of good or ill;
Putting a living soul in moveless clay,
And by his spell upon the poet's eye,
Peopling the desert with seraphic shapes,
Which in their best ideals can not pass
Beyond the real hidden from the soul
Behind the palpable material shell.

What meet we here? What forms come
trooping in?

What outcomes of the habitable space
We call our own? The wizard spell is
changed;

Our pictured paradise is blotted out,
While all the phantoms of the false and vile
Skulk in the corners or depict themselves,
To foul the run of Nature at its source."

The poem is a fine picture of human nature in its various phases, good and bad, low and high, while it celebrates in terms of enthusiasm and lofty devotion the mission of Christ to elevate, purify, and redeem man.

ALCOHOL IN SOCIETY. An Arraignment of the Drink System, as an Enemy of the Public Good. By Richard Eddy, D.D., author of "Alcohol in History." 12 mo, pp. 398. Price, \$1.50. New York. National Temperance Society.

This volume is the third and last of a series of Prize Essays projected by Mr. J. H. Jackson to cover the field of the liquor question. Its companion books are *Hargreaves'* "Alcohol and Science," and "Alcohol in History." In the book before us the subject of its title is considered in the following order: The Evil in its Social and National Phases; in its Relations to Religion; its Influence on Education; the facts in regard to the Two-Wine Theory; a consideration of the Old and New Objections to Total Abstinence and Prohibition. It aims to be an exhaustive treatment of the various phases involved in these general headings, and to bring to the illustration and defense of the positions taken by the essayist, facts which have long been undisputed, as also those of the most recent date. The chapter on Education is unique, exposing as it does the fallacy of relying on general education to prevent or overcome intemperance, by showing how the vice prevails in colleges and schools, among men in all the learned professions, in the most enlightened and

best educated countries, drink facilities counteracting superior general education. The character of the education that will be helpful is sketched in full detail, and the extent to which it is being adopted in various parts of the world is made known.

CARMINA OCTO. Q. Horatii Flacci. Edidit Georgius Vincent. Novi Eboraci, Apud F. A. Stokes et Fratrem, A. V. C. MMDCXLI.

In ancient roll style, on parchment paper, F. A. Stokes & Brother have brought out eight songs of the sweet Roman poet Horace. First we are given the verses in the old letter of the Latin manuscripts, on which college graduates may try to refresh their long disused Latin brain cells. The long roll, as it is unfolded, brings into view finally very fair translations of these eight songs, which are of course those from whom our classical friends are wont to quote oftenest. The style of the roll is unique and taking, even to the leather string that ties it, while Mr. Vincent is to be complimented for his skill as editor.

GROVER CLEVELAND. By William O. Stoddard, author of "George Washington," "John Adams," etc., etc. 12mo, pp. 263.

ABRAHAM LINCOLN AND ANDREW JOHNSON. By William O. Stoddard. 12mo, pp. 284 and 73.

ZACHARY TAYLOR, MILLARD FILLMORE, FRANKLIN PIERCE, AND JAMES BUCHANAN. By William O. Stoddard. 12mo, pp. 94, 66, 58, 104.

These three neat volumes are the latest additions to the series entitled "The Lives of the Presidents," published by Messrs. Frederick A. Stokes & Bro., of New York City. The author, Mr. Stoddard, being a practiced workman with the pen, in the line of biography, and always employing a style which is eminently adapted to popular reading, has made these lives brief but comprehensive. The leading historical features in the political career of each distinguished man are treated with clearness, and we have enough of the private character and life in each case. When it is understood—and no attempt at explanation is necessary to make it understood—that intelligent people today as a rule have little time to devote to the reading of voluminous books—the author

who is terse and skillful in reducing his material to a comprehensive form, is the acceptable writer.

Mr. Stoddard devotes an entire volume to Mr. Cleveland. Brought out as the book was, during the recent very active presidential canvass, it being probable that both the publishers and the author expected Mr. Cleveland to be re-elected, it has the character of a campaign book. Whether or not the failure of Mr. Cleveland will affect its sale, it must be admitted that the past four years of official authority have been distinguished by many interesting events.

Of Abraham Lincoln we do not easily tire. His life and the period during which he administered the National Government are extremely interesting. Mr. Stoddard is not the man to neglect his opportunities. Abraham Lincoln, it must be remembered, is a familiar subject to Mr. Stoddard, as a few years ago he published a large work, covering the life of the frontiersman and president. Of Andrew Johnson the account is brief, yet comprehensive.

The volume in which we have four presidents relates to those whose careers were not distinguished for any very remarkable events. To be sure, in the case of Mr. Buchanan, the crisis had culminated in the war of secession, and occupied the attention of the people, but Mr. Buchanan was a very passive character, retiring from the responsibility of meeting the exigencies which had been forced upon the government, with apparent satisfaction.

HYGIENE OF THE NURSERY. By Louis Starr, M. D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, etc. 8 vo, pp. 208. Cloth, \$1.50. Philadelphia. P. Blakiston, Son & Co.

This is a practical work of value, adapted to the use of the laity, as well as instructive to the physician. The author says in his preface that he feels that intelligent parents are ever ready to be instructed, and willing to co-operate in the great work of preventing disease, the highest aim of scientific medicine. We think intelligent parents are becoming alive to the necessity of knowing the phases of common cases of illness in children, and the more available means of prevention and cure; but the amount of

ignorance yet prevailing is the subject of almost contemptuous consideration among educated physicians. People can not excuse themselves by saying that doctors do not give advice or instruct, for liberal and true physicians generally are ready, on occasion, to give practical advice, and popular books and magazines devoted to, or containing counsel for use in the home and nursery, have multiplied greatly in a few years. Little or no reference has been made by Dr. Starr to drug treatment. This is entirely proper, as it is not the place of the uninstructed in poisonous things to prescribe them. The great value of the book consists in its hygienic features, the relations of clothing, exercise, amusement, sleep, food; and things that can be best done by the mother or nurse in an emergency, are properly considered.

EATING FOR STRENGTH. Food and Diet, in their relation to Health and Work, together with several hundred recipes for wholesome food and drinks. By M. L. Holbrook, M. D., author of "Hygiene of the Brain," etc. Published by M. L. Holbrook & Co., New York.

A new edition of a book which has been successful in its introduction to the public, and deservedly so. Dr. Holbrook's purpose, both in the old and the new edition, is to present the most recent facts of science with regard to diet. Believing in the relation of food to physical vigor, he has sought to describe those articles that meet the want of body and mind. With a bias toward vegetarianism, he has been very careful to show the importance of those articles that have their basis in the farinacea. One interesting feature of the book relates to the cost of the different articles in common use, and he makes comparisons between the flesh sorts and the vegetable. The subject of drinks is treated to some length, and this subject, if fairly appreciated and put into practice by the reader, can not fail to prove helpful.

PUBLICATIONS RECEIVED.

TWENTY-THIRD ANNUAL CATALOGUE of the officers and students of Vassar College, 1887-88. Poughkeepsie, N. Y.

We note that the cost of instruction and board in this well-known school for young women, is \$400 the academic year.

PEARS' SOAP

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FAMOUS
ENGLISH

COMPLEXION
SOAP

HENRY WARD BEECHER'S TESTIMONY



cleanliness is next to Godliness. SOAP must be considered as a means of grace and a clergyman who recommends moral things should be willing to recommend soap. I am told that my commendation of PEAR'S SOAP has opened for it a large sale in the UNITED STATES. I am willing to stand by every word in favor of it that I ever uttered. A man must be fastidious indeed who is not satisfied with it.

Henry Ward Beecher

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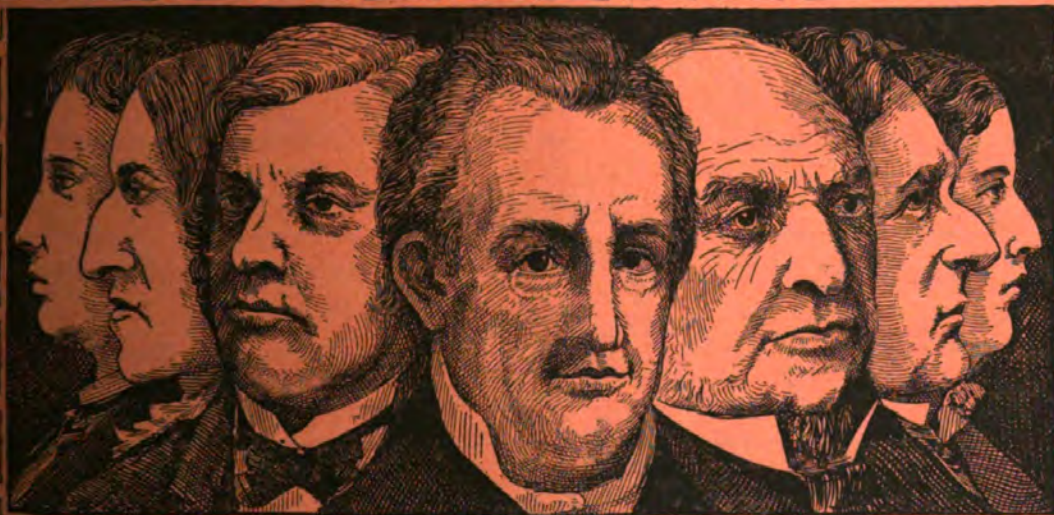
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ANNOUNCEMENT FOR THE NEXT NUMBER.

Among the features of the March PHRENOLOGICAL will be a sketch, with portrait, of Royal E. House, the inventor.

The Editor has in view for No. 17 of the series of Notable People — Consul Harold M. Sewall, with some account of Samoa and its people; M. Eiffel, the projector of the great thousand feet tower in Paris, now nearly completed; Mrs. Benjamin Harrison, wife of the President-Elect; and Cardinal Lavigerie, who has been prominent in the crusade against the slave trade in Africa. The Rev. Arthur C. Dill will give a stirring description of certain features of life in Deadwood, Dakota. Dr. Felix L. Oswald will continue the valuable series on Sanitary Reform, discussing further "The Tenement Evil."

Mrs. S. L. Hauser, of Bareilly, India, will have something to say of "Curious Remedies in India," and other contributors will supply Tricks of Memory, A Prepared Body, The Philosophy of Mental Cure, Recent Observations in the Relation of Brain Localization to Hypnotism, etc., etc.

The Phrenological Journal is published monthly at \$1.50 a year, or 15c. a number. To each new yearly subscriber is given either the Plaster Paris Phrenological Bust or New Lithographic Phrenological CHART Premium, a new plate, 19 x 24 in., with ring for hanging. When the Premium is wanted, 15c. extra must be received with the subscription to pay postage on the JOURNAL and the expense of boxing and packing the Bust, which will be sent by express, at expense of the subscriber; or No. 2, a smaller size, or the Chart Premium, will be sent by mail, postpaid.

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THE
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AND
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NUMBER 2.]

FEBRUARY, 1889.

[WHOLE NO. 602.



HENRIETTA H. SKELTON.

MRS. HENRIETTA H. SKELTON.

ADVOCATE OF TEMPERANCE REFORM.

THIS lady has fortunately physical development enough to give to her brain, which measures 22 1-4 inches, adequate support. One peculiarity of this brain is that it becomes larger as it rises; the top of the head is massive, giving indications of power or grasp in matters pertaining to the higher duties of life. In subjects which relate to mere detail, she is less inclined to work; she always strives to generalize that which many people would specialize; in other words, she would cut the fifty fagots by holding them in a bunch, instead of dealing with them in detail; and so she combines facts, and organizes ideas, and deals with principles rather than with mere historic particulars. She seeks to deal with ideas and principles, with the logic of facts rather than with the historic statements that satisfy most people.

She has decidedly strong Mirthfulness, and sees the droll and eccentric, the peculiar and witty side of subjects; and will often use an epigram, having a witticism for a sting, that serves, like the cracker of a whip, to finish the business. She has Agreeableness, and can make herself and her subject seem smooth and acceptable; and is inclined, when she can, to use oil and honey, rather than vinegar and alkali.

She has large Imitation, so that, as a natural actress, she can suit the look and the gesture and the general action to the subject matter, and give it a double vigor and efficiency thereby.

She ought to manifest a musical elocution, and be able to give such tones of voice as will meet the exact sense of the subject, and impart thus by the sound a quality of sense which mere noisy words will not do. She ought to be able to mitigate the spirit of opposition which sometimes may be raised against her, by the suave and gracious and pleasant way in which she will put

the other side of the subject forward; and sometimes she starts with the appearance of concurring with the opponent, and does agree with him as far as she can, but begs to show a shade of difference on some points. But, before the points are finished, they are so strongly shaded, that they cover the ground amply.

We find here large Language; if she had larger perceptive organs, she would speak with more fluency in respect to the light and detailed phases of subjects.

She talks best when she gets where the work is pretty strong and solid.

She has Firmness enough to indicate great perseverance; and Conscientiousness enough to have decided convictions, and a certain moral courage equal to the convictions.

She has large Approbativeness, and hence enjoys approval: would suffer if she were disapproved or derided. Her Caution makes her watchful, guarded, prudent, painstaking, and anxious. Her Secretiveness enables her to be judicious in the selection of topics and in the treatment of them with different kinds of people socially.

Her Continuity is not large; hence her mind is adapted to variety in its exercise; and, though she might be interrupted, she would come back to the main line of thought when she had treated the side issue.

She remembers ideas and principles better than she does historic data, and, if she were speaking, she would put the data on the back of a card to refresh her memory when she came to the point where she wanted to use them, instead of carrying them as a part of the story in the mind.

She is strongly social, is friendly, inclined to adapt herself to people, and conform, as far as principle and duty will admit; and sometimes conciliates opponents through a friendliness of per-

sonal character. People will sometimes quarrel with her ideas, but dislike to quarrel with her.

She is ingenious, inventive, rather rich in imagination, but never gets out of the reach of the logic of the subject, or the conscience that belongs to the subject: she would rather fail while doing right, than to win success through wrong measures. Her appeals to people through the family and social, and especially parental relationship, are kindly, earnest, and strong. If she wanted to convert a man from the use of alcoholic drinks, she would speak of his children and his wife and his home in a way that would do more for him than an analysis and physiological statement of the case, personally.

This organization seems to be derived from the paternal side; the build, the figure, the head, and something of the features here would indicate inheritance from the father; hence, she thinks and talks more like a man than like a woman.

The best masculine orators are those who inherit most from their mothers; and they mingle the constitutional vigor which belongs to their sex with the gentleness and smoothness which they inherit from their mothers; and, *per contra*, the women who inherit from their fathers will plan their mode of action, and predicate their enterprises on the logic and the courage which belong to the subject, and they will administer it with the gentleness that belongs to the fact of sex, and thus secure better success than if the inheritance were not from the father. The man is benefited by inheriting from his mother, the woman is benefited by mental inheritance from the father, and then both sides of human life are blended in each; and what there is of strength or smoothness, what there is of power or gentleness and sympathy, in both sexes, are combined in the individual; and thus nature vindicates herself, and the fittest survive.

N. S.

Henrietta Hedderich Skelton, Superintendent of the German work for the N. W. C. T. U., and President of the State Union of Idaho, was born in Giessen, Germany, November 5th, 1839, her father being at that time a professor in the University of Giessen. Her first four years were spent in the full enjoyment of an out-door life, with the companionship of two sisters and three brothers. When five years old, the little girl was made acquainted with sorrow, two brothers and a sister dying within a brief period.

About the same time Professor Hedderich was elected to one of the principal professorships in the celebrated University of Heidelberg. There, in the true kindergarten, by Froebel's method, Henrietta Hedderich began her studies. Her love for outdoor life, imbibed at Giessen and encouraged by her parents, had become a large part of her nature, and all hours of the day not spent in the schoolroom were spent out of doors; not in idle play, but among the plants and flowers of the well-appointed gardens adjacent to the school and forming a part of the parental demesne.

There the little girl, under the direction of her wise and gentle mother, learned much of true garden lore and skill, and no doubt it is largely owing to that fact that the Henrietta Skelton of to-day is so strong and possessed of such endurance. To that education and training the N. W. C. T. U. is even now indebted for the energy, fortitude, and almost unexampled endurance of this grand character, whose work as an "organizer" and lecturer in the German Spanish, and English languages, has made her name familiar throughout the length and breadth of her adopted country.

When the young girl was crossing the threshold of her sixteenth year, death came again to her happy home, and her father laid aside his work of educating the young. Six months later the mother followed her husband to "the shining shore."

An uncle received Henrietta as a legacy from the dying mother, and, after settling up the family affairs, removed his charge to his home in Canada.

At the age of eighteen, the orphaned girl married Mr. Skelton, traffic superintendent of the Northern Railway. The marriage was an unusually happy one, Mr. Skelton being a fine specimen of the business-bred Englishman.

One son blessed their union. Thirteen years of peaceful life they were permitted to spend together, mutually helpful and generously regardful of all about them who were in need of counsel or aid. So generous and hospitable, indeed, were they, that when Mr. Skelton died, his widow had nothing left but her boy, her happy memories, her brave heart, and grand endowment of "pluck."

At the death-bed of her husband Mrs. Skelton consecrated herself to the great cause of temperance, a cause dear to her husband as to herself, for the advancement of which they had labored hand-in-hand, in a quiet but effective way, among their neighbors and acquaintances.

Shortly after her husband's death Mrs. Skelton entered the lecture field, where she promptly earned the reputation of a sound and logical orator, as well as a persuasive one. She has been, as one of her comrades phrases it, "Always and unswervingly loyal to the cause."

So soon as the Prohibition party was proposed, Mrs. Skelton went heart and soul into the movement. Her faith in the ultimate victory of prohibition principles and the adoption of prohibition laws is as unlimited as her faith in God.

As an advocate of woman's suffrage she is most able, convincing, and reasonable in her arguments. She is ever ready to be sent to a new field. The darker the clouds that hang over it, the heavier the underbrush to be cleared away, the better she enjoys dispelling the

one and destroying the other. Her presence is magnetic, even in the quiet home where she is a guest; but when her eyes glow and her cheeks flush, and her strong voice fills the hall with the eloquence born of her love for her cause, her listeners sit with tear dimmed eyes, and are won over to her side of the great question. Naturally she is more at home in the German language, never at a loss for a simile or a word, using no notes, stepping about the platform with an ease that might be envied by many a masculine speaker, as the sentences follow each other in rapid succession with telling bits of wit interspersed.

Handling her opponents without fear and with bared hands, she yet aims her blows so as not to arouse their anger.

The esteem in which the W. C. T. U. holds this ever ready messenger of their work may be understood better when it is known that her Western admirers are now raising a fund to build a cottage for Mrs. Skelton at Pacific Grove, California. In order that she may have plenty of flowers, etc., the proposition includes the purchase of two lots. The editor of the *California Bulletin*, organ of the W. C. T. U. of the Pacific slope, being, I believe, appointed to receive the funds for that purpose, at least Eastern friends need not hesitate to send their mites toward securing a home for the generous-hearted woman who will herself never be able to save anything against the day of gray hairs and aging hands, no matter how much she earns.

The deepest sorrow of her life came to Mrs. Skelton five years ago when her promising son was called to join his father, before he had completed his twenty-fourth year. His high attainments and pure character were a pleasing comment on his mother's training, and now she is hoping again for great things in the person of her little grandson. She did not stop to nurse her grief and mourn over her blighted hopes, but, pressing back the tears, she put the more energy into her work for the living,

hoping for the day when our land shall be free from the rum curse. She is building a monument to that son more enduring than granite, through her labors in the cause which he loved.

Mrs. Skelton finds time to write books and poems, busy as she is, and also to read much, although she is a discriminating reader, wasting no time on merely "entertaining books." In her journeyings by rail she fastens her thoughts with her knitting-needles. Her little grandson can testify that the long, strong wool stockings which "grandma" knits on the swiftly-moving train are just the thing for his Dakota home, and they are none the less acceptable because a lecture was woven with the brain while the fingers wove the stocking web.

Those who have read Mrs. Skelton's books, or her articles in leading temperance papers, must acknowledge that she is as ready with her pen as with her tongue, and that she is an advanced thinker, living close to that Savior for whose cause she endures hardships which would crush one less brave than herself.

Of the books already published by Mrs. Skelton, the most popular are "Eastertide," "A Man Trap," "The Fatal Inheritance," "Home Life in Canada," "The Christmas Tree," and "Lily Orme." Perhaps her strongest work is her latest, which will soon appear under the title of "Grace Morton."

Almost every reader of poetry is familiar with her poem, "If I Should Die To-night," and the hymn, "Pray Without Ceasing." Of her unpublished poems we give one, written a few days after the death of her son :

HIS GIFT.

"Give him, I pray, all good ; bid buds of
pleasure grow
To perfect flowers of happiness where'er his
feet may go.
Bid truth's bright shield and love's strong
arm
Protect him from all earthly harm.

"Lest there be yet some other thing, better
than all the rest,
That I have failed to ask, I said, 'Give,
Lord, the very best
Of every gift that Thou dost deem
Better than I can hope or dream.'

"He lies before me still and pale, the roses
that I prayed
Might bloom along his path of life, are on
his bosom laid.
Encrowned with a strange calm he lies
Like one made dumb with sweet surprise.

" 'Better than I can ask or dream,' this was
my prayer.
I wonder, weeping bitter tears o'er him
lying there,
If this be that for which I prayed so long
ago.
When he was but a child, and say, 'Thou,
Lord, doth know.'"

MRS. A. ELMORE.

THE IMAGINATION AS A SPIRITUAL SENSE.

WEBSTER defines imagination as :
1st. A power to create or reproduce an object of sense previously perceived, or to recall a mental or spiritual state. 2d. Power to re-create or re-combine with readiness under the stimulus of excited feeling for the accomplishment of an elevated purpose.

We should add to the above. 3d. The working sense of the soul. The power in mind which invents, pictures, sees,

and places before the "mind in committee of the whole."

The most active mental agent of the child is the imagination. Aided by this, he bestrides a stick and takes a horse-back gallop, while she enjoys a good time caring for a baby constructed of the blanket which covers her shoulders when taken out riding.

In school, imagination places before the mind of the pupil real capes, bays,

shores, coasts, valleys, and snow-clad mountains, aided by book pictures. The imagination does vast service in school, and he is a slow pupil who is deficient in it.

Poetry, painting, and invention are the products largely of the imagination. Of the two former we need cite no examples—they are too well known. Of the latter we will mention :

The production by Columbus of a sphere representing the earth was a work of the imagination with him because it was not yet proven that the earth was a sphere. So also was his belief that land might be found by sailing west founded almost entirely upon the imagination. The great advances in astronomy, mathematics, mechanics, and all the world of science have first felt their way through the imagination. The imagination conceives—pictures—presents the picture to the reason; reason considers, weighs, decides. Then follow experiment and proof.

The wheels, axles, cogs, ratchets, slots, cranks, pulleys, crossbands, cylinders, steam-chests, cut offs, governors, and eccentrics of the mechanical world, have first existed in the imagination. The animal senses produce only animal thoughts. Confine man's thoughts to these, and he would think of little more than he can feel, hear, see, taste, and smell. The imagination's senses are invention, comparison, perception, prescience, comprehension, mental right, conscientiousness, hope, belief, faith, poetic fancy, and artistic power.

INSTANCES.

In poetry we mention Milton's *Paradise Lost* and Homer's *Iliad*. These are more than fancy; they were products of the imagination.

In painting, all works of the ideal are produced first in the imagination. In art, the ideal is also the imagined—evidencing the high and noble work of the sense.

We particularly mention two recent products of the imagination—the great

East River Bridge and the Statue of Liberty. 1st. Roebling's production. It began with the conception of a desire to build there a bridge. The conditions of length, requirements of strength, material, and form, were sought until in his mind had grown the plan and picture of the bridge as it stands to-day. He drew its plan, calculated every bolt and item of material needed in its construction, recorded these calculations and specifications, and died. The bridge arose according to his plan, and we now see it as he saw it before it was.

2d. In similar manner grew the Statue of Liberty. What a majestic conceptive thought—the placing at the gateway of the nation the torch of Liberty enlightening the world. The author saw it in his imagination for years. It grew into a plan, finally was translated into metal form; to-day, and for ages to come, standing a materialized, glorified image, around which sacred memories of La Fayette, Rochambeau, and France, will ever cluster.

Finally, our conceptions of Jehovah mark our standing, our worth, our personal completeness. Be our imagination gross and sensual, and our conceptions of God will be like it. Be they noble, sublime, Christlike, and such a God will be imaged and enthroned in our hearts.

"As the man thinketh so is he," is one of the grandest aphorisms of Holy Writ. For the word "thinketh" we should write "imagineth," and the man, be he great or small of thought—the man as he is, stands before us. W. H. GARDNER.

HANDEL once undertook, in a crowded church, to play the dismissal voluntary on a very fine organ there, and the congregation became so entranced with delight that scarcely a person stirred. Finally the usual organist came forward and took his seat, saying in a tone of superiority, "You can not dismiss a congregation. See how soon I can disperse them!"

NOTABLE PEOPLE OF THE DAY.—No. 16.

DONALD GRANT MITCHELL.

IN that walk of literature, fiction, which seems at this time to hold an absolute supremacy over the reading masses, woman has secured a very conspicuous place. She has won it, too, by writing not merely the transitory, sensational, frothy love story, but by successfully responding to the demand

If any apology were necessary for introducing two authors who have very recently won eminence by their books, the above paragraph would suffice, we think, but we are confident that it will be regarded by most of our readers as a mere preliminary to this fresh installment in our series when they perceive



DONALD GRANT MITCHELL.

of cultured tastes for something that reflects the higher thought of the age in social and religious questions of urgent importance. English literature possesses woman writers of English and American birth that any age and people would be proud to own.

that we have associated the authors of "Robert Elsmere," and "John Ward, Preacher." But that a little variety may be accorded to the sketches, and that it may not be said by some jealous bachelor of chronic antipathy to the opposite sex, that the women this time have it all

their own way, we shall give our attention first to an author of the trousered pattern who has long been known and loved by all who esteem freshness and purity in thought that concerns everyday life.

What true American has not heard of Ik Marvel, and "Reveries of a Bachelor?" We knew the name and the book years ago in our boyhood, and, of course, fondly believed all that was so delightfully written in it.

Donald Grant Mitchell had won a good place among writers at an age when most of us scribblers are "hacking" away in obscurity, ardently ambitious of fame, but jealously impatient of its slow evolution. He was born in Norwich, Conn., about 1822, and, as one says, he must have been born amid rural scenes "so full are his books of country life. In his boyhood days there were the green hillsides near his home, the verdant fields, and the beautiful forests. His fondness for nature seems, however, to have been born in him, and as his tastes in early life led him that way, his zeal and love increased, so that when a site for a home was selected, it was a farm.

"This farm contains two hundred acres, and is situated near New Haven, Conn. It was purchased in 1855, and for years has been one of the numerous attractions of the suburbs of that beautiful city, and is visited by many who have learned of its famous owner, and the wonderful effects he has produced in the surroundings of his own home. Here he has utilized for beautifying the place every stream and hillside, every clump of shrubbery and every shade-tree. This place of rural beauty is known in his literary works as 'My Farm at Edgewood.'"

He has traveled much, and given time to the study of art, a fact that declares itself in his admirable criticisms and observations on domestic architecture and landscape gardening. It was in recognition of his proficiency as an art student

that he was appointed one of the judges of art at the U. S. Centennial in 1876, and in 1878 was U. S. Commissioner at the Paris Exposition. The city of New Haven called him to its service in laying out its beautiful park at East Rock. He has also been called upon to lay out numerous private estates and public grounds.

"Reveries of a Bachelor" and "Dream Life" are the literary products of his early years, but there are none of his later writings in which he has put so much of his individuality. It is stamped upon every page, and the boy and the man in his library, in his garden, and abroad in the fields, is before us.

For two years he edited the *Atlantic Monthly*, and for a time he was editor of *Hearth and Home*. As a contributor to the magazines, his adopted name has been often seen attached to popular articles upon subjects of a useful class.

It is fully twenty years ago that "Dr. Johns," the story of an old-time Connecticut minister, was published. "Seven Stories, with Basement and Attic," a volume of reminiscences and travels, is another book, but the greater part of his writings concern rural life. "My Farm at Edgewood," for instance, is a practical work on agriculture, yet full of romance and esthetic attraction. In "Out-of-Town Places" he elaborates his ideas of house-building, and describes the simple design yet most comfortable arrangement of his own home. "Wet Days at Edgewood" is a series of sketches and notes on country life.

We can not but feel, as we read his books, that Mr. Mitchell is a child of nature, and one who finds endless delight in the study of tree and shrub, bird and animal, as they live in native wildness. Life, simple, pure, generous, free, has for him exhaustless enjoyment.

The head and face as shown in the drawing are those of an original certainly, but not an original of "cranky" rudeness and angularity. There is an expression of independence and strength soft-

ened by culture and kindness. A head so high as that has much of tenderness, and delicacy. He must have been a sensitive man always. The breadth is not great; rather, we can infer from the drawing, that Mr. Mitchell's head is comparatively narrow, and wanting in those elements that lead men to dare the arena of struggle and competition.

there is no evidence of a disposition to adopt useless mannerisms or to show a very profound respect for the distinctions born of artificial customs.

MARY A. WARD.

THE author of "Robert Elsmere" has an exceptional face. This must be noted at the first glance bestowed upon the portrait. Not that the head in itself is



MARY A. WARD.

The narrowness of the forehead suggests the man of specific purposes, the one inclined to pursue a line of life that was subject to few distractions. Caution is rather marked, and so is the faculty of human nature; he should be well versed in that kind of knowledge that relates to personal character. Kindness and courtesy are cardinal elements, but

of so excellent a mold that we can not readily point to women whose heads are as well fashioned, but, taking head and face together the combination is striking. Margaret Fuller Ossoli had a phenomenal face, so had Theodosia Burr. This of Mrs. Ward reminds us of the talented daughter of the ill-starred American in some respects, especially the contour of

the forehead and the eye expression. That nose is remarkable for strength ; it is the nose of inquiry and independence. A strong nose, indeed, yet modified by lines of smoothness and regularity that intimate refinement by natural derivation. The upper lip contrasts with its lower mate ; it is very full while the other is thin ; a warm nature, one would say, yet held in reserve by pride and delicacy. The eyes have a contemplative, critical expression and physiognomically show more of the tendency to precision, definiteness, and nicety of language than to fluency.

The general character of the head indicates much intellectual capacity with memory, method, taste, and power to organize her thought, so that it shall clearly declare her purpose and cover the field of its logical applications. There is nothing of the effusive in the development, but much of positiveness and spirit. She is kindly and sensitive, very appreciative of obligation. It seems to us that the sense of integrity is the dominant feeling in her moral faculties, and corresponds with the development of the nose, so far as that can be said to intimate one's morality. As a writer of stories it seems to us that she would be inclined to illustrate the virtue of strict honesty in every line of action, and hold up to derision those who disregard their obligations, whether natural or assumed.

The back-head seems to be well filled out, so that the affections that center in home and friendship are strong. She may in this respect show the discriminating influence of a trained and active intellect and be wanting apparently in that exuberance of feeling which is marked by effusiveness and multiplied caresses, yet where her affection and friendly interest are bestowed she is cordial, sincere, and constant. The temperament is certainly of a high order, the motive supplementing the mental element in a greater degree than the vital, while the rare texture of the in-

herited Arnold constitution imparts a grace and delicacy to the clearly cut lines of face and figure.

Mary Augusta Ward was born in Hobart, in the island of Tasmania, on the 11th of June, 1851. She is the eldest daughter of Thomas Arnold, and a granddaughter of that well-known master of Rugby school whose history forms one of the choicest leaves in English educational literature. Matthew Arnold was, therefore, her uncle, while another uncle is the author of that remarkable panegyric on Buddhism, "The Light of Asia." At an early age, after the approved custom of young English women of good stock, she was married to Mr. Thomas Humphrey Ward, of Brasenose College, Oxford. Mr. Ward, as editor of "The English Poets," has become known in literature. This marriage seems to have been fruitful in stimulating her literary faculties to exercise and production. In 1880 her first book appeared, a juvenile. Four years later "Miss Bretherton" appeared, a novel that attracted considerable attention. In 1885, Mrs. Ward published a translation of "Amiel's Journal," and "Robert Elsmere," the book that has made her name famous on both sides of the Atlantic, appeared last year. Besides these books, she has done considerable work of a miscellaneous sort, contributions to the reviews and magazines, articles and sketches for cyclopedic works. A student of the language and literature of the Latin races, especially Spanish, she has done not a little work, critical and otherwise, in relation to them. One of her early articles, entitled, "A Spanish Romanticist," was a review of the life, works, and influence of Gustavo Becquer, with a prefatory sketch of Spanish politics, which was essential for a right understanding of the subject. This was signed "Mrs. Humphrey Ward."

A glance at some of her papers throws considerable light upon Mrs. Ward's intellectual attainments and upon the

character of her critical work. Among them are articles on "Marius, the Epicurean," a review of Walter Pater's book with that title; "Style and Miss Austen," a charming essay apropos of the recently discovered letters by the author of "Pride and Prejudice;" "M. Renan's New Volume" (of Studies in Religious History); "The Literature of Introspection;" "A New Edition of Keats;" "French Souvenirs," on the book of that title by M. Maxime du Camp; "Francis Garnier," who was a distinguished leader among the French colonizers in the East; "A Swiss Peasant Novelist," a sketch of the life and a review of the works of Albert Bitzios, who wrote under the pseudonym of Jeremias Gotthelf; and "M. Renan's Autobiography."

Mrs. Ward also wrote a large number of lives of early Spanish and Visigothic kings, saints, etc., for Drs. Smith and Wace's "Dictionary of Christian Biography." She was, in addition, one of the only two women who contributed articles to the work of which her husband was the editor, "The English Poets."

With regard to the book "Robert Elsmere," so much has been said in all circles and everywhere about it, and so great is the diversity of opinion, that it is best to give here but a brief description of its character in the words of a book-maker:

"First, it is a novel with an avowed purpose and a strong philosophical tendency; second, it is a novel of character, with but little attempt at plot and still less of incident; third, it depicts some of the tendencies and the intellectual characteristics of our time with an almost startling directness and force; and fourthly, it is a work of very high artistic and literary finish and of great dramatic power, one in which the interest of the reader is held throughout the course of a narrative whose extent is fully twice that of the ordinary novel."

"There are few novels which contain

so great a number and diversity of characters, fewer still in which all the characters are so well sustained. The action is somewhat too complicated, and there are too many unrelated characters, it may be; but with what distinctness are they all placed upon the canvas! So it is with the numerous scenes. The Thornburghs and their circle, the musical coterie which gathered around Rose in London, the salon of Madame de Netteville, the Elgood street conventicle, and many others all stand out with the clearness and precision of a *tableau vivant*."

This synopsis shows why opinions vary with regard to the merits of the book and the influence it may exert on the thought of the day.

From a writer with such antecedents and associations as Mrs. Ward we should expect a book quite different from the ordinary novel, realistic or romantic, of the day. We should expect a book, if of the narrative or fictitious order, that would illustrate the actual movement of modern thought in some great department, society, or literature, or morals, or religion, and, of course, with a purpose of advocating certain principles deemed essential by the author to the growth, development, or improvement of that department.

The religious world has indicated the most interest in "Robert Elsmere," and ministers, especially those of the orthodox stripe, have shown most zeal apparently in criticising it, and so publicly as to assist materially its circulation. One gentleman of the cloth informed us that, having read a dozen chapters, he was so pleased that he advised his people to read it, but discovered to his chagrin, on reading a few chapters more, that he had made a mistake and then endeavored to repair his indiscretion by counter advice, the very way, of course, to incite a special curiosity. We shouldn't wonder if there were many ministers who behaved in a similar manner toward the book and their congregations.

The interest these gentlemen show is

a little remarkable because the line of theological criticism pursued by Mrs. Ward is by no means new to those familiar with the discussions of scriptural exegesis and of Christian doctrine by the latest scholarship.

MARGARET DELAND.

OF a totally different stamp is the work of this author from that of Mrs. Ward, and her type of organization is different, as the reader can see in the engraved portraits. There is less of the motive temperament and more of the



Margaret Deland.

sanguine-vital elements in Mrs. Deland. Her brain is nourished by an admirable physique, and its organs are enabled to exercise and co-ordinate with little friction. Such a mental machine is much like a highly finished engine--if we may be permitted to use the simile--that is supplied with an abundance of steam, so that it runs smoothly and continuously, part co-ordinating harmoniously with part. There is considerable reach anteriorly to that brain; the perceptive organs are unusually large, as intimated by the overhang of the brows.

Mrs. Deland is a close observer, and an omnivorous one, and, we should say, has a memory of unusual power, retains what she observes. She is sensitive in a high degree, especially to what her friends may think of her, because her affections are strong and her success bears some close relation to her social interests. She is no cold, reserved, stiff formalist, making success add to her dignity and serve to sustain an assumed queenship over others, but she is ready, we think, to divide her honors; and if her friends rejoice in her success, one chief element of her ambition is secured, and she is the happier. She loves home, family, and friends most earnestly, or we mistake the meaning of that mouth and chin. The nose is well cut in refinement's own mold, and the eyes are full with the fluency of language. She should be an easy, free talker, and a ready-writer. Whether or not her book expresses her mind on the topics it touches, this lady has the expression of one who has opinions of her own, and the nerve to utter them should it be expedient; but as a rule, she is tender of other people's sentiments, and does not care to cross or wound them.

Margaret Deland was born in Pittsburgh, Penn., something like thirty years ago, and was educated and brought up in the family of an uncle, Mr. Benjamin Campbell. She was about twenty-two years of age when her fortunes were united to Mr. Lorin Deland, of Boston, a gentleman several years older and of good culture and literary judgment. Mr. Deland saw in his young wife the elements of superior literary capacity, and encouraged her by his sympathy and kindly criticism to write. Her first ventures were in poetry, and certain verses that she published in the magazines attracted notice, so that her future appeared promising. In 1886, a volume of selections from her work, entitled "The Old Garden and Other Poems," appeared, and met with a success quite rare for a first book of

poetry from a new author. The first edition was exhausted in ten days, and before the second appeared copies were selling at advanced prices. The book was well received by the press, and five editions have made the public familiar with her quality, the lines being full of the fresh life of nature.

Mrs. Deland had now won ample recognition as a poet, when, to the surprise of a large circle of readers, she appeared as the author of a novel, "John Ward, Preacher."

In this effort her success has proven greater than as a poet. The first edition of the book was sold in less than a week, and several editions have followed.

Mrs. Deland, like her English contemporary, has been bold enough to make religion a subject of illustration, and even criticism, in her book : but she has not gone to the extent of liberality or heterodoxy that is evident in the

book of the brilliant English woman. As an Episcopalian, she is broad in opinion, and believes that articles of faith should follow, or participate in, the development of modern thought, and not cling to what is effete and fossilized, however "sanctified" it may appear to be by time and practice. Her late book, therefore, is a reflection in great part of the revolt against bigotry, asceticism, and the excessive assumptions of dogmatism. The pure, true, useful, and spiritual she would have exemplified in the everyday practice and work of the Christian man, and especially in him who stands before society as a leader and teacher in the person of the minister.

Settling in Boston at the time of her marriage, Mrs. Deland has remained there, dividing her time between the duties of conducting a simple yet delightful home and her literary avocations.

EDITOR.

A GIFT OF THE GODS.

INGENUITY! Have there ever been any books written on ingenuity, any poems composed in praise of it, any monuments erected anywhere to immortalize the memory of simply ingenious men or women? Yet ingenuity is an element which underlies all success in literature, science, discovery, invention, social, political, and commercial prosperity. It is the essential oil in the complicated and often rusty machinery of daily life. It is the quintessence of common sense in its application to material matters; it is tact and wit and wisdom all combined; it is materialized gumption. Better is much ingenuity with little wealth than a great deal of wealth without it.

We are accustomed to ingenuity on a large scale, though when it assumes colossal proportions it is no longer known by that unpretentious title. It is at once recognized as inspiration, talent, genius. Columbus giving to Castile and Leon a new world, Milton con-

structing a "Paradise Lost," Wren building his Cathedral of St. Paul's, Stevenson running his steam engine, and Edison listening to the weird messages of his phonograph, are all subjects for the world's admiration and applause. We have books written about such men, and monuments erected to their memory. They are exponents of ingenuity in its grandest forms.

But there are men and women who discover no continents, write no books, invent no engines, yet who by their ingenuity keep well lubricated the wheels of domestic life. So far as one's personal, everyday comfort and convenience exceeds his occasional enjoyment of some great work of art or mechanism, so far are these sharp-sighted, quick-witted, and deft-handed fathers, brothers, and sisters of greater practical consequence than many of the great explorers, inventors, and writers of the world. They are the people who "can make something out of nothing."

and improve on the original material; who can repair with a pen-knife and a piece of string almost anything from a broken harness to a broken head, and who, from old bottles, old boots, and old bonnets, can construct magnificent vases, elegant book-covers, and bewildering spring hats.

The ingenious cook hangs from the band of her apron the holder with which she must needs catch up some article from the stove every other minute, while her sister, making frantic plunges in every direction for something with which to grasp the hot handles, ends by burning her fingers and anathematizing all the pots and pans. The ingenious seamstress sings as she sews, with uninterrupted speed and undisturbed temper. From little pockets in her capacious apron she draws the black or the white thread, the silk or the darning cotton, as occasion requires. Scissors, securely attached by short rubber bands, never become entangled, and run no risk of getting out of the way. At a sudden call all the sewing materials are let to slip into the large pocket which really forms the apron, and the apron itself, if necessary, is unbuttoned and laid aside. In the same room sits her sister whose spools are continually rolling out of sight under tables and bureaus, whose scissors disappear as if attracted by invisible magnets, and whose thimble can never be discovered anywhere on the surface of the earth if once removed from the finger. They go shopping together, and while one carries her troublesome parasol under her arm to knock off the hats and put out the eyes of the unfortunates behind her, or laying it down on each counter, loses it in piles of goods, to her own annoyance, and the exasperation of the storekeeper—the ingenious sister, fastening around the handle a loop of inch-wide black ribbon, slips it over her wrist and knows no loss or annoyance for herself, and causes no disaster to her fellow beings. They sketch together on the seashore, but while the wind flops

and tears the paper of one, the other, laying hers upon a sheet of card board, slips an elastic band over one end, and works in comfort and security.

The ingenious woman knows how to use a glue-pot, a dye-pot, a paint brush, a saw, and a hammer. Lacking expensive, or even sufficient furniture, she supplies her rooms with soap boxes and re-constructed flour barrels, covered with pretty, wholesome cretonne; makes convenient book shelves and corner cup-boards of other boards and boxes; picture frames of strips of pasteboard covered with plush; wall-pockets of canvas, embroidered and ornamented with bows of ribbon; saves broom handles, and sawing off three of them to the required length, fits them into a little square or round top, thereby making a convenient table, to be adorned as fancy dictates; puts the broken lamp into a ginger jar, decorated beyond recognition, and appearing as a handsome ornament as well as luminary, making a shade for it from an old silk handkerchief and discarded lace; makes knotted fringe, for tables or curtains, from old shawls and blankets which have outlived their usefulness; and when not able to obtain a new carpet puttles the cracks and stains the unsightly floor, more than half covering it with mats made from the best pieces of the old carpet and its border.

Ingenuity is the greatest economy of time, money, strength, and temper. Blessed be the ingenious people, their heirs and assigns forever, making of any and all material conditions and elements an environment with which they entirely harmonize, who are always in some measure independent of the limitations of circumstances, whether of place or pocket.

Blessed be ingenuity!

C. B. LE ROW.

IN time we transact business for eternity; whatever, therefore, we do now, should be done well.

NORTH AMERICAN ABORIGINES.

THE by-ways of all civilized nations lead to the aboriginal races whose incoming trails are lost in a primal wilderness, and to this rule the North American Indian is no exception. This race has no history, either written or sung. Isolated from the known world, the aboriginal tribes occupied this Western continent long periods to which no data are affixed, and hence have never been touched by the pen of the chronicler.

In later ages—yet nearly a thousand years ago—the Vikings, Icelandic and Norwegian—saw the shores of the New World, “as they sailed,” unguided by quadrant or compass, and the accounts of those voyages, folded away in their secluded sagas, surrounded by Arctic ice, remained unseen by the world for centuries. Through the long, dark period, when European literature was confined to a few monks, and the sign manual of Charlemagne was only a rude blot, the Norse pirates possessed a written language, and preserved accounts of their voyages and discoveries, and here are found a few scanty notes concerning the red men of the far West, and even over these the jealous historian would cast the veil of doubt. The cryptographic rock writings on the coasts of Norway, Greenland, and North America confirm the sagas, a glance at which sent the Genoese Colon on a triumphant voyage of discovery to an unknown continent. Looking through the Norse rover’s spy-glass, Columbus gained the honors due to Leif and Thorfinn.

The portion of the Western continent now occupied by the United States was thinly inhabited by roving tribes, wild indeed—but far removed from the lowest degrees of barbarism. The Aztecs, and some of the South Americans, were well advanced in a rude civilization, and lived in a state of barbaric magnificence. Humboldt, looking out over the nations of the earth from his cosmical aerie, perceived that the American aborigines pos-

sessed striking characteristics in common with the Mongols, as the Huns, Kalmucks, and those wild tribes of whom history obtained but a lightning glance, as they swept into the clouds of everlasting night. The ancient Scythians, described by Hippocrates, were a people to whom the American natives bore many striking resemblances. The practices of scalping, burning, and torturing were Scythian, and the names of certain deities had evidently the same derivation.

In the sculptured tombs of Thebes, where the celebrated procession of nations is depicted, a red race is represented, but the pictured chronicle lacks data of when or where this race existed. Mummified bodies, the long auburn hair unchanged, have been found in the caverns of the West—relics of a pre-historic era. The Asiatic Goths, who colonized a portion of the British Isles long before the Christian era, probably discovered and settled in America. The Welsh language is found in many North American tribes, and as the Welsh descended in part from those wild Goths, many otherwise inexplicable discoveries in the Western continent are clearly accounted for. There are many reasons for supposing that the Mongol Tartars found their way from Asia to the American coast by the sea, as they were bold navigators. The magnetic needle was in use among the Tartars 2,000 B.C., and by its guidance they explored many and strange lands, making long journeys over the plains in magnetic carriages. From ruins found in the valley of the Mississippi it is evident that three distinct races have existed there. The earliest wrought in stone and metals, and carved hieroglyphics upon the rocks, but they passed away long ages ago. Then came the mound builders, those mysterious ground toilers who piled the earth in mathematical ground figures about long subterranean passages, and placed many specimens of their handi-

work there—curiously wrought earthenware, implements, and amulets—the uses of which are now unknown. These, too, passed away, and the red men came from the by-ways of the old world, both east and west, for it is not likely the North American tribes were all derived from the same parent stock.

Probably some roving bands found their way into this continent by the Aleutian Isles, through Alaska and the Great American Desert, where their wonderful monuments yet remain; and others, maybe, traversed through the plains of Northern Asia and Europe in the pre-historic age of Atlantis; and with the final loss of that island-continent, when the earth was divided, in the days of Peleg, the return way was destroyed, and thus the Mongols succeeded the mound-builders as the aborigines of North America.

It is certain that the Indians were familiar with the great events in the old world history—a dim knowledge of the fall of man, and also of the flood, but did not know whence these traditions sprang. The best informed of the early students of this primitive race believe that a part, at least, of the aboriginal stock is of Jewish origin, a remnant of the lost tribes. Like the Jews, they counted time by the seasons, and by suns and moons; they held feasts and observed fasts, changed their names for great events, and burned incense in worship. They anointed their heads, danced at their devotions, had prophets, priests, sacrifices, the avenger of blood, and rocks of refuge for the homicide. The devotion of David and Jonathan was exemplified in the friendships of the young warriors, and the chiefs beautifully expressed to the white men their belief in the immortality of the soul: "We red men can not die eternally; even the corn buried in the ground rises again." They were Pantheists, always paying a general homage to the forces and phenomena of nature, and to whatever they deemed greatly their su-

perior in might and power. With the eye of the spiritualist, they saw their ancestors moving in the clouds of heaven, and called the Northern Lights "the dance of the dead." Yet the Indians were not a devotional people, nor did they make idols for worship. A curious stone might be preserved as a charm or amulet.

That this wild race was the rude offshoot of a recently lost civilization, is proven by the fact that their minds were not in the semi-idiotic state which results from long-continued savagery. In a primal wilderness, human life soon assimilates itself to the wild nature around it; for man, left to his own devices, with no restraining, upleading influences, soon sinks low in the scale of being. The red man's mind was but sleeping, and only needed a careful awakening touch to call it into active and noble life. Their character was gentle and trusting, and they aided the early white settlers in every possible way. They led them to the springs—their choicest treasures—and taught them how to cultivate the maize for bread; they showed them the haunts of the otter and beaver, the wealth of a race whose clothing was skins and furs; and the colonists, in turn, gave them the curse of intoxicating liquors, told them lies, and dealt treacherously with them; and they proved as apt scholars in vice as they did in the lore of the Harvard Latin school, without the restraining influences of a Christianized civilization.

The Pilgrims—that "band of exiles who moored their bark on the wild New England shore," sought for themselves the liberty of conscience denied at home, and probably gave no thought to the moral and spiritual welfare of the natives within whose lands this freedom was sought; but the *Puritans*, the planters of the Massachusetts Colony, came—in the words of their Grant, to "propagate the Gospel in the regions of the far West." Those ancient charters

were often strangely religious documents, but the glorious hopes for the evangelization of the native race, so glowingly interwoven into those grandiose old documents, were never realized. A beautiful land of vast area, held in the tribal commonalties, lay before the adventurers, and the conditions of the inhabitants, their needs, and their claims upon Christian sympathy were soon lost sight of in the greed of gain. The best men of the day saw only barbarous tribes to be exterminated as speedily as possible to make room for their own encroachments. Only in very rare instances was any missionary work done for the native race. The Leyden pastor mourned the attitude his people, the pilgrims, assumed toward the natives, and sent them letters of expostulation and reproof, but the first decade passed by with nothing done for their education and uplifting. These years would have been the golden age for missionary work among the Indians, for the illusion that the white man was a superior being had not vanished. A change came over the red man when he saw his customs trampled upon, and his rights disregarded; hence resentments arose, untempered by moral restraints.

The wastefulness of the white settlers early led to trouble. Living as the natives did, according to tribal usages, and holding all lands in common ownership, there were no fences or dividing lines in their lands. Along the rivers and shores were strips of meadow lands, with back-grounds of heavy timber or forests. The Indians loved these meadows; they delighted in unbroken, waving grass, and though no "cattle on a thousand hills," found grazing there, yet the grass lands were never trampled on. The trails passed through forests, and along ridges of high upland—like the Roman roads in the days of barbaric glory—the meadow lands were always undisturbed. Twice yearly—in April and November—the forest growth was burned with all the fallen leaves. They were very care-

ful in these semi-annual burnings that the game should be undisturbed and the forest trees remain uninjured. A disregard of this care on the part of the colonists, early led to discontent, for the Indians resented any infringement on tribal customs and laws. But the dividing lines of the stranger soon crossed the lands of the red man, and he became an outlaw in the land of his forefathers. Yet the Indian is indigenous to the soil, and in the words of Miles Standish, "dies hard." He has lived in the land but not of it. His names linger among the mountains, and on the rivers, and are heard where the red men now are never seen; and how at this late day to dispose of the weak and beggared remnant of this once widespread people, is a national problem.

ANNIE E. COLE.

THE COMING DAY.

UNDER the centuries biding its time,
Waiting a moment supreme and sublime,
Warmed by the sun of hope, nourished by
tears,
Sheathed by the long ages, folded in years,

Through all the changes gathering strength,
Out of all mysteries raising at length,
Germ of Progression, fair is thy youth,
Haste thy maturity blossoms of truth.

Burst, bud of Promise, into full bloom,
Fill all the waiting air with thy perfume,
Into the saddened world breathe out thy heart,
Unto the sinking souls courage impart.

Delay thee no longer, now is the time,
This is the moment supreme and sublime,
Can we not conjure, invoke thee to come?
Here in our open hearts make thee a home?

Or must we pass away in the gray dawn,
Just as the wings of night backward are drawn?
Ah, but we see the mists clearing away,
And from the hills behold heralds of day.

As in the days of old, one from the height
Saw the fair fields beyond laden with light,
Saw the dear promised land sweep into view;
Just one triumphant glance, then an adieu,

Be it so, then, with us, if it must be,
If not to press the soil, then but to see
Bright through the breaking clouds Love's
promised land,
Over the tide of crime Truth's golden strand.

ALMEDA COSTELLO.

INSANE ON EATING.

A MARKED case of morbid Alimentiveness or a diseased appetite is mentioned in *Hall's Journal of Health*. A Mr. Rogerson, who was the son of a very wealthy Englishman, after concluding his course of study, spent some time in continental travel. On this round, he seems to have given most of his attention to the study of cookery and how to eat and drink. Before he returned to England his father died, and he entered into the possession of a large fortune. He was now able to look over his notes of epicurism, and to discover where the most exquisite dishes were to be had and the best books to be procured. He had no other servants in his house but men cooks, for his footman, butler, housekeeper, coachman, and grooms were all cooks.

Among those that were more professionally so were three cooks from Italy, one from Florence, another from Vienna, and another from Viterbo, who was employed for the special purpose of

dressing one particular dish only—a delicacy of Florence. He had also a German cook for dressing the livers of turkeys. The rest were all French. Besides these he had a messenger traveling between Brittany and London to bring him the eggs of a certain kind of plover, found near St. Malo, and so extravagant was he that a single dinner, though consisting of two dishes only, sometimes cost him upward of fifty guineas.

He counted the minutes between his meals, and was wholly absorbed in devising means to indulge his appetite. In the course of nine years he found his table dreadfully abridged by the ruin of his fortune, and himself verging fast to poverty. When he had spent a fortune of \$750,000, and was totally ruined, a friend gave him a guinea to keep him from starving; but a short time after he was found dressing an ortolan for himself. He died of starvation, literally, because he could no longer obtain the food he craved.

 COULD ONE HEART'S WORLD BE TAKEN.

COULD one heart's world be taken,
With photograph most clear,
With every vail off-shaken,
What marvel would appear!

Could testimony faithful
One spirit's rocks impart,
How wonderful the strata,
The ages of the heart!

How o'er life's mystic granite,
Would stalk some mighty thought
Like obelisk Egyptian,
Or frieze Chaldean wrought!

How mighty grief's stone fossil,
By sorrow's deluge sweep,
Or passion's wild upheaval
Would burst its rocky sleep!

And withered Love's lost flora
In depths eternal cast,
Like dead creation gather
In debris of the past.

Then newer page and better
Might science' book unfold—
Of Pneuma, Psyche, Soma,
In living green and gold.

Then open thy soul's window,
And let the sun shine through;
Unfold the mystic shadow,
Unfold the glory, too.

Each soul hath clime peculiar,
Its individual zone,
And there truth's sun gives color
And flowering of its own.

Is in thy field of thinking
The smallest truth-flower born,
A fearless plant unshrinking
Out in the world's wide lawn,—

Some heart may breathe its healing,
Or drink its balmy dew,
And bless thee for revealing
Its faintest heavenly blue.

LYDIA M. MILLARD.

PRACTICAL PHRENOLOGY.

[CONDUCTED BY PROF. NELSON SIZER.]

OCCUPATIONS FOR BOYS.

TO put the right boy in the right place is the earnest study of all sensible parents. In one household several types of development may exist, adapting different boys to different trades and occupations. One will become a grocer or a butcher and like it; his brother will learn to be a jeweler, and each will wonder how the other can pursue his chosen vocation. Another will get an education and wonder how his brother can build houses or sell goods. If the father and mother were not very different in temperament, taste, and talent, such diversity of disposition and capability would not mark their offspring.

The heads and faces of these three boys represent three classes of talent and faculty and three important branches of duty and achievement.



Figure 5—MECHANISM.

Fig. 5 represents and is adapted to Mechanism. He has the firm constitution, the strong temperament; he has

therefore endurance and constitutional stamina, and is capable of doing the work and enduring the fatigue and hardship which may be imposed upon the man who is a builder or a machinist. Observe the solidity of the features; that strong nose and solid upper lip; that substantial cheek bone and chin. Observe the fullness across the brows, indicating practical judgment. See how wide the head broadens out, backward from the corner of the eye and upward toward the temples, where Constructiveness, Acquisitiveness, Ideality, and Sublimity are located, giving him the faculty for invention, mechanical ingenuity, tact to devise ways and means, and carry them out, for the construction of anything from a watch to a locomotive. Observe how wide the head is above the ears, where Destructiveness and Combaticiveness fill it out. Then he has large Secretiveness and Cautiousness, thus filling up the side head, from the opening of the ear to the upward back corner, and then from the opening of the ear forward, in the region of the mechanical powers. Then his head is high enough at Firmness, a point directly above the opening of the ears, at the center of the top head. He has solid common sense, good reasoning power, good ability for financiering, and great power to govern men and manage and control, and push the cause in which he is interested.

Fig. 6. That is a bright face and a well developed head. He is naturally adapted to be a business manager and a salesman. His large Language, indi-

cated by the fullness of the eye, and the width and prominence of the brow, qualify him to take in the particulars pertaining to business affairs; to recognize the details, and to describe definitely, readily, and copiously, whatever he knows about a subject.



Figure 6—BUSINESS.

His large perceptive organs, indicated by prominence of the brow, give him the practical knowledge, and his full upper forehead gives him a general planning ability, while his Language enables him to express his knowledge in a way that makes it acceptable and interesting to others. Then he has the wideness of the temples; showing taste for the beautiful, adaptation to mechanism, so that he would understand the mechanical qualities of any article he might have occasion to sell. Then Acquisitiveness and Secretiveness are large enough to give him a relish for trade and business, and the requisite policy to adapt himself to customers and to emergencies. His head is broad enough to give him strong Acquisitiveness or love of property, and the desire and skill to acquire it.

He has sufficient Destructiveness and Combativeness to make him energetic and enterprising, with rather large Approbativeness to give him a desire to please and gain approval.

He has a pliable, mobile face, full of expression and animation, with enough

of tact and grace, policy, and power of adaptation, to meet the requirements of the active, popular business man.

Fig. 7. Education, professional life, scholarship are evinced in that entire make up of head and face. Observe the length of the face from the chin to the eyebrows, as compared with its width; it has classical outline, delicacy of structure, and natural refinement. Then the head, corresponding with the face, is high, comparatively narrow, and long. The drift and spirit of such an organization is toward ideas, sentiments, books. He would become the writer, the investigator, the literary and theological student.

The fullness of that top-head indicates theological tendency, spirit of sympathy, reverence, integrity, and spirituality. He has enough of the development in the upper side head to give him a sense of the beautiful, poetical, and imaginative, and if he does not reach the pulpit, it will be because he is not surrounded by religious influences, or not so related to education as to enable him to acquire the requisite culture.



Figure 7—BOOKS.

These three boys, if the first can take mechanism, or such merchandising as deals almost wholly in things of the mechanical character, and the second can have banking, insurance, dry goods, or what would be called commercial business, and the third can have an education for the pulpit or the bar, or the

editorial room, they will achieve far more than they would be likely to do if the positions were reversed. In fact, Fig. 7 is not adapted to business, and would not be likely to succeed in it.

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HOW TO STUDY DEVELOPMENT.

THERE seems to be a popular misunderstanding everywhere that Phrenology is to be studied by "bumps" on the head, and that hills and hollows constitute the means of estimating the largeness or smallness of the phrenological organs. For more than half a century we have been laboring to convince the world, that in the examination of the head, we don't look for bumps as is generally supposed, but for distance from the spinal axis, located at the top of the spinal cord, to the surface of the head where the organs are located. Imagine the brain to be organized like a cauliflower, and being developed out of the stem till it fills the whole skull. Let the brain be regarded as a cauliflower and the spinal cord as the stem, and the point where the spinal cord unites with the brain, be considered as the center, from which the brain development radiates.

If a line be drawn through the head from the opening of one ear to that of the other, it will pass through this brain center, called in the books *medulla oblongata*. The brain is developed by fibers running from this central point to the surface of the head, and the largeness of brain is made by the length of these fibers, even as a wagon-wheel is made large by the length of its spokes from the hub.

From that common center of the brain, the development is side-wise, backward, forward, upward, in every direction. Some heads are two inches wider than others, measured by calipers from the opening of one ear to that of the other, yet the surfaces of these heads may have no "bumps." The lines from the opening of the ear to the root of the

nose, or to the top of the forehead or directly upward, and backward to the crown or to the middle of the back-head, will be in one head, an inch or two inches longer than in another head, of equal width, yet there are no bumps on the head any more than there are bumps on a large apple; the apple is large because the distance from the core is great.

Some heads are irregular in form, showing a difference in the length of these fiber-lines in different parts of the head. One has a wide, large, short head, another has a head large at the base, and low in the top, one has a head that runs back from the opening of the ear, more than is common, and it may be short in front; another head is long in front of the ears, and short behind. Thus one man's brain is mainly in front of his ears, and he has talent but little force. Another has great development between and back of the ears, and is short in front; he is not very intelligent, but is passionate, selfish, base, and animal in his instincts. One is full and high in the top-head but small in the base of the brain, and he has morality, perseverance, and dignity, but lacks energy.

One may be long and full in the back-head, and rather deficient in the upward and forward developments; he will be extremely sociable, companionable and loving, but will lack intelligence and morality, and all these conditions of the head, come from the lengthening or shortening of the brain fibers. All this may occur without showing what would be called a bump. We now give two illustrations of the practical application of these principles.

Fig. 8 shows three heads, the opening of the ear being the point to which all the heads are brought as a starting point. The idiotic head being small, all its lines from the brain center are short, and therefore the entire head and face fall within the lines of the other two. The next, or intermediate, is the head of a man who murdered his brother. It

shows long lines from the ear backward; rather long lines from the ear to the upper back-head, but forward toward the

moral, and very strong in the animal and social. (See phrenological head, page 20, Jan. No.) There are no "bumps" vis-

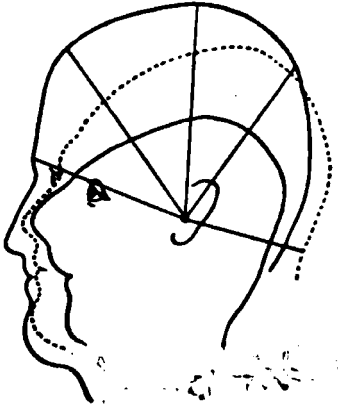


FIG. 8. Outline Heads.

intellectual and upward toward the moral region the lines are comparatively short. In the base of this head where the organs of passion and propensity are located the head is large, while in the region of morality and talent the head is deficient. The larger head is the outline of John Clare, an English poet, which will be seen to be much larger in the forehead or intellectual region, and also better developed in the top-head, where the moral organs are located; but in the lower back-head the murderer's head projects beyond that of the poet. Indeed the murderer's head, a cast of which we have, is very broad and heavy at the base, narrow, thin, and pinched at the top, the crown, where Firmness and Self-esteem are located, being the only part of the top-head at all well developed. In the engraving Fig. 9 there is a marked difference between the two heads, and yet they wore the same sized hats. It will be seen how much longer the lines are from the opening of the ear to the front and top parts of the larger head, while the other is scrimped in front and top, and extends backward more than the other. The head which is developed upward and forward, was a man of intellect and strong moral sentiment, and only properly developed in the regions of propensity. The head in dotted outline was narrow in intellect, low in the

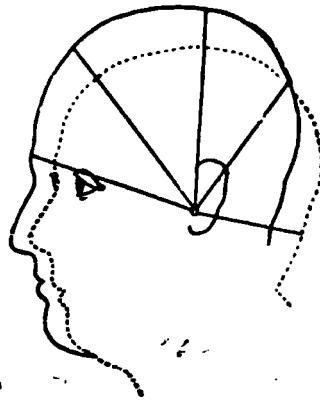


FIG. 9. Outline Heads.

ible in the outline of either head, but the length of line from the opening of the ear in each case shows a marked difference. Any one can not help seeing the difference, and the differences thus seen, show the diversity of the characters, and this recognition of difference is practical Phrenology.

—:O:—

SIZE OF HEADS.

THE inquiry is often made, "What is the average size of a man's head?"

If we were to ask what is the average height or weight of a man, the reply would be, some men are 4 feet 10 inches high, others are 6 feet 4 inches, the medium between these two extremes would be 5 feet 7 inches, yet this would be probably an inch above the average. Some have a head measuring 20 inches, others 24 1-2 inches, the medium between these two measurements would be 22 1-8 inches, and this is about an inch above the real average, since very few, not one in 100,000 have heads 24 inches. Some men weigh 100 lbs., others 300 lbs. The large man should have the larger head, as also the larger feet or hands. Twenty-two inches would be large for the head of a man who weighed but 100 lbs., but only full for one who weighed 150 lbs. Children's heads vary according to age. A 6-years-old child

may have a head from 18 1-2 to 21 1-2 inches.

—:o:—

SOME SINGULAR DATES.

MOST people complain of a poor memory of dates, we fancy, not because of the weakness of the organ of Time, but the lack of its culture. I have a good memory of dates and now vividly recall the first fact of its culture. When I was six years of age, I had learned to write letters and figures with a black lead-pencil and, of course, rejoiced in the practice. A bright unpainted door in our house invited the use of my pencil, and I wrote the current date, Jan. 18, 1818; and while I was praised for the excellency of the writing, I was blamed for impressing the black lines into the soft, white pine wood, beyond the power of ready removal. Sapolio had not appeared.

I can to-day see the easy sweep of the letters, and count the three repetitions of 18. That writing and the blame of it, nailed that date in my memory, and it remains. To-day, I write the current date, Dec. 28, 1888; the last time that the four figure eights will appear as the record of the date until Jan. 8, 2888, a thousand years hence. From Jan. 8, 1888, four eights have been used thirty-six times, but they will be used together no more for a thousand years, and time will wait twenty-two years before four figures will repeat themselves in the date, viz., Jan. 1, 1911, and then again eleven years, to Jan. 22, 1922, and before four large figures will appear, viz.: to Jan. 9, 1999.

Sometimes we are given the address of a person, and it is some queer arrangement of figures, such as 123, 246, 333, and easily remembered. A lady wanted something of us, which she wished to be sent to No. 111 East 111th street, and when written, it looked like a picket fence. Another No. 22 East 22nd street, and No. 99 East 99th street, such an easy number to recollect.

A lady once said, "I know that Bur-

goyne surrendered in 1777, for I remember in the school-book containing the account, the three long-tailed figures 1777 hung below the line." The faculty of form in this case aided the memory of time.

The keeping of a diary greatly aids in remembering dates. The fact of thinking every date and writing it in connection with some fact of interest marry the date and the fact beyond the reach of divorce, under conditions of favorable development.

—:o:—

SETTING THE SWITCH.

PROF. NELSON SIZER, My Dear Sir:— I have this day received from you my Phrenological Examination. When I called upon you I was halting between two opinions as to a certain move to make in business. After your examination I was fully decided as to the course to pursue in regard to it. When one step more is liable to throw a man down a precipice, he stops and so saves himself from destruction; in the same light I place your phrenological examination. It is so true, so real that I must halt and consider. You have been candid with me and I shall profit by your advice. You not only brought out fully my own character but a great part of my mother's through me. The many suicides, the amount of misery and troubles brought about in our land, I believe arise from the fact that men do not know themselves as they should. Let the good work go on and may men who are now asleep as to the worth of Phrenology, awake to its full importance, be taught and advised, then with the help of God who is over all, go about doing good.

Yours very truly,

C. A.

—:o:—

Question: "Can you make a correct examination from photographs, and what kind is required?"

Yes. Send for "Mirror of the Mind," which will explain it fully.

CHILD CULTURE.

DRESS AND CHILD BEHAVIOR.

A WRITER on household topics says, with that wisdom born of experience :

Parents have their ideas as to behavior, dress, and many details, which in some respects do not really affect the after life of the boy or girl. In most such matters, however, it may be well for the sake of discipline, to train the child to acquiesce readily in and obey whatever is decided upon by its elders ; still there are some things not affecting any vital principle of discipline in which the child's rights should be respected. One of these is in the matter of dress. Not that a child should decide the question wholly, for some would be led immediately into vanity and extravagance ; but children have a right both to comfort and pleasure in respect to clothing, and when aversion to some particular garment is so deep-seated that the child is rendered unhappy by being tricked out in it, and when that aversion is no stubborn desire to have its own way, that is a right to be respected. We are much quicker to recognize the rights of comfort than those of happiness.

Not long ago I came across a package containing a dainty Indian lawn apron made years ago by hands now stiffened with age. Daintily ruffled, pretty, light, and delicate enough for a fairy ; it has never been soiled. It was made for me by my mother ; but as I looked at it I could distinctly remember the weight of sorrow which oppressed me whenever she put the lovely garment upon me. No romp, no picnic, no ride, no presents could ever make me happy as long as I wore it. And why ? It was

made with low neck and short sleeves, when they were all the fashion ; and though I could not then tell why, the world was all out of joint as long as I must wear it. At first it was thought to be willfulness, but gradually it dawned upon my wise mother that something else lay at the root of the matter, when from smiles over the preparation for a long anticipated doll party I suddenly burst into tears as she held up that sprigged lawn, and piteously begged to stay at home rather than wear it. It was then that she said, "The child shall not wear short sleeves again. I am convinced that it is barbarity for me to insist upon it."

And the pretty garment has lain undisturbed in sweet clover ever since. I look back to that childhood scene to thank her for wisdom which saved me from actual suffering, to say nothing of what might have developed in my nature and manners.

I am confident that much of the awkwardness often noticeable in many children as they grow older may be traced to the injudicious disrespect of instinctive aversions when impressions are being made for life. Had my mother insisted upon that apron being worn, I am positive I should even now be troubled about the disposal of my hands and the tendency to shrug my shoulders continually. All my self-consciousness as to possession of arms and shoulders would have been severely developed.

Garments may be pretty, stylish, clean, well-fitting, and rich in texture, yet, without being able clearly to explain why, the child's sensitiveness may be

touched by cut, or even color, and some repellent chord may produce untold misery. There are many children who feel as I felt ; who have inherent tastes, likes, and dislikes, instinctive feelings as to personal peculiarities or the exposure of person—tastes which demand respect because of their right to all things reasonable to give happiness. I know of one little fellow whose knickerbockers always make him miserable, while his long-trousered sailor suit is a joy ; a little girl whose quaint Kate Greenaway costumes cloud the face that is ever sunny in plain frocks ; and another whose

slippered feet and black stockings have brought many a real heart-ache.

Some children can not bear to be conspicuous in any way, and if such shrinking is at all characteristic, it should not be emphasized. Little folks are much more reasonable than, from their inability clearly to set forth their feelings in argument, some mothers suppose them to be. In this day of keen analysis of character and motive, there is no study more worthy of our close attention than our children as individuals with individual rights.

PRAISING THE LITTLE ONES.

PERHAPS parents do not realize as fully as they ought what an influence for good in the household is the element of praise. Few indeed are the natures that may not be benefited by its use, but child nature is especially susceptible to its power. There is that within a child which readily responds to any attempt to make it better and nobler, and that is the distinguishing mission of praise.

If you commend your child for a duty faithfully discharged, the next time he has occasion to perform the same service, he will try and do it even better, and the next time better still, until at length he will have become able to do it as well as yourself.

Even from a practical point of view, it pays to be even lavish of praise to the little ones. How much more readily they do your bidding if the fulfillment of your last request was followed by the praise which no doubt it merited. If the child obeyed willingly although the work might not have been done as you would have liked, he deserved approbation, and if he did not receive it, you failed in duty to the child.

Some people seem to be shy of bestowing praise, for fear that it may sound silly. If these people had been accustomed from childhood to giving and re-

ceiving merited commendation, this false idea would never have found lodgment in their minds. To be sure there is such a thing as artful and ridiculous encomium, but this we call flattery. A word or two of good honest praise never sounds foolish, no matter how often it is applied.

There are times when you can not conscientiously bestow praise, but even then it may be well to be as chary as possible of censure. It is so much easier to find fault than to commend, especially if you happen to be in an uncomfortable frame of mind, that it is just possible that things may not be as they look to you at the moment ; therefore it is more than probable that you will be glad afterward that you said but little. We can not forget if we want to, that a word once spoken can never be recalled, and we can remember if we will, that words of caution and kindness seldom need recalling.

It may require some tact to praise in such a way as to bring about the best results. It certainly would not be wise for parents to foster vanity in their children, nor is this necessary if sound judgment is used.

Neither would it be best to encourage to do well merely for the sake of praise. Teach them to do right for the sake of

right, and when they have proven their aptitude, do not be afraid to let them see that you fairly appreciate their efforts.

MRS. S. E. KENNEDY.

A PRECOCIOUS CHILD.

IN the last number of *Babyhood* a Massachusetts correspondent describes a little fellow who exhibits remarkable intellectual proclivities for so little a fellow: I send a brief account of my little nephew, wishing to know if there are many similar cases, and also feeling in want of advice. At two years old, or thereabouts, he learned his letters (the large ones) from playing with a set of alphabet blocks. At a little over three he had a present of a box of "sliced birds" with names attached. From these he at once taught himself to read, learned the small letters without assistance, and at three and-a-half could read almost any word or words he saw; at four he could read in any book, and now at four years and five months will read for hours for his own amusement in any book he prefers, his present favorite being the Bible; the last was the *Encyclopædia Britannica*. He has never been taught to spell, but can spell any word he has ever seen, the length presenting no difficulty; thus it is quite as easy for him to spell hippopotamus as cat, etc. He never seemed to mind the differences in English spelling, a little confusion of the hard and soft *c* being his only trouble, as when he would speak of "ankent Rome," having seen but not heard the word "ancient." He punctuates and accents very correctly. While learning to read he took up the study of geography, which he pursued from maps. He now knows all the countries in the world, their principal rivers, cities, etc., and their situation in respect to each

other; the states of the Union, and their capitals and principal towns; the English counties, and much else which I have not space to write—all as readily without the map as with it. He has several dissected maps, and puts them together with absolute certainty, as easily with the wrong side up as with the right, and will name any piece by seeing it on the wrong side. When asked to bound a country selected at random he does so slowly but correctly, evidently from a picture in his mind. How much he could learn if he were instructed, or even encouraged, it is impossible to tell. His friends at first used to amuse themselves a little with playing with him, giving him letters to make into words, which, at three-and-a-half he could do with wonderful quickness, etc., but now have long endeavored to keep him back. He is kept out-of-doors as much as possible, where he is very happy and content and fond of play, but indoors he cares little for anything in comparison with books, to which he is always recurring, and if the one he especially wants is hidden, he will take the first he can find, and when forgotten once or twice has spent from two to three hours over them without stirring. He is very persevering, and if he hears the name of any place new to him will hunt for it for hours, and even days, till he finds it, and will work over long, foreign geographical names, pronouncing one syllable at a time, and combining them by degrees till he gets a very fair approximation to the sound.

A TREE FOUNTAIN.

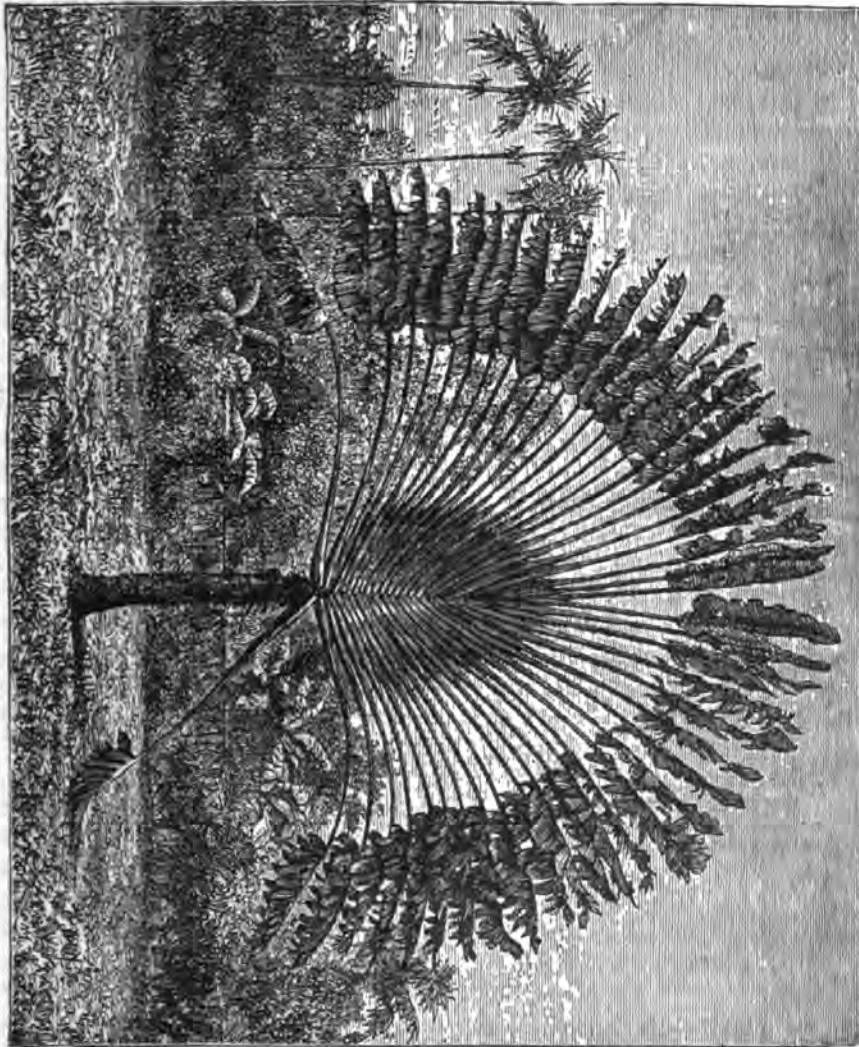
WHAT a great, beautiful thing! our young reader must say, and wonder if such a tree can exist. Yes, the warm region of the globe produces it as well as many other strange looking

plants. This is the traveler's tree, a native of the island of Madagascar, and found in other tropical countries as well, but not in America. The growth of the leaves is its peculiar characteristic.

These spring out of the stem on each side, and form a graceful arch or fan upward of twenty-five or more feet across. The leaves are therefore of enormous size, ten to fifteen feet long, their stalks being very thick and strong. Growing in a symmetrical, slab-like

at its junction with the main stem and hence is recognized as a source of refreshment to the native and traveler in a region where long seasons of drouth and intense heat occur.

Even in the driest weather it is said that more than a quart of water can be



THE TRAVELER'S TREE.

form, they are very useful to the natives for many purposes, the chief one being that of roofing in a house.

But the peculiarity which gives this tree its reputation and confers upon it the name by which it is generally known is the fact that it has the property of storing water in the broad fibrous stalk

got by piercing the bottom of the leaf-stalk, and the liquid is always clear and pleasant to taste. These trees with their beautiful semi-circles of leaves are common objects in the scenery of the lands in which they flourish. They are sometimes called also the fan palm, and sometimes the traveler's fountain.

NATURAL TEACHING.

MENTAL dormancy, we have been told time and again by the old schoolmaster, who has, moreover, not passed through the mill of experience with his eyes shut, can be quickened into newness of life when necessity presses upon it to act. But when the pressure of necessity is continued too long, the result is nearly always the same on the active as on the inactive mind. Nothing is so easily stultified as stupidity, and the process which renders the stupid child more stupid, not unfrequently makes even the clever child lose heart. In dealing with the willing and the unwilling mind the process is the same, the supplying of the food of knowledge that nourishes and strengthens and encourages to self-effort, not the supplying of the medicine of discipline which though it purifies for the moment, eventually enervates, and stupifies the natural gifts in the child. Thanks to Nature there are few, if any, children without "a turn," as it is called, for something good and useful, and it is in this "turn" there lies the hope of mental development. It is this gift which the teacher must first discover before either medicine or food can, with good effect, be administered. By building upon this nucleus of

native intelligence or inclination, the bitter-sweet of school-work soon strengthens the soul to recognize the pleasure of doing one's duty; and when the most indifferent pupil—indifferent perhaps not so much from laziness as natural longing for muscular freedom—begins to feel this pleasure, the school life becomes all sunshine, the acquiring of knowledge becomes as sweet to the mental desires of the child as is the syrup of the maple to the taste. The natural developments in education are gradual, not violent. The true methods of imparting instruction are born of Nature itself; and under them the knowledge that is acquired is the knowledge that assimilates as a palatable food that nourishes, not as a bitter medicine that nauseates even when it rectifies. By the natural process of getting understanding, the memory is not excoriated with a knowledge that is beyond the comprehension of the intellect. Mind growth is as slow and gradual as body growth, and can be checked only by too much food or too much medicine. The true education has only to guard against a surfeit of the one; since Nature itself has provided the means of escaping the other.

OUR BENNY.

BENNY boy, Benny boy, what do you see,
Looking so solemn, and wise as can be?
Do you dream of the day that will make you
a man?
Be a boy, Benny darling, as long as you can.
Don't look to the future, but live for to-day;
"Boast not of to-morrow," the good Book
doth say.
Just whistle and sing, Benny boy, all you can;
Don't change your boy-heart for the heart of
a man.
Don't let trouble sadden or darken your life,
But show a brave face through the thickest of
strife.
Be joyous and happy, be merry and glad;
As long as you can, be a boy, Benny lad.

MRS. G. W. TATRO.

EDUCATE THEM TOGETHER—Experience clearly demonstrates that on the whole there is less danger of moral contamination in a well-managed school, where rich and poor, high and low, meet together on a common fraternal basis, than in schools founded on class distinctions; and certainly the hot-house system of education which many parents favor has never produced good results. Your healthy child is safer amid the rough-and-tumble of the public-school yard, than in the society of the nursery. Sturdy morality is not secured by seclusion from the world, nor by continuous application to dry tomes concerning the haps and mishaps of the past ages.



CATARRH.—No. 5.

THE FOOD RELATION AND EXPOSURE.

THE pathological anatomy of a cold as it has been explained in the last chapter, shows the close relation of catarrh to disturbances of the skin's function, and gives a rational emphasis to the warning of the hygienists, "Don't choke up the pores!" What are the leading types of the disease that affect the large organs of the body, the liver, spleen, kidneys, lungs, and the heart, but forms of a catarrhal degeneration induced in a very large proportion of cases by overwork consequent upon a congested, inactive skin? How many "colds" are the direct result of over-eating? The heavy feeder always has trouble with his throat. He goes from the table with a sense of fullness and weight in head and neck, as well as stomach, and his habit of hawking and coughing, and his explosive efforts to clear the mucous membrane of irritating exudations that interfere with speech and comfort, show how loaded the glands and integument are with the products of nutrition and waste.

The dinner courses of fashionable society are responsible for an untold amount of catarrhal misery, self-inflicted to be sure, and, in the case of many, a downright offence against personal knowledge of what is physiological. Holiday times and anniversary occasions prove seasons of advantage to the doc-

tors, producing as they do so abundant a harvest of gastric and intestinal disorders. The man who joins a family company at the holiday table, and, responsive to the command of the host, gorges himself with roast turkey and ham or tongue, with the multifarious side-dishes of potatoes, turnips, onions, celery, stuffing, cranberry sauce, pickles, etc., and crowns the feast with an immense slice of pudding or pie, or takes both, and a cup or two of coffee to "wash everything down," usually goes to bed with an aching brow and a sense of discomfort in his throat and neck that may be followed next day with a soreness of the pharynx and a stuffed nose. "I must somehow have taken cold yesterday," he says, and resort may be had for relief of the oppressed and turgid membrane to astringents or expectorants, which may, by their excitement of the nerves, but increase the discomfort.

Your high liver is the hardest person in the world to persuade that his cough and wheeze are due to over-feeding. It is exposure to a cold draught in church or at some "confoundedly dull" entertainment that is the cause of his malady! Mr. Besant in one of his novels has a character who is given to daily indulgence in gluttonous eating and drinking, with the sequence of periodic attacks of rheumatism, colic, and liver congestion.

His physician warns him repeatedly against his vicious habits despite profane and most abusive protests on the part of the gourmand. He *will* eat and drink as he pleases and the doctor *must* give him the relief he needs.

Dr. Page regards a common cold as an ailment due to uncleanness, to blood, skin, and glands loaded with effete matters that should never have been permitted to accumulate in them and prevent their normal operation. He sneers at the notion of cold air and exposure producing illness in a healthy man, and has experimented in various ways that to most persons appear foolish in the extreme, if not suicidal, to determine his claim. "I have, upon the approach of colder weather," he says, "removed my under-garments, and have then attended to my out-door affairs minus the overcoat habitually worn; I have slept in winter in a current blowing directly about my head and shoulders; upon going to bed I have sat in a strong current entirely nude for a quarter of an hour, on a very cold, damp night in the fall of the year. These and similar experiments I have made repeatedly, and have never been able to catch cold. I became cold, sometimes quite cold, and became warm again, that is all." ("Natural Cure.")

If exposure to cold be the real cause of the inflammations and local lesions we complain of, every time a breeze of low temperature played upon the skin there would be a resultant malady, some local congestion would be the constant accompaniment of every individual. The absurdity of this is evident on reflecting for a moment upon the constitution and office of the skin. It was designed to be a shield and protector, an instrument of safety. Upon it was to be played extremes of heat and cold, wind and wet, according to the habits and life of man. The half naked Indian in the early days of our settlement of America used to sneer at the delicacy of the white man who must cover his body

and leave but the face exposed to the cold weather. "Indian all face," would be the explanation of the red man's ability to endure the rigors of the climate with but scanty attire.

"When the vascular system is healthy," says a writer in the *Lancet*, "and that part of the nervous apparatus by which the caliber of the vessels is controlled performs its functions normally, any disturbance of equilibrium in the circulatory system which may have been produced by external influences will be quickly adjusted."

In the performance of their important duties in reflex action the nerves are sure to be derelict if they are not well nourished, and here comes in the necessity of appropriate food for the nerve tissues, in quantity not excessive. "Nervous" people, as a rule, are troubled with catarrh. I have shown this quite fully, I think, in the pamphlet on "Nervousness," and when by a proper regulation of their habits, their constitutional state is improved, the catarrhal symptoms abate. Commenting further on the cold air fallacy, let me use the pleasant sarcasm of Dr. Page who writes "that people of all ages, sexes, occupations, and social positions, and in all conditions of *general* health, catch cold, say to-day, from the slightest exposures; often, indeed, they are totally at a loss to account for them, except upon one surmise or another, like that of the old lady who 'caught her death o' cold taking gruel out of a damp basin;' while next month, next week, perhaps, the same individuals endure the most extreme exposure, as for example, riding for hours in the face of a driving rain or snow-storm, until wet and chilled through and through, or perhaps, being turned out at night in bitter cold, half clad, to find their way from their burning dwelling to a distant neighbor's—in short, they may suffer the most taxing exposures, and yet 'catch' nothing more than a good appetite for a warm dinner or a cheery fireside. The boy

who, as was supposed, caught a fearful cold one warm day last week, from merely stepping to the door bare-headed, stole away yesterday, when the *mercury* was *twenty or thirty degrees lower* and bareheaded and barefooted, paddled in the frog-pond until his clothes were wet through and his lips blue with cold, and yet he turned out this morning without a trace of disease!"

I am reminded of an incident that awakened a thrill of holy horror and dismal expectation in a certain circle at the time it happened. A lady friend of very delicate constitution was summoned to the bedside of a brother who had been taken suddenly and violently ill. He had been engaged in the work of build-

ing a branch railway in the Catskill Mountain region and was stricken down at the farther extremity of the line. For over 20 miles of the journey she was called to make, this feeble woman rode on the tender of an old locomotive at night, the weather being cold and wet, to the place where her brother was, and ministered to his need as best she could, and a day or two later returned by the same conveyance to the point where a comfortable vehicle could be procured. To the surprise of all her anxious friends she was neither "killed" nor prostrated by a "heavy cold," and some of these friends insist even now that she was sustained throughout the trial by a "special providence." H. S. D.

OCTOGENARIANS IN NEW ENGLAND.

ONE of the editors of the Boston *Globe* has been making special inquiries with regard to the number of persons in New England positively over eighty years of age, and the statistics affecting their nationality and modes of life. The results obtained are interesting to us especially because of the bearing upon the temperament, family, and habits. The *Globe* editor sent a circular containing a series of questions to the representatives of his newspaper residing in each county of New England, and particularly insisting upon accuracy in the replies to be made.

Full and detailed descriptions of no fewer than 3,500 cases of *bona fide* octogenarianism were given by the correspondents, the cases being confined to no particular kind or locality, but came in indiscriminately from hill and valley, sea-coast and inland.

A comparison of these returns shows that the married people of New England live longer than those who affect a life of single blessedness, but the proportion of the one class to the other of those who attain the four score goal, upsets all reckoning for the married ones number no fewer than ninety-five in every-

hundred of those on the list. Another particular revealed by this canvass, is the fact that dark complexioned people do not show at all well in the race for longevity with the light complexioned, for five out of every six of the New England old folks under review are blonde, with blue or gray eyes, and abundant brown hair.

As to the habits of life of these old folks, the answers furnished all point to the fact that *longevity, save when it is accompanied with regularity of habit, is rare.*

"These old people, men and women alike, are put down as early risers and retirers, almost without exception, and fully nineteen out of every twenty have observed this custom throughout life, except, perhaps, at some short period in youth. Meals have been eaten regularly, three each day, with dinner at noon, the exception being so rare as to indicate nothing. Exercise in most cases has been hard work up to 65 or 70, and after that period has consisted (when the regular occupation has been given up) of walking, gardening, or both. Except in cases of sickness these old people are as active and fond of constant occupation

of some sort to-day as most men and women are at 35."

The nature of the occupations they have followed is significant. Out of 1,000 men, 461 have been farmers; 92 have been carpenters; 70, merchants; 61, mariners; 49, laborers; 42, shoemakers; 41, manufacturers; 23, clergymen; 28, masons; 16, blacksmiths; 16, bankers; 12 each, iron workers, mill hands, physicians, and lawyers; and the rest are divided among nearly all the other trades and professions.

Certain anomalies will arise in the consideration of the habits of these old people. For instance, "while the farmers of New England and their wives are cleanly people, they are not much given to bathing. This neglect may not have prolonged their existence or made them more healthy, but it is to be presumed that it has not cut off many years or caused much disease. Neither are the members of these households well informed in relation to sanitary matters. They know little of the unseen dampness to which the human system is constantly

exposed, and, knowing little, care little. May not this be an influence in favor of a prolonged existence, paradoxical as the supposition may seem? In Hingham, Mass., with only 4,000 inhabitants, there are eighty people over 80 years of age, and out of these seventy-five are of light complexion. In no other town in New England, so far as could be learned, is there such a proportion of old people. This town is on the sea coast, lies very low, is without sewers, and has only recently put in a system of waterworks. From a sanitary point of view the conditions here are about as unfavorable to long life as could be conceived outside the crowded portions of the large cities. And in Boston where the sanitary conditions appear to be the worst—in North End and South Boston districts—the greatest number of very old people are found."

A query arises here: Have these people always lived in the city, or have they only come to the town to live when too old to be alone and continue the vocation and life of earlier years?

A PUBLIC MAN ON TOBACCO.

THE following remarks are attributed to Mr. Chauncey M. Depew, the President of the New York Central Railroad, and well known for his prominence in affairs of public interest. His example and experience are instructive to young men everywhere.

"I was a confirmed smoker, smoking twenty cigars a day, up to about a dozen years ago, when I gave up the habit. I do not now use tobacco. Twelve or thirteen years ago I found myself suffering from indigestion, with wakeful fits at night, nervousness, and inability to submit to much mental strain. I was in the city of Albany one day, and bought a twenty-five-cent Partaga. I was walking up Broadway, and at the corner of State street I took the cigar out of my mouth and looked at it. I had smoked about an inch of it. A thought struck me. I had been reading a Ger-

man savant's book on the unhealthfulness of the use of tobacco. I looked at my cigar, and said, 'you are responsible for this mischief.' I threw that Partaga into the gutter and resolved not to smoke again. For six months I suffered the torments of the damned. I wanted to smoke, but I resolutely refused. My appetite, meanwhile, was growing better, my sleep was growing sounder, and I could do more work. After I had worked continuously one day, late at night I thought I would try a cigar as a soothing influence. I lighted a cigar; it was delicious. I enjoyed the aroma of the smoke and the pleasure of the cigar more than I can say. The next day I smoked four cigars, and the next two. I found that the use of tobacco was affecting my physical system, and I stopped it entirely, and have not commenced again, and probably never shall."

THE BLACK SHEEP.

“THERE’S always a black sheep in every flock.”

The above was a concluding sentence uttered by Rachel Winters one calm, beautiful day in the month of roses ; a perfect June day, when all nature woos us to good and beautiful thoughts, and bids her lovers to forget for a time that sin and misery exist in the busy, practical world, and give themselves up to perfect enjoyment. The speaker was little above the average of her country surroundings in intellectual attainments, but she possessed enough common sense to discriminate rather keenly, without reasoning from cause to effect. She often gave expression to vague ideas which proved that, with early facilities for culture and training, she would have developed into a superior woman ; but as it was, she was so hampered with domestic duties and responsibilities which she assumed by an early marriage, that she found little time for cultivating the mind. Her condition has its counterpart in many a household, for what else can a country girl of the times do surrounded by such environments ?

Being ambitious to keep pace with her neighbors, if not to excel them in what pertains to a well kept household, she exerted herself beyond her powers of endurance, and, early in life, was much broken in health. Fortunately for her and all his patients, Doctor Black was a grand old humanitarian, far in advance of the times in his theories and modes of practice.

On that particular June day the doctor had called, and, after inquiring of the welfare of his patient, had drifted into harmless neighborhood gossip about a wedding which had just occurred.

The bridegroom was the son of a local minister of the Gospel, who owned and lived upon a farm in the neighborhood. This minister had five sons and a daughter, all bright and intelligent, except James, the eldest, who was the man

chiefly concerned in the marriage commented upon. James was peculiar ; so much so, that his father had made excuses for him by saying that he had fallen from the barn and injured his mind early in life. After the doctor and his listeners had discussed the matter awhile, Mrs. Winters had made the remark which opens this true story.

If there was anything in which Dr. Black delighted more than another, it was to give expression to some of his advanced ideas when he thought there was an opportunity of doing good. Mr. Winters had joined them on the veranda. The old doctor knew that a love of the “ardent” was a leading cause of Mr. Winter’s “spells” of indisposition frequently complained of, and so he replied ; “Yes, he is the ‘black sheep’ of the flock, and I can tell you why. You do not know as much of the past life of Benjamin Brown, James’s father, as I do. He has only lived in this part of the country since his marriage. He, like those here, was brought up to believe that a morning dram keeps off the ague ; that it warms us in winter and cools us in summer ; in fact, that it is a specific for every ill, and a sure preventive, if liberally used in time. Benjamin was a jolly, impulsive boy, a favorite with all, and of course never refused a treat or a good time with the boys.

“He has a finely organized temperament, and is consequently of a nervous disposition, and it did not take long for whiskey to get the mastery.

“People in those times thought little harm in a man getting tipsy once in a while, but Benjamin was such a tall, ungainly youth that he furnished much sport for the young people when he would get past locomotion, and once at a log-rolling, where the fair sex were also gathered for a quilting bee, he became sick from too much drinking and had to vomit. He wanted to get out of sight of the girls, but, not being able to walk, he started off through the orchard

on all fours, furnishing much sport for the young ladies, one of whom called out in a high key: 'Don't root up our orchard, Benny.'

"But these sprees were not so frequently indulged in by him as by some young men. He had great thirst for knowledge and improved his time to study until he began to teach. School teachers were not required to be as proficient then as now, however.

"Finally he met his fate in the person of a very lovely young woman, according to his idea, and, indeed, her influence over him was very strong, for she finally succeeded in getting him to give up the habit of drinking, but not without much effort, however, for he had indulged so long that the condition of his organism had so changed that it was a long time before nature regained her normal power.

"Benjamin had been married scarcely a year when a son was born. How proud and happy he was! He had already begun to study for the ministry and had given a few lectures on temperance, and he could now realize as never before what a terrible thing it would have been to continue to set such an example for his children to follow. His wife was no less happy and when he kissed her and the babe, she said: 'Oh, Benjamin, how happy it makes me to know that now there is no danger of your ever coming home drunk and killing baby and me like Sam Watkins did his wife and child.'

"Time passed and Benjamin became quite popular as a preacher and lecturer, as you know. Other children were born and all but James have a bright future before them. For years the father believed that the fall from the barn had injured his first-born. He once asked me if I thought that anything could be done for him. I had often wanted to tell him what was the matter with his son, but had never summoned the courage. It was a grand opportunity to set him to work in a dif-

ferent way in the temperance cause—a way which had always been neglected, because not understood. So I prepared him for what I had to tell him by saying: 'You are doing a good work by teaching total abstinence from a moral standpoint; but you could do ten-fold more good by teaching total abstinence from a hygienic standpoint, because by so doing you would not only have to show the dreadful effects of drink upon the physical body of the drinker, but you would have to show its effects upon generations yet unborn, through transmission. Your Bible tells you that the sins of the parents shall be visited upon the children, even unto the third and fourth generation. I know that many of you never apply this to violations of physical law, but that is just what it means. You violated a physical law when you drank until your system was in an abnormal condition. An abnormal condition is an unhealthy condition. Before those organs had time to resume a healthy state you had a son. You transmitted whatever you possessed, and you possessed a weakened body and your son is suffering from poor organic quality.

"His mother's healthy condition helped to counteract the evil effects and he possesses a constitution that will carry him through a tolerably long life, but the brain and nervous system are of poor quality and he will always be mentally weak. You sinned more than you knew; while you possessed good organic quality, insuring strong vitality, which could resist much abuse, and finally recover sufficiently to scarcely feel its effects, you have brought a being into the world who will never be any better than he now is. I would not pain you by this recital if it were not that I know you can do much good by warning others.'

"After recovering from the shock which my recital had given him, he thanked me for opening a mine of knowledge to him which he said he would in-

investigate. But it is getting on in the afternoon and I must go."

After the doctor left, Mr. Winters walked thoughtfully out into the barn-lot. Let us hope the talk did him good while we follow the fortunes of James.

James's mother soon died, and Benjamin sold his farm and went West where he could purchase cheaper prairie land and thus get enough that each of his sons should have a farm.

As fast as they married they settled upon their farms and word frequently came back of their prosperity—all but James. Poor James! he was always having ill luck. Nothing ever prospered for him. By his system of management he was constantly losing and he was too self-conceited to take advice from any

one; so, in a few years, he came back to his native State with all his possessions in a wagon. All the children born unto him would die in infancy. He rented a farm but soon lost everything but a little household furniture, and then he began a life of daily labor, changing about from place to place. Finally his wife tired of such a life and left him. He then tramped off and nothing more was heard of him for fourteen years, when he tramped back again, worked for a man a while and started again to go South and "get rich." He was always boasting of what wonderful things he was going to accomplish. That is the last we ever heard of him. And so ends the career of one "black sheep"—one out of hundreds.

AMERICA.

THE BUTTERMILK DIET.

CONSIDERABLE attention has, of late, been called to this article of diet in our country. In the East "sour milk" is the staple article of diet, especially among the wandering tribes. They do not consider the ordinary sweet milk as we use it here a suitable article of food, but after a process of fermentation it is deemed ready for use. Thousands of people all through the East subsist entirely upon it. They believe not only in its nutritive qualities but also in its medicinal qualities. In Germany sour milk (buttermilk) has long been recognized as a valuable adjunct in the relief of stomach troubles and some of the German physicians report wonderful cures of disordered livers by its use. In India buttermilk is universally used, and so highly esteemed by some of the pastoral tribes, that they have this saying: "A man may live without bread, but without buttermilk he dies." Where there is a deficiency of meat and other nitrogenous foods, buttermilk supplies the lack, as among the laborers in the United Kingdom. The Welsh make a curd which is eagerly eaten, by mixing buttermilk with boiling whey.

The chief interest which buttermilk has excited in this country is in the fact of its apparent medicinal properties. Special attention was called to this subject by an article which appeared in one of our monthlies last year. The writer of said article stated that he had been a hopeless dyspeptic. Drugs failed to reach his case. His appetite was uncertain. He became almost a stranger to sleep. He could no longer work, and life was a burden to him. As a last resort he applied to a physician who was recommended as very successful in gastritis and other stomach troubles. This doctor told him that he thought he could cure him if he were willing to follow his prescription. He replied that he was "willing to do anything." The prescription was that he should live on buttermilk for a month. He did so. The result was a complete restoration to health.

The writer of this article took the pains to look up the man who claimed so much for buttermilk. He proved to be a noted D.D., and a hard-working editor in New York City. He told me that the buttermilk had done wonders

for him. He drank from two to four quarts every day. Occasionally he ate a small piece of dry bread. Nothing else passed his lips except the buttermilk. At the end of the first week the inflammation of his stomach subsided and for the first time in many months he slept all night. At the end of the fourth week he considered himself well, though he continued to drink some buttermilk every day. He told me that while on the buttermilk diet he was at his desk every day and did not lose a pound. To avoid temptation he kept away from the table. He also stated that his physician informed him that he had cured a large number of dyspeptics with the same prescription after everything else had failed. Other physicians of his acquaintance had resorted to the same "heroic" treatment with like results. He mentioned the fact that a number of prominent physicians in Brooklyn had put their patients who were troubled with a low fever every day (occasioned mostly by weak stomachs) on the but-

termilk diet with splendid results. Since the above conversation I have heard of a number of dyspeptics who have been helped and cured on the same line. I have tried it myself, and speak with confidence. Patients who have an excess of acid in their systems may not be benefited by its use, but the great majority who are troubled with ordinary dyspepsia, torpid liver, and consequent "biliousness" will be greatly helped if not cured.

The philosophy is simple. While buttermilk is inferior to skimmed milk in nutritive properties, it is still a valuable article of food. It is already soured and in a partially digested condition so that the stomach has little to do in taking care of it. Besides this it furnishes its own "juices" in a large measure so that the digestive apparatus is excused from much of the trouble. In a word, the lactic acid seems to meet a want. As a food and medicine it is simple and within the reach of all.

J. A. T.

THE NEED OF ARM-EXERCISE.—Walking on an even surface, the only variety of physical exercise which most business and professional men get in town, is well known to be a poor substitute for arm-exertion. The reason is partially plain, since walking is almost automatic and involuntary. The walking mechanism is set in motion as we would turn an hour-glass, and requires little attention, much less volition and separate discharges of force from the brain-surface with each muscular contraction, as is the case with the great majority of arm-movements. The arm-user is a higher animal than the leg-user. Arm-movements are more nearly associated with mental action than leg-movements. A man's lower limbs merely carry his higher centers to his food or work. The latter must be executed with his arms and hands.

A third way in which arm exercise benefits the organism is through the

nervous system. Whether this is due to an increased supply of richer, purer blood, or whether the continued discharge of motor impulses in some way stores up another variety of force, we do not know. One thing is certain, the victim of neurasthenia is very seldom an individual who uses his arms for muscular work; with this, the limit of hurtful mental work is seldom reached.—*Popular Sc. Monthly.*

WHERE ARE YOU GOING ?

WHERE are you going so fast, young man,
Where are you going so fast,
With the cup in your hand, and a flush on
your brow ?
Though pleasure and mirth may accompany
you now,
It tells of sorrow to come by and by ;
It tells of a pang that is sealed with a sigh ;
It tells of a shame at last, young man,—
A withering shame that will last.

NOTES IN SCIENCE AND INDUSTRY.

The Saoros.—In a recent number of the *Journal of the Anthropological Society of Bombay* Mr. Fawcett writes an interesting paper upon the Saoros or Sawaraha of the Ganjam Hill Tracts. A good deal of his article is devoted to an investigation of the religious ideas, sacrifices, and funeral rites of these people, some of which seem to be very curious. The objects of worship fall into two classes: malevolent deities (of course elementals), such as Jalia, Kanni, and Laukan, the sun; and ancestral spirits (*pitris*). According to their ideas every human being possesses a *kulba*, or soul, which, though it departs from the body at death, still retains the degraded tastes of the Saoro for tobacco and liquor, and must be satisfied, or it will haunt the living. In the more primitive parts of the country everything a man possesses—his weapons, his cloths, his reaping-hook, and some money—are burnt with him; but this custom is falling into disuse. A hut is built for the *kulba* to dwell in, and food is placed there; but the most important ceremony is the *guar*, which occurs later, the great feature of which seems to be an erection of a stone to the memory of the deceased. Near each village may be seen clusters of such stones, standing upright in the ground. The *guar* seems to give the *kulba* considerable satisfaction, but it is not quite happy until the *karja* is celebrated—a great biennial feast to the dead, when, after the sacrifice of many buffaloes and the consumption of much liquor, every house in which there has been a death in the last two years is burnt; and finally the *kulba* is driven away to the jungle or the hillside. Sacrifices are often made to appease elementals or *kulbas* who have done harm, and in every paddy-field an offering of a goat must be made both when the paddy is sprouting and at harvest time. It does not appear that these people have ever practiced human sacrifice. They have among them priests or diviners called *kudangs*, whose occupation seems to be hereditary. The *kudang* is supposed to be able to interview the spirit of the deceased and ascertain his wishes. The method of divination usually practiced is that of dropping from a leaf-cup

grains of rice, uttering the name of an elemental as each falls and so discovering which of them is the cause of the calamity, whatever it may be. A similar practice is in force among the Khonds, though Mr. Fawcett does not mention the fact. The *kudangs* do not live entirely by their priestly functions, but work like ordinary mortals.

Unrecognized Sensations.—Sound is the sensation produced on us when the vibrations of the air strike on the drum of our ear. When they are few, the sound is deep; as they increase in number it becomes shriller and shriller; but when they reach forty thousand in a second they cease to be audible. Light is the effect produced on us when waves of light strike on the eye. When four hundred millions of millions of vibrations of ether strike the retina in a second, they produce red, and as the number increases the color passes into orange, then yellow, green, blue, and violet. But between forty thousand vibrations in a second and four hundred millions of millions we have no organ of sense capable of receiving the impression. Yet between these limits any number of sensations may exist. We have five senses, and sometimes fancy that no others are possible. But it is obvious that we can not measure the infinite by our own narrow limitations.

Moreover, looking at the question from the other side, we find in animals complex organs of sense, richly supplied with nerves, but the function of which we are as yet powerless to explain. There may be fifty other senses as different from ours as sound is from sight; and even within the boundaries of our own senses there may be endless sounds which we can not hear, and colors as different as red from green, of which we have no conception. These and a thousand other questions remain for solution. The familiar world which surrounds us may be a totally different place to other animals. To them it may be full of music which we can not hear, of color which we can not see, of sensations which we can not conceive.—*Sir John Lubbock.*

Manufacture of School Globes.

—The first process in making a globe is to

cover the model with a thick layer of pasteboard in a moist state. When it has dried, a sharp knife is passed around it so as to separate the pasteboard coat into two hemispherical shells, which are then taken off the model and united at the cut edges with glue. The next thing is to cover the sphere with white enamel about one-eighth of an inch in thickness. When this is done the ball is turned to a perfect roundness with a machine. The iron rod running through the center of the original model and projecting at both ends through the surface has left holes in the globe which serve for the north and south poles, and through these a metal axis is run to represent the axis of the earth. The next thing is to mark the surface off into segments corresponding with the sections of map that are to be pasted on. These map sections are made from copper plates in the sizes and shapes required to fit the globes. They are printed like dress patterns, on sheets of the finest linen paper. To paste them on properly, so that they will meet at the edges and not show the lines of joining, requires great pains and skill. Then the different countries are tinted by hand with water colors. Finally, the whole is overlaid with brilliant white varnish, which is of such hardness that it will wear indefinitely without scratching.

Vegetable Wax.—Japan wax is obtained from a tree, *Rhus succedanea*, which is found in Japan, China, and throughout the East Indies generally. In the Japanese language it is called *haje*, or *hase*. The tree commences to bear fruit when five or six years old, and increases its product every year, till at fifty years a single tree will produce 350 pounds of berries, from which 70 pounds of wax can be obtained. The wax is formed in the middle of the berry, between the seed and the skin, like the pulp of a grape. It is extracted by boiling the berries in water, and allowing it to cool, when the wax separates out in a solid cake. The specific gravity of this wax is 0.970, and its melting point 131 degrees Fahr. It is largely used either alone or mixed with tallow, by the Chinese in the manufacture of candles. The principal port of export is the city of Osaka, whence, in 1876, nearly 2,000,000 pounds were shipped to London.

Curious Results in Figuring.—“Here is a curious study in figures,” said the expert accountant. “Multiply the figures 1, 2, 3, 4, 5, 6, 7, 8, 9, by 45 and we get this result: 5,555,555,505. Reverse the figures: 9, 8, 7, 6, 5, 4, 3, 2, 1, and use the same multiplier, and we get another curious string as follows: 444,444,444,445. Taking the same figures as the multiplicand and reversing the figures 45—54—we get an equally curious result: 6,666,666,606. Again reversing the multiplicand and using the same multiplier makes the sum total all 3's except the first and last figures, to wit: 5,333,333,334. You will perceive that the first and last figures put together make 54—the multiplier. Take the half of 54—27—or reverse 2 and 7 and use it as a multiplier and the result will be just as astonishing—all 6's and 1's. There is a witchery in these figures that I can't understand; can you?”

Why Albinos do not See Well.—According to Dr. A. D. Williams the white flaxen hair of albinos shows that there is a deficiency of coloring material in their bodies. Further proof of this fact is found in the absence of the necessary amount of pigment in their eyes. Such persons have pink eyes because there is not pigment enough in the iris and upon its posterior surface to prevent the red reflex of the fundus from shining through the iris. Such persons are always greatly annoyed by strong light, because there is not sufficient color to prevent the ingress of a flood of it. It enters not only through the pupil, but through the substance of the iris as well. The choroid being likewise deficient in pigment, the excessive amount of light dazzles and greatly confuses vision. Furthermore, the deficiency of pigments in the choroid prevents the light, after it has properly acted on the retina, from being absorbed, that being the main function of the choroidal pigment. Albinism is an unfortunate condition, as there is no way to supply the deficient pigment to the iris and choroid. The annoyance is somewhat palliated by the use of properly colored glasses. These supply the place of natural pigment to a slight extent.

A Fruitful Region in the Desert.—The Oued Rir', now becoming one of

the most prosperous regions of Algeria, is a great oasis in the Sahara, overlying a vast subterranean water reservoir from two miles and a half to eight miles wide, and extending some seventy-eight miles from north to south. It is now tapped by about one hundred and fourteen French spouting wells and four hundred and ninety-two native ones, with a total discharge of sixty-three thousand four hundred and twenty-five gallons of water per minute. The Oued Rir' has nearly five hundred and twenty thousand palm trees in bearing condition and an annual date production of more than five hundred thousand dollars. The population—which, like the productive land, has more than doubled in thirty years—is thirteen thousand, distributed through thirty-one centers.

To Oil Harness.—Mr. E. Chambers writes to the *Boston Globe*: Make the following preparation. Take a small keg or half barrel, and put in it some iron filings from a machine shop, or old rusted stove-pipes, worn out horseshoes, or any kind of iron; then pour on enough cider vinegar to cover the iron. Always keep it on hand, for the longer it stands the stronger it will get. After a few weeks draw off some of this color and put a little copperas in it. Now you have a complete grain color. I know of none better. Take a brush and apply this liquid to the parts of the harness that show red, or you can go all over them with it. This must be done immediately after you have washed your harness, before oiling, because it will not take where there is any grease. These preliminary points disposed of, now comes the cleaning. Take the harness apart, wherever it can be unbuckled; give each strap a good washing, using lukewarm water with a little washing soda in it. Scrub well with a scrubbing brush and be sure that you get all the grease and dirt off. Work well in the hands until soft and pliant, for it is no use to apply oil on dry, stiff leather—it will never become soft. After this has been done, hang it where it will not dry too rapidly, until about three parts dry.

Then apply plentifully on both sides pure cod-oil—this has more body and lasting quality than any other grease I have ever tried on leather tanned with bark. Besides,

if you use neatsfoot oil rats and mice will eat your harness, while they will not touch that greased with cod oil. After giving it a good coating with this oil, hang it up until dry. Then I would go over it again with the oil, giving it but a light coat this time. After that dries, wipe off with a dry, coarse cloth.

Labor in Japan.—In Japan the wages of carpenters are from 30 to 45 cents a day; wood carvers, 35 to 53 cents; paper hangers, 23 to 45 cents; stone cutters, 45 to 53 cents; blacksmiths, 23 to 38 cents; gardeners, 19 to 38 cents; day laborers, 15 to 23 cents. The workingmen pay 40 cents per month rent for a house of one room, \$2.25 per month for food, and \$3.75 per year for clothes. This schedule of wages and living will hardly prove complacent reading to the average American working-man.

Drink and Crime in London.—In a communication by M. Maram, to the London Academy of Medicine, entitled, "Alcoholism and Criminality," he says that in examining the history of 3,000 criminals, under sentence in the various prisons, he found the following percentage of confirmed drunkards. Vagabonds and beggars there were 79 per cent.; assassins and incendiaries, from 50 to 57 per cent.; of thieves and swindlers, 71 per cent.; while of those convicted of violence to the person there were 88 per cent.; and of those guilty of violence to property there were 79 per cent.

The Distance of the Sun.—The following summary is from the *London Times*: "The results of the American observations of the last transit of Venus, in 1882, have been tabulated and summarized by Prof. Harkness. Ten stations of observation had been established in the United States, and 1,472 photographs of the transit had been taken. The mean of the results give the parallax as 8,847 min.; that is, the mean distance of the earth from the sun is about 92,385,090 statute miles. Prof. Newcomb had, twenty years ago, estimated the parallax at 8,848 min.; and the American astronomers estimate the possible error at not more than 130,000 English miles."



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NORMAL EDUCATION.

"Tis education forms the common mind,
Just as the twig is bent the tree's inclined."

THE poet-essayist may have partaken with Locke in an over-estimate of the molding effects of education on the character of man, but the principle expressed in the couplet may be said to apply, as it is related to practical results, in the great majority of cases, to the average child. Archdeacon Whately expressed the true phrenological idea when he said that proper education was like grafting trees—to get the best results there must be "a relation between the stock and the graft." The thousand failures and errors in both the physical and moral life are for the most part due to a lack of relation between the mental stock and the training. Yet it might be said that the larger proportion of children as we meet them in society might be subjected to a similar course of training, moral and intellectual, if judiciously and scientifically ordered, and the general result would be favorable to their development of mental balance and capacity.

The lamentable spectacles of disgrace and failure that are of daily occurrence,

affording items of sensational interest to the newspaper reporter, would be much fewer, we are certain, if the best general system of instruction were put to use in primary and grammar schools. Every tree in the orchard has its peculiarities, but these may not be known by the gardener; his experience, however, assures him that in the grafting season he should procure those cuttings for the young stocks that have the best "all around" qualities, if he would raise fruit that will find a ready market at a fair profit.

We have advanced far enough in our comprehension of the essentials to moral integrity to put into use a formulary that should be followed for the purpose of establishing in every child's mind the fundamental principles of just, honorable and humane conduct, and enlarging, systematically, the scope of the child's observation of life, much beyond that limited horizon of selfishness within which intellectual training, when given alone, is restricted.

The economist insists that youth shall be taught systematically the principles that enter into the organization of our Government and civil institutions so that the rights of the mature citizen shall be exercised intelligently and with due regard to the welfare of the community. He rightly claims that great damage is done to the State, and the progress of the people in social prosperity and individual happiness is seriously hindered by popular ignorance of civil economics, permitting, as such ignorance does the existence of gross abuses and corruptions in political affairs.

In such a claim we have a scientific postulation that involves both intellectu-

al and moral elements, and we are compelled to admit its validity. So in the sphere of primary and grammar school education we have as scientific a postulation of the necessity for the training of the immature moral faculties at the same time with the culture of the intellectual, if we would have a fairly matured and balanced character in the young man or young woman. The disuse of a single intellectual faculty tends to loss of power in perception and reasoning, so disuse of a single moral quality renders the character just so far uneven and faulty. A wheel that has lost one of its spokes may appear to run as firmly as before, but after a while the fellow begins to show weakness at the wanting part, by bending in and falling out of line in its revolution. Each faculty is to the human mind as the spoke to the wheel, the better the finish and fit the higher the symmetry and the better the action.

The wheelwright uses such tools as he can obtain for his wheel making ; in our mind making we should avail ourselves of all the means at command or declare ourselves responsible for the sorry spectacle of an unfinished, perverted character.

A HINT FOR SELF-IMPROVEMENT.

In one of Mr. Ruskin's crisp essays on morality, he tells his reader that "however good you may be you have faults ; that however dull you may be you can find out what they are ; and that however slight they may be you had better make some—not too painful, but patient—effort to get out of them."

The first step in this procedure he intimates is to "find out first what you are

now," and to make a really definite attempt in this he says: "Take pen and paper, and write down as accurate a description of yourself as you can, with the date to it. If you dare not do so, find out why you dare not, and try to get strength of heart to look yourself fairly in the face, in mind as well as body."

We can not question the value of the counsel that Mr. Ruskin gives, for it is certainly high, and no doubt has proven of great help to some persons. We would add a few suggestions in reference to the method to be followed in both the attempt at self-examination and the effort that should be followed for self-improvement.

If the man or woman who has determined to cultivate character should take one of the lists of faculties such as accompany the ordinary phrenological charts and study their simple definitions in connection with the procedure of self-improvement, there will ensue a better understanding of the nature of his or her faults, and, of course, better light will be thrown upon the course to be pursued for their correction. Let such a person enter upon the study of his faculties and qualities thus systematically and go through the entire order slowly and earnestly, and we are sure that the result will be edifying in a substantial way.

Here is a scheme of mental introspection which at first look seems almost too simple, yet if Mr. Ruskin's advice is worth following, as most intelligent people will readily affirm, our appendix, and we will claim no more for the suggestion just now made, should be respected, because it adds a practical and

systematic course of action to the otherwise general admonitions of the eminent English writer.

THE PHYSICAL FACTOR.

It has been said by the writer in another place that "while the action of the mind is dependent primarily upon the faculties its expression is greatly influenced by physiological conditions;" hence in the study of the mental side of human life it is absolutely necessary that we should have a definite knowledge of those physiological conditions. Observers have been in the habit of referring them to what is called *Temperament*, which means generally the mingling or combination of one's physical elements.

There are writers who attribute more than this to temperament, claiming that its influence upon character is of so strong and subtle a nature, that mere physical function is insufficient to explain it, and that we must go to such sources as heredity and psychology for satisfactory data. We inherit our peculiarities of physical constitution as much as we do our mental traits, and it should be recognized that some receive from their parents such a happy combination of the physical elements that the brain and mind are so well nourished and stimulated that the expression of character is striking for harmony and strength. A fine temperament means a fine, well-made body, all the vital organs being well developed and performing their functions completely: the heart, lungs, stomach, liver, kidneys, spleen, intestines, glands, skin, etc., do their special work continuously and well, and all parts are kept in normal condi-

tion. There is no tendency to weakness or lapse in vitality, but rather toward a surplus, so that the man goes on day after day in his chosen vocation, with a consciousness of abundant strength and capacity. Such an organization is strikingly shown in the case of Mr. Ericsson, the well-known engineer and inventor, who to-day at eighty-five, still devotes the most of his time to the study and labor of his profession. But a factor enters into this matter of organization which is an essential to the expression of efficient activity; that factor is the exercise of the body by such means as serve to impart to bone, muscles, and tissue in general the firmness and consistency that constitutes vigorous health.

It may be scarcely necessary to argue in support of the principle that a sound body is important to strength and balance of mind. Mr. Galton in a discussion of "*Hereditary Genius*," says:

"There is a prevalent belief that men of genius are unhealthy, puny beings—all brain and no muscle—weak-sighted and generally of poor constitutions. I think most of my readers would be surprised at the stature and physical frames of the heroes of history who fill my pages, if they could be assembled together in a hall. I would undertake to pick out of any group of them, even out of that of divines, an 'eleven' who should compete in any physical feats whatever against similar selections from groups of twice or thrice their numbers taken at haphazard from equally well-fed classes. . . . It is the second or third-rate students who are weakly. A collection of living magnates in various branches of intellectual achievement is always a feast to my eyes, being as they are,

such massive, vigorous, capable-looking animals."

The facts presented in the discussions of the day relating to physical education show that there is a concomitance of intellectual strength with physical development—the active, vigorous youth at school, will as a rule show a higher degree of mental capacity than the puny and feeble student.

While the size and configuration of a man's brain and the quality of its texture are to be considered the chief factors of his mental capacities, yet the energy in operation of those capacities is more or less modified by his physical state, and his success or failure in important directions will depend upon his physical condition.

It is to a recognition of this fact that so much is being done in our colleges

and schools to promote the interest of teachers and scholars in physical training. At some large institutions the building and furnishing of gymnasiums may appear to carry the principle to excess, but it is, nevertheless, a right principle and will bear excellent fruit. Children should receive systematic training in light gymnastics, under competent instructors as much as instruction in the "three R's." Their recesses and other intervals of diversion when at school, should be made interesting to them by the practical entertainment good physical training affords. The noisy, objectless running and tumbling about that constitutes the play of most young children when in the school court, can not commend itself to anyone, and should give way to exercises that mean something to body and brain.

Our Mentorial 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.

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 small hand, or in pencil, as the compositor has to read it across the case, a distance of over two feet, and the editor often wishes to make changes or additions.

4. Never roll your manuscript or paste the sheets together. Sheets about "Commercial note" size are the most satisfactory to editor and compositor.

5. Be brief. People don't like to read long stories. A two-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 also.

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. Personal and private matters addressed to the Editor in his professional capacity will receive his early attention if this is done.

HAIR AND ENDURANCE.—*Question.*—Does an abundant growth of hair indicate physical strength and longevity, and, conversely, does baldness show weakness?

Answer.—If you should attend a large assembly of men, and stand where you could note their heads, you would find a very large proportion of the middle-aged to be bald. The story of Samson probably gave rise to the notion that hairy men are strong. Temperament has much to do with the hair, the motive and vital having usually more than the mental. Among the nations the Chinese are notable for endurance, yet are as notable for baldness and want of hairy growth. Long-haired men are generally weak and fanatical, and men of scant locks are the philosophers, savants, and statesmen of the world. It is the small head that nature covers with the most hair.

TRANSCERENCE OF WILL TO ANOTHER.—**L. A. R.**—*Question.*—Is the description in "Robert Elsmere," where Rose is compelled, merely by the force of Langham's will, to go across the room blindfolded and kiss the hand of a marble statue of Hope, to be considered as among the possibilities, or only a freak of the imagination of the author? In other words, do some persons possess the power of making others obey their will, without words or acts?

Answer.—There is no doubt to be entertained with regard to the power that some persons can exercise over others. The researches made by scientific men in hypnotism, or animal magnetism, have demonstrated this fact; so that Mrs. Ward really makes use of an ordinary principle in the incident that our correspondent quotes from her book. We have seen a subject in the hypnotic trance say and do things willed, but not uttered aloud, by the operator, and when the operator was at a considerable distance. To those who are familiar with such experiments, the conduct of Rose would appear comparatively simple, figuring, as she does, as a character lacking in force and individuality. The committee of the London Society for Psychical Research, to whom was intrusted the examination of the subject of "mind transference," reported very fully a series of experiments that show conclusively that one mind can be impressed by another (while in the normal

state), no attempt being made to magnetize.

HAUNTED HOUSE.—**A. S. A.**—If we owned a house said to be haunted, and it was thought that the ghost, or whatever else, made it his stamping ground because of some treasure supposed to be concealed under the floor, we should certainly make a thorough investigation for the sake of the treasure at least. It seems to us further, that you should have a paying investment in such a house; if you can furnish authentic testimony that the phantom has been seen by several persons, and the exhibition is still kept up, your house should be very valuable as a place of resort. By charging admission to the parts where the ghost walks, and permitting curious people to spend the night there, in payment of a fee, you should derive some revenue from it. Haunted houses are becoming rare now-a-days, and that is one reason why you find people so skeptical and non-committal about yours.



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

The "Elsmere" Mania.—I am at a loss to explain the popular *furor* and ecclesiastical excitement raised by "Robert Elsmere," on any hypothesis that will not be considered an unpleasantly cynical one. Certainly there has been nothing proclaimed by Mrs. Ward on religion that had not been set forth before with more adequate preponderance of evidence and acute critical reasoning by that brilliant critic, her uncle, and the prominent figures who may be included under the general term of the Dutch School of Criticism. "Robert Elsmere's" only contribution to critical literature is a batch of specious generalizations, giving a fair condensation, it may be, of the conclusions of a certain class of advanced thinkers. For their premises we must consult themselves, and draw our own conclusions. I must say that I was distinctly disappointed in my expectation to find in the book a weighty contribution to religious thought,

and I am tired to boredom with the incessant chatter about its theological significance. It is a suggestive reflection that only when these heresies are doled out in spoon-meat, is the discussion taken from the academic arena down to the congregations of the masses, and the orthodox faith defenders rendered truculent and noisy.

These remarks must not be construed as derogatory to the "successor of George Eliot." She must feel highly flattered that her work has proved such an awakener, and that she has "awaked to find herself famous." Rejecting the plan of such an elaborate controversial story as "The Eclipse of Faith," she has given us intensely interesting fiction, displaying rare literary workmanship, faithfully exhibiting intellectual types and tendencies of the day, and showing a journalistic intuition into signs and symbols, facts and fallacies of the times. As I say, however, "Elsmere's" reason-for-being, and his notoriety, are due to his supposed aid toward a solution of the "Caucasian Mystery." Certain American literary hacks have written down the book as "dull," but such could only be the verdict of creatures nursed in what I shall take the liberty of baptizing the School of Gunpowder and Gush.

W. MATCHES.

Primary Researches in Hypnotism.—Notwithstanding the many remarkable phenomena connected with the science of mesmerism, I myself esteem the simplest and the most common as important as any, for the reason that these more nearly concern ourselves in our daily life, and show how great is the unconscious influence we have upon each other.

I grant that the more remarkable and striking facts are best suited to show the phenomena to be expected and looked for. These I read with great interest. But having now encountered a great many of these, and a large number of the same or similar kinds, a person may descend to the minor and commoner phenomena—the more delicate and less striking characteristics.

For instance, how interesting the fact that in my own case I unwittingly magnetized two persons at a time—the first a well-confirmed subject, and the second unknown by myself to be one.

Conversing one day in a general manner with a man known to be "sensitive," I willed him, without any previous warning, or forethought, to forget what subject he was talking about, and what he was going to say. He was in his ordinary state, and no attempt had been made by myself to hypnotize him. He immediately confessed that he had forgot what he was saying—something about a person he had been calling upon—the number of her residence, and her relation to him, and in a few minutes, after relaxing my attention on him, he recollected, and would have gone on with the discourse had not the attention of both of us been drawn into another subject.

My second case arose from my conversation with an amiable youth of fifteen, who inquired what magnetism was, and how performed.

To illustrate I passed one hand over his forehead, closed his eyes, and asked him if he could open them, which he readily did, but afterward said they "felt heavy." This person I had not before seen.

The subject first referred to I have four or five times seen, and during this interview had opportunity to examine him intimately, and to question fully, he being remarkably accessible. On the first interview I noted a sensitive disposition, so that the lightest pressure of the hand was reciprocated by an answering pressure, apparently involuntary.

On subsequent occasions I found the pulsation at the heart by auscultation to be quick, with a remarkable variation from the normal systemic throb. The pulsation at the wrist was long, thrilling, moderately hard, and the throb of the carotid very prominent and pronounced. He avers that he can readily see the pulsation in several localities on the surface of the body.

In common with most sensitives that I have seen, the skin is fine-grained, soft, and inclined to be marble-smooth.

His development is thoroughly normal and symmetrical in many respects; complexion, light; hair, fine; eyes, light gray; position in standing, erect, with a strong inclination inward of the spinal column at the lumbar region.

H. CLARK.

PERSONAL.

WE regret to announce the sudden death of Dr. NATHAN ALLEN, of Lowell, Mass. Dr. Allen was in advanced life, but had shown so much vigor mentally until very recently that there was little thought of his death. In the next number of the JOURNAL some account of his life may be expected, because of his long sympathy with the cause of physical and moral education.

DR. GAUTIER, of France, emulating the example we may suppose of Koch, has fallen a martyr to his zeal in investigating the subject of infection by tuberculosis germs. While pulverizing dry discharges for the purpose of making experiments he became himself infected, and died. Dr. Gautier was the physician who treated Boulanger after he was wounded in his duel with Floquet.

DR. SCOTT, a reverend doctor we believe, and the father-in-law of President-elect Harrison, is eighty-eight years of age, but not too old to keep a \$1,200 clerkship in the Pension office at Washington. He comes of an old Virginia family, the same from which General Winfield Scott was descended. He was at one time a professor in the Miami University, Oxford, Ohio, and later was the principal of a famous girls' school in that town. Notwithstanding his years, Dr. Scott is bright and hard-working.

THE Rev. Dr. Smith, president of Trinity College, Hartford, Conn., was recently invited to be bishop of the Diocese of Ohio. Mark Twain, who attends the Episcopal Church, and is an admirer of Dr. Smith, wrote a characteristic letter urging him to remain in Hartford, and expressing a desire for the privilege of answering the call from Ohio. Said Mark: "I can say very strong things when I am warmed up, and I am warmed up now. I can write a letter that will just make those people never mind about details. You turn the whole thing over in my hands. Leave this Ohio insurrection to me. I'll make short work of it." It need scarcely be said that Dr. Smith will not be bishop of Ohio.

WISDOM.

"Thou must be true thyself,
If thou the truth would teach."

LIFE, like a dome of many-colored glass, stains the white radiance of eternity.—*Shelley*.

HE who can, at all times, sacrifice pleasure to duty, approaches sublimity.—*Larater*.

FAITH in the supremacy of the soul leads to the subjection of the outward life.

WHAT is remote and difficult of success we are apt to overrate; what is really best for us lies always within our reach, though often overlooked.

THERE is no use in trying to strike an average on honesty. The article must be simon pure or it is spurious.

IF what shows afar so grand,
Turn to nothing in thy hand,
On again, the virtue lies,
In the struggle, not the prize.

It is better to have strength of principle than of mere muscle, but better still to have both. A man who is strong in intellect and in body is on the best terms with nature and the world.

MIRTH.

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

"Do you enjoy good health?" "Why, yes; to be sure; who doesn't?"

"Well, Pat, Jim didn't quite kill you with that brickbat, did he?" "No; but I wish he had." "What for?" "So I could have seen him hung, the villain."

Hired girl (to tramp): Go 'way; I won't give you nothin'. Tramp (from Boston): Particularly grammar. Good-by!

CITIZEN (to stranger): What are your politics, my friend?

Stranger: I have no politics this year; I'm leader of a brass band.

HUSBAND (to wife home from church): Service interesting this morning, my dear?

Wife: Not particularly so. Mrs. Carlton-Pell's baby was baptized, and they say its baptismal robe of lace cost \$500. I think there is such a thing as being too religious.

THIS is the order which a little girl brought into a Lewiston druggist's store, the other day. It was written on a dirty piece of note paper as follows: "Mister Druggist: Please send ipecac enough to throw up a 4-year-old girl."

IT WENT.—Mistress: Didn't the alarm clock go off? Bridget: It must have wint off, mum, for I can't foind it this mornin'. Mistress: Why, what did you do with it? Bridget: I jist laid it on the shed in the back yard, mum, so that it wouldn't annoy me.



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 the Editor with recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

FAMOUS WOMEN OF THE OLD TESTAMENT. A Series of Popular Lectures delivered in the First Baptist Church, Montgomery, Ala. By Morton Bryan Wharton, D.D., late United States Consul to Germany. Illustrated, 12mo, pp. 308. New York, E. B. Treat.

Fifteen names of women, who are given places of prominence in the ancient scriptures, are included in this series—beginning with Eve and ending with Esther. The character of the lectures is quite free from the homiletic limitation that one might expect to find in the language of a professional clergyman, when treating of a Bible subject, especially those important persons who give life and color to the Hebrew narratives. He does not lose sight of the pulpit, however; as the minister of the Church here and there intimates his belief, and suggests its pertinency to the theme of the hour. Of course as the series proceeds the author has many things to say

regarding social and domestic life as it is found to-day, and he is crisp, sarcastic, and humorous often, when the Bible narrative discovers some contrast that can be used with effect. The Witch of Endor has a place in the reverend author's series, and is one of the more interesting chapters of the book, because of its rather free treatment of ghost stories and the common spirit phenomena that we hear so much about. The illustrations are many, good engravings for the most part from the masters of ecclesiastical painting.

SONGS OF TOIL. By Carmen Sylva, Queen of Rumania. Translated by John Elliot Bowen, with an Introductory sketch of her life.

OLD AND NEW WORLD LYRICS. By Clinton Scollard, author of "With Reed and Lyre."

These two additions to the list of modern poets are published in the neat and attractive style of their \$1 series, by Messrs. Frederick A. Stokes & Brother, of New York City.

Princess Elizabeth, of Rumania, has put thoughts in tuneful writing that deserve preservation, as Mr. Bowen certainly shows us by his arrayal of the original with the translations he has ventured to make. Mr. Whittier's "Songs of Labor" thus find an echo in that far-off country of the East, and it is a lady of royal lineage who has discovered in the humble employments of the masses inspiration for her pen. Author as she is, this lady is perhaps better known for the part she took during the late Turkish-Russian war that made Rumania its battleground. She was earnestly active then among the soldiers, doing what she could to alleviate the suffering of the sick and wounded, and her people gratefully called her "the mother of the wounded." The student of German has a text-book in this work of the publisher that may be useful toward mastering the language.

Of Mr. Scollard's verse we must say it is of the descriptive and lyric types that usually please when exhibited with grace and a nice discernment of the effect of words. There is a mediæval quality in the method that to us seems specially attractive and he who is familiar with old European

life and story will select many of the topics in *From Over Seas*, and *Sonnets and Quatrains* as very much to his taste.

"COCKLE SHELLS AND SILVER BELLS." By Mrs. M. F. Butts. 8vo: Buffalo, Moulton, Wenbourne & Co.

With this title we are given a volume of a hundred and more poems, from the pen of our friend whose elastic and sprightly pen has limned many a pleasant sketch for the readers of the *Phrenological*. The title is an expression of the spirit that pervades Mrs. Butts's verse. She writes to enliven and cheer the little ones of home.

Mother or father may read these poems to their younger children and give them pleasure—while the old heads may see much beneath the jingle of a line to render their approval serious. Let our babies learn to repeat such pretty verses as these rather than the witless rhymes so common in the nursery, and, our word for it, there will be better moral growth as one result.

PUBLICATIONS RECEIVED.

HOUSE PLANNING. By C. Francis Osborne, Assistant Professor of Architecture in the Cornell University. Published by Wm. T. Comstock, New York.

This is not a book with a series of designs for houses of different cost, but a consideration of the elements that enter into a well arranged, convenient, and complete house and home. It is therefore a critical exposition of what constitutes good house building, and being well illustrated has a place on the list of books useful to the modern architect.

WORKING WOMEN'S PROTECTIVE UNION. Twenty-five Years' History.

An interesting recital of the operations of a valuable charity in obtaining justice in behalf of oppressed and defrauded women and girls who live by manual toil. Published by the Union. New York.

FORTY-FIVE YEARS OF REGISTRATION STATISTICS. By Alfred R. Wallace, LL.D. Second Edition, with Notes and Appendix by Alexander Wheeler, London, Eng.

It is unnecessary, perhaps, to say that this pamphlet is a powerful attack on the practice of vaccination, and coming as it does from a very eminent naturalist, has acquired a large circulation and proved of great help to the anti-vaccination movement in Europe and America.

THE MEDICAL BULLETIN VISITING, published by F. A. Davis, of Philadelphia, deserves mention.

It is a new arrangement for the use of the practicing physician which will commend itself at first sight, the apportionment of spaces for the different functions it is a physician's office to perform, being the result, evidently, of practical experience. Useful information with regard to the latest developments in medication is supplied in a very concise yet satisfactory form. Price, \$1.00, in substantial morocco.

THE MEDICAL JURISPRUDENCE OF INEBRIETY.

Being papers read before the Medico-Legal Society of New York, and the discussion thereon.

This is an elaborate document, the papers and report of the discussion occupying over 180 pages. Upward of thirty persons of prominence in law or medicine are represented, so that the field of the topic may be said to be well covered. Mr. Clark Bell, one of the participants in the discussions, and the editor of the volume, has given to a department of advanced science a valuable compilation from the thought and experience of men and women who have studied inebriety on its different sides. Copies may be obtained, price 50 cts., by addressing the Medico-Legal Journal Association, No 57 Broadway, New York.

HAND-BOOK OF PHARMACY AND THERAPEUTICS. Third Edition. Revised. Compiled for the convenience of busy practitioners from the best recognized sources, therapeutical and pharmaceutical. Published by Eli Lilly & Co., Indianapolis, Ind.

THE ROMANTIC STORY OF WICKLY'S WOODS. By H. W. Taylor, M.D. 12mo, pp. 144. Price, 25 cts. Published in Denison's monthly series. T. S. Denison, Chicago, Ill.

DAS SOHAMANENTUM DER JAKUTEN (The Shamanism of the Jakutes). From the Russian of V. L. Priklonskij. By Dr. Frederick S. Krauss. Reprinted from Vol. XVIII. of the Transactions of the Vienna Anthropological Society. 1888. Received from the translator, Dr. Krauss.

OYSTERS AND FISH.

Another convenient little handbook for the cook adds to the list of Mr. Thomas J. Muray who evidently appreciates the value of gas apparatus in kitchen economy, by the dedication of his book to an inventor of a "close-top gas stove." In 85 or more pages the cuisine of oysters and fish is pretty thoroughly covered. Price, paper, 50 cents. Frederick A. Stokes & Brother, New York.

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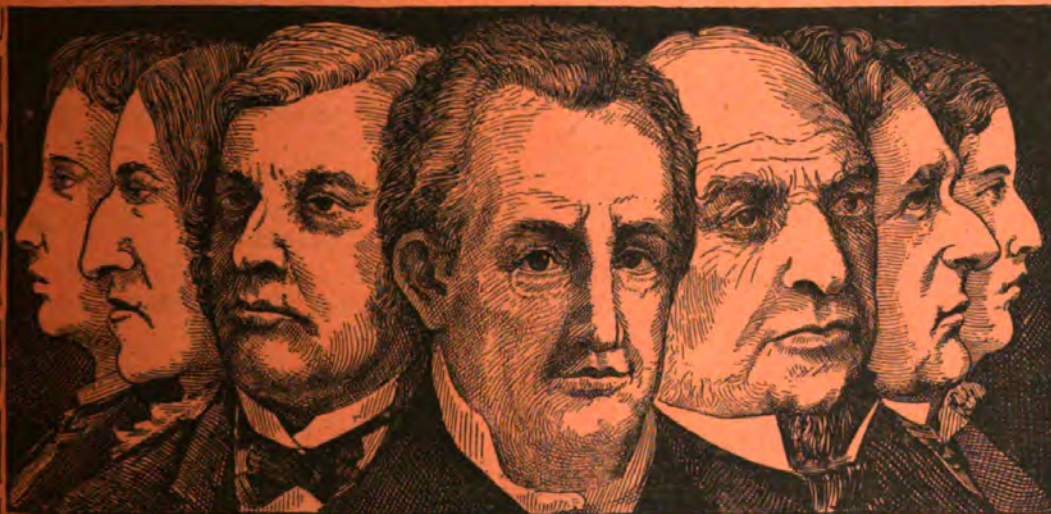
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ANNOUNCEMENT FOR THE NEXT NUMBER.

A sketch of the Great Tower at the approaching Paris Exhibition, and of its projector, M. Eiffel, will appear in the April PHRENOLOGICAL. There will be, also, sketches and portraits of Chief Justice Mitchell, of Indiana, and William Warner, Commander-in-Chief of the Grand Army of the Republic. The article on Judge Church and life in Deadwood, Dakota, will certainly appear. Besides these, Miss Cole will supply a thoughtful paper on the relations of the American Indian to the White Settlers and the United States Government, Prof. Hume will talk about the Barbarism of Fashion, the Editor will furnish an account of some recent experiments in magnetism, Prof. Sizer will discuss Balance of Development, Human Capacity, and other topics, and L. A. Roberts, Esq., offer a point or two on Religious Teaching in the Public Schools, etc., etc.

The Phrenological Journal is published monthly at \$1.50 a year, or 15c. a number. To each new yearly subscriber is given either the Plaster Paris Phrenological Bust or New Lithographic Phrenological CHART Premium, a new plate, 19 x 24 in., with ring for hanging. When the Premium is wanted, 15c. extra must be received with the subscription to pay postage on the JOURNAL and the expense of boxing and packing the Bust, which will be sent by express, at expense of the subscriber; or No. 2, a smaller size, or the Chart Premium, will be sent by mail, postpaid.

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[WHOLE NO. 603.



ROYAL E. HOUSE,
The Inventor and Electrician.

ROYAL E. HOUSE,

THE INVENTOR AND ELECTRICIAN.

IN our youthful days we read about the House telegraph, and used to wonder how it compared with that of Morse, and were inclined to believe that a printing machine must be better than one that merely made dots and dashes on a strip of paper. Now that Mr. House has come again into notice on account of his claim to priority as inventor of the telephone, the man who has a history that associates him with the old pioneers in experimental electricity deserves more than passing attention.

Well on in years, as the portrait intimates, there are in the head of Mr. House the signs that declare an organization of strong and positive characteristics. The towering central region shows a decided, steadfast disposition—a very firm will. He is a difficult man to move from his anchorage. Only stubborn facts that compel his respect will modify his convictions. Nose and the coronal development are certainly in close accord in this respect.

The lines of the forehead are those of the scientist. That central line in particular marks the tendency to close, minute inspection and to make nice discriminations. He has been the man to recognize the qualities of things and to estimate their relations on the basis of a very keen comparative judgment. There is a sharpness of observation exhibited in the general make up of the organization, a power of discrimination that extends to the moral life and constitutes him an independent thinker in matters that affect his inner personality. There is nothing of the imitator about Mr. House; he is of his own kind; possesses a sharply defined individuality that may express itself at his age in certain eccentric mannerisms. He should, however, be a person of kindly sentiment, even tender in the expression of feeling—if that expression have its own peculiarities.

From an account that recently appeared in the *Scientific American*, the facts that appear in the sketch following are mainly taken; the reader who takes note of the progress of the most remarkable feature of secular affairs, electricity, will read them with interest.

Royal Earle House was born in Rockingham, Vt., September 9, 1814. In 1840, he invented and put in operation a water wheel that would work under water, and not freeze in winter, and yet do the work of a gravity wheel with its gearing. The principle of the turbine wheel had long been known abroad; but House's invention lay in such a combination of the impulse and discharge as should make the wheel of practical value, and his ingenious contrivance is now extensively used in various forms and known by different names.

In 1842 he resolved to devote his life to the study of electricity, and to give popular lectures, with accompanying experiments. After a brief career in the lecture field he decided, however, to limit his attention to the more promising arena of invention. Morse had already taken out his earlier patents, but had not yet built the first electro-magnetic line—from Washington to Baltimore—when House conceived the idea of his printing telegraph. He made his first instrument of the kind in 1844, and exhibited it before the Mechanics' Institute in New York City. It received a gold medal from the American Institute in 1848, with a special compliment on its being "an invention of great ingenuity." The committee of award were Professors Agassiz, Chilton, and Renwick. Morse's telegraph conveyed intelligence by preconcerted signals, dots and lines made by breaking and closing the circuit. House's telegraph printed its messages in Roman letters. The component parts were type wheels, platens, a keyboard like that of a piano, and a single line of

telegraph. The type wheels moved synchronously by a step-by-step motion, arrested at will by pressure on a key, causing its representative letter to be printed. The actual speed attained was at the rate of fifty words a minute, or equal to the average speed of the modern typewriter. This was more rapidly than work could be done by the Morse instrument; but the printing-telegraph required more power to move the type wheels, etc., which became an objectionable feature when stations came to be multiplied.

A new era was introduced in telegraphy when the messages came to be received by *sound only*, the operator writing them off rapidly in a suitable form for delivery. Mr. House saw the need of more sensitive apparatus for the transmission of sound waves. Taking up the subject where Boursal and Reiss had discontinued their researches, he made and had patented an "electro-phonetic telegraph," June 27, 1865, and in order to improve the workings of certain parts took out another patent, May 12, 1868. This invention consisted in placing at each station of the line a hollow ear piece for receiving sound waves, this being closed at one end by a thin flat plate, or diaphragm, having a spring force to counterbalance the magnetic force of the armature, and thus hold the sounding head in a state of magnetic equilibrium when the circuit is closed. There was also a device for adjusting the loudness of sounds.

The inventor's idea was simply that of making an instrument of great sensitiveness for receiving the sound signals of letters used in telegraphing. But this instrument is really a *telephone*, doing as good work as can be done by the more recent Bell telephone. The Supreme Court has decided that "a patentee is entitled to all the benefits which result from his invention, whether he has specified all the benefits of the patent or not." Hence Mr. House regards the Bell telephone as an infringe-

ment on his patent and has called the attention of the American Bell Telephone Company to his claims. The inventor specified in his patent of 1868 that diaphragms as large as eight inches could be used. To test this Mr. House produced a disk of the size stated, made of pine wood, and the result was most remarkable. The messages were distinctly audible when the speaker and hearer each stood five feet away from the instrument; and when several persons carried on a conversation in the room, it was transmitted perfectly to the other end of the room. Let the reader note the fact that nearly every detail of the mechanism of these extraordinary telephones was covered by the House patent of 1868, granted eight years prior to the Bell patent of 1876, and observe the remarkable fact also that neither House nor Bell specially claimed that their instruments could "talk."

When business increased so that many million messages went over the wires every year, it became evident that there must be a wasteful multiplication of poles, wires, instruments, and operators, or else that in some other way the cost of sending a telegraphic message must be reduced to a minimum. House undertook to meet this demand by a system of his own. He invented a new, time-saving alphabet, in which a message may be prepared for transmission. When thus prepared it is sent over the wire with greatly augmented rapidity, and is transferred from line to line without having to be repeated. "Untouched by an operator, the message is automatically received and translated into ordinary printed typography ready for delivery, while automatic machinery, without the aid of an operator, takes care of and files away the paper of the transmitted message." So ingenious is this device that a series of messages on a single line may be sent as one message, and each be automatically dropped at its destination, and the capacity of a single wire will exceed the ability of six operators

to prepare messages, each of which in its turn may be started by a slight movement of the hand. And this system does not interfere with the use of the wires, on occasion, in the ordinary way. This improved system, so far as it may be adopted, must give us one of the great demands of the age—rapid and cheap telegraphing.

In 1884 Mr. House removed to Bridgeport, Conn., where two of his nephews

reside, who are also known as successful inventors.

The fact that he was brought up amid the rugged fields of a mountain farm, enabled him to start in life with strong physical powers, as well as a healthy and vigorous mind. The result is that now, at the age of seventy-four years, Professor House enjoys uniform health, and his mental faculties are still in vigorous activity.

FAITH AND PROVIDENCE.

IF faith be an element of perfect psychological existence, those truths which we hold through its assurance, must be in harmony with those truths which we discuss through reason, and the soul is susceptible of its highest spiritual development without those petty superstitions and false doctrines which are so prevalent among some religious professors. No disparagement to religion is intended, but faith arising from Spirituality is blind, and rational inquiry is necessary to determine what faiths are worthy of acceptance. Faith transcends reason, holding truths which reason can not grasp for lack of data. The existence and attributes of Deity, the existence of the soul with its future state, and kindred transcendent truths, can be known only through the sentiment of faith which gives an internal consciousness of their truth. But, if those things which we hold through faith be truth, they must receive the sanction of reason, and reason becomes the only test of credibility. Spirituality is a strong faculty and requires a strong curb, for, being blind, it should not enslave reason and mislead the understanding.

It were far better for every man who feels the necessity of religion and a life of godliness, not to canvass too freely the opinions of others; for they are more often founded upon caprice, than upon sound judgment, and more often upon hearsay than upon individual conviction. Nor should he gather together in

a body all the theories of men; for he is a genius who can cast out the false and retain the true. Nor should he confine his studies to any book or series of books purporting to be of divine inspiration and authority, for many have been misled through misinterpretation, and the whole visible creation—all the works of God—declare His will as clearly and even more eloquently than the mystic and symbolic pages of Revelation. We believe that, in creation, the means was established by which mankind may attain a true faith. That means seems to be largely intellect; for, wherever any people has ascended from a state of savagery and barbarism with its attendant barbarous superstitions, to a state of civilization with its more rational beliefs, there has been a marked increase in intellectuality.

Knowing that mankind has experienced a rapid elevation from superstition, it is only fair to admit that true faith is not yet perfectly attained. Admitting this, and the part performed in human elevation, no man need fear to test his faith by rational inquiry. One belief characteristic of modern religion should be examined. Exalting the power of God, we have come to conceive him as controlling, directly in the present, every operation of nature, including the soul.

This conception implies an imperfection in the Creator; for, if those laws which were established in creation, are

not sufficient to attain His ends, without His present intervention or superintendence, they are imperfect, and their Giver shares in their imperfection. If the Creator be the ideal and perfection of wisdom, His laws are sufficient to attain His ends, and His Providence is shown, not in the present, but in the past, not in the operations of the universe, but in its constitution.

The operations of the physical world always proceed in accordance with law; but we are free to obey or disobey many laws, physical, mental, and moral. Disobedience to law is a fact, and demonstrates the freedom of the human will. He, therefore, who gave human freedom, being unchangeable, can not abridge it, and His providence does not extend to the conscious volitions of the soul.

The poet, in whose intellectual operations imagination leads, may see the Almighty in the sun, the stars, the winds, the rains, and in the green herb; and the theologian, tracing all things to God, may overlook the whole chain of second causes, and make Him the controller of the elements; but these ideas are not characterized by the exactitude of science, and should be accepted accordingly.

The whole course of human events—the successes or defeats, the pleasures or pains of individuals—seems so inconsistent, and so far beyond all human knowledge, that we refer it to the guidance of Providence, and acquiesce in His will. But, such acquiescence is born of intellectual dullness, inability to inquire, or unwillingness to understand, and is far from commendable, for it retards the elevation of the race.

If the original constitution of parents, with their creative and pre-natal states super-added, be stamped upon children, and, if this parental constitution be an inheritance from a previous parent, and these parental states be under the control of the will, the constitution and natural bias of every child born is mainly

of human origin. If education have any influence upon our motives, if associations materially affect our wills, and, if we may or may not educate, and may seek or avoid any associations, our course of life is almost, if not completely under our own control.

We are but parts of one complex whole. Every individual will may be thwarted by opposition from other and equally potent wills; and what wonder, then, if, when ambition leads us to efforts beyond our native ability or in opposition to other wills, that we fail and our hopes are crushed, and our energies wasted!

Children, youth, men and women, in the prime of life, or in old age, sicken and die, and ministers impress us with the strangeness and inscrutability of the ways of providence. We are given life, and the blessings of health and happiness, we know not why, but on conditions whose fulfillment is wholly a matter of choice. Failing fulfillment, pain, sickness, and death ensue. Nor are we left to chance in choosing, for intellect discerns the laws of life and health with as great certainty as it does the laws of the inorganic world.

If reason demonstrate the falsity of a belief in "providence," it is degrading to the Christian profession to believe in it, and Christian ministers should be first to enlighten the minds of the laity. The sooner we shall divorce ourselves from prejudice, and from error, venerable with age, and sanctioned by monkish or scholastic names, the sooner we shall be free to consider "the ways of God to man," and receive the blessings of worthy service rendered intelligently, in accordance with His laws, and not in the blindness of ignorance and superstition.

JOHN W. SHULL.

IF you would not have affliction visit you twice, listen attentively and at once to what it teaches. BURGH.

A WORD FOR THE CRIMINAL.

IF people who are favored by the circumstance of birth in possessing good organizations, exhibit irregularity of moral conduct, we should be considerate with regard to many of those born in relations that impress an unfortunate type of organization, although we may not grant so much respect to Heredity as some writers. As an observer of the vicious and criminal class justly says: "We 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 dangerous 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.'

LIFE.

LIFE is a vigorous tree
In verdure exceedingly fair;
Tender and precious its bloom—
Its blossoms and fruitage rare.

Life is a brilliant gem,
In depths of a gloomy mine;
Freed from its garments of earth,
In diadems it may shine.

Life is a central spring,
In the bowels of earth lies hid;
Waiting till it shall be freed,
Till raised is the earthy lid!

Life is a motive power,
It flows from the Godhead's breath!
Pulsing and throbbing for age,
On, on, thro' the vaults of Death!

* * * *

Never increased nor lessened,
Life is perpetual, supernal!
Ever and only renewal!
Even as God is eternal!

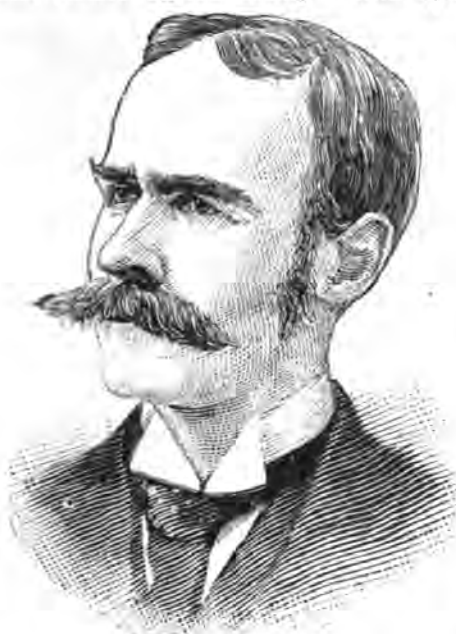
GRACE H. HORR.

NOTABLE PEOPLE OF THE DAY.—No. 17.

HAROLD M. SEWALL,

Consul-General to the Samoan Islands.

THE relations of the United States with Samoa, otherwise known as the Navigator Islands, have occupied a good part of public attention latterly, and the fact that our government has seen fit to send war vessels to the Islands indicates that American interests were, apparently at least, in some peril. The position of Samoa in mid Pacific is one of importance to us as a nation aside from the commercial interests that a country rich and fertile agriculturally within 3,000



HAROLD M. SEWALL.

miles of us would be supposed to sustain.

The natives of the islands are semi-civilized, but like the Hawaiians, whom they resemble racially, they are tractable and intelligent, and if properly treated could be easily and happily governed. For the most part they are of fine physique, straight and broad shouldered, and have a powerful muscular development. Their color is light brown. Many of the women are handsome, both in form and feature. One thing which detracts from their appearance is the way

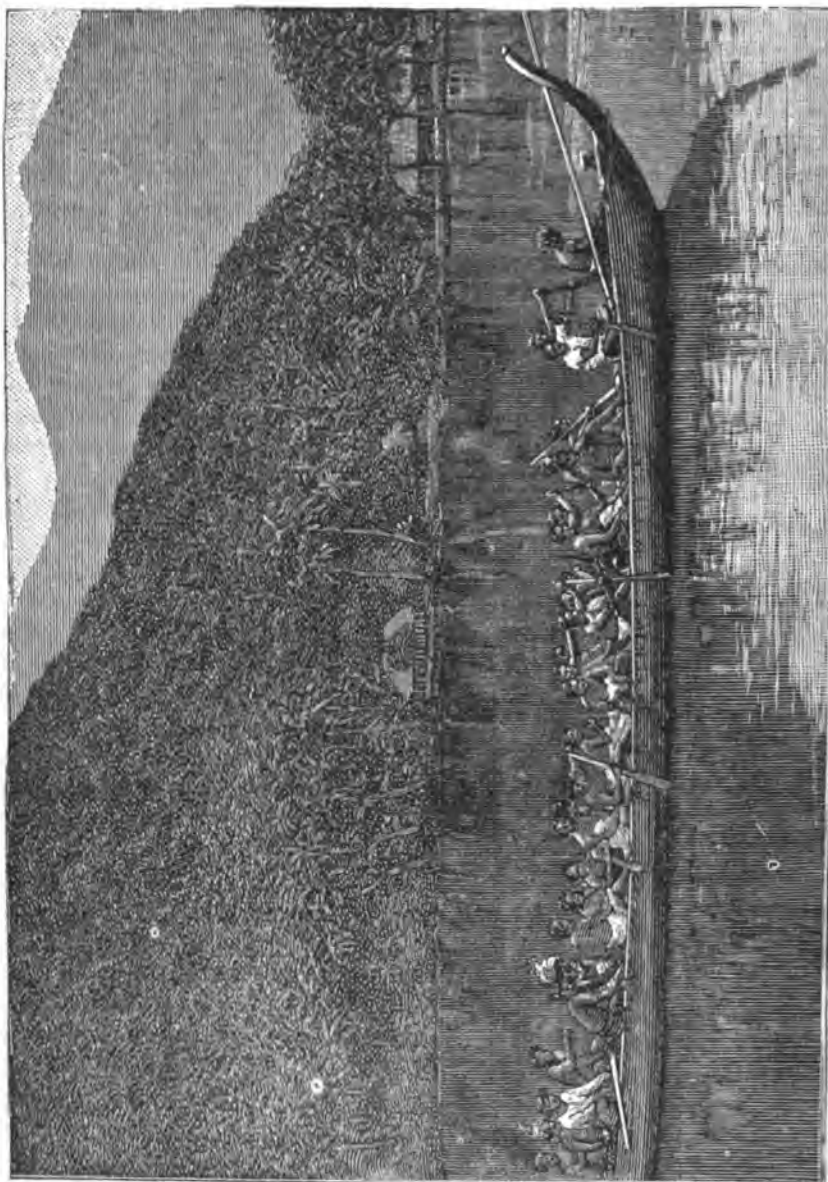
in which the greater portion of them wear their hair. As a rule this is worn in a huge bushy mass, having a reddish tinge. This, however, is not natural, their hair by nature being fine, black, and straight. With strange perversity of taste, the natives cover it with a kind of lime until it is rendered harsh and stiff, and the color is changed from black to reddish brown.

Their habits of life are simple, hunting and fishing and a little tilling of the soil being their chief occupations. They raise a few pigs and fowl, but for the most part are indolent, depending chiefly for their food supply on what nature abundantly furnishes in the shape of bread fruit, cocoanuts, bananas, oranges, pineapples, and other tropical fruit. Their villages are mere collections of huts, though in the main these huts are neat and comfortable. Not much regard is paid to the laying out of streets, the houses seeming to be thrown together almost at random, in some places huddled together in groups of two or three, but usually standing detached, with oftentimes a little pebbled yard in front.

Simplicity characterizes their dress as well as every other feature of their living. This consists at most of two pieces—the “lava-lava” and the “tupuka.” Before the coming of the missionaries and calico the lava-lava sufficed. This is sometimes made from reeds and grasses, sometimes from “tappa” cloth, and sometimes from calico. It is nothing more than a sheet wrapped around the loins, with one end tucked in to secure it, and reaches to the knee or to the ankle, according to the taste of the wearer. The more primitive are made from reeds and grasses, forming a fringe, as it were, from loin to knee, and are fastened with a wooden pin. Many are made from “tapa” cloth. This is a native cloth, made from saplings of some

peculiar wood. The bark is removed and the wood is beaten to a pulp. This pulp is then rolled out into sheets, and when dry the sheets are glued together, forming large pieces of any desired size. It is firm and strong in texture, and re-

the paint being made from clays mixed with fish or cocoanut oil. Since the islands have been opened to trade calico has taken the place of native cloth to a great extent. The other article of dress, the "tupuka," consists of a piece of cloth,



SAMOAN WAR CANOE.

sembles tough wood-pulp paper or parchment more than it does cloth, although it becomes quite soft and pliable by use. They paint this cloth in fantastic designs, in colors black or dark brown,

about eighteen inches wide and of varying length, with a hole in the middle large enough to put the head through. This they wear over their shoulders, the ends falling down over the back and breast.

This is almost exclusively a feminine garment. Nowadays, however, it is not



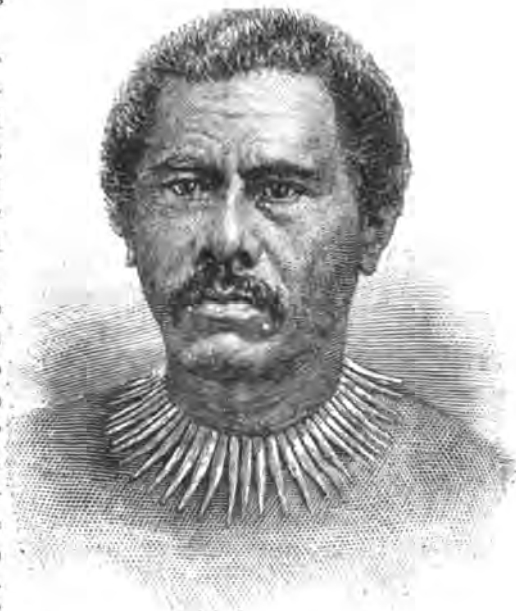
TAMASESE.

rare to see calico dresses worn by the women.

Tattooing is universal, and is regarded a mark of manhood, and the youngsters are anxious to have it accomplished so that they may be considered men. It is a terrible ordeal and many of them shrink from it until they are eighteen or nineteen years old, or until ashamed longer to appear without this decoration. The tattooing on all the men is of the same pattern or design, but there is some variation among the women, who have much less on them. The men are tattooed from their waists down to their knees in an almost solid and unbroken design, the edges being somewhat fanciful, although always the same. The victim lies prone on the ground, and the artists begin their work. Their instruments are various sized combs, made of fish bones with teeth extremely sharp. These they dip in the ink used—a preparation made from the soot of burning candle nuts—and then drive them into the quivering flesh with little mallets.

They go over the surface quite rapidly, which blackens under their artistic touch, the blood flowing out at each tap of the mallet. It takes several days to complete the work on one subject, it being more than he can stand to have it all done in one day; and for weeks he limps from the effect of his torture. They do not tattoo the face as in the Marquesas Islands.

All the natives, male and female, young and old, are splendid swimmers, seeming to be as much at home in the water as on land. They swim out to ships from the shore, and any time they wish to leave the ship, quietly jump over the side and swim away. Equally skilled are they in handling their canoes. In fact, the islands are known as the Navigator Islands because of the skill of the natives in this direction. Their canoes are very narrow, being made from logs, hollowed out, and are



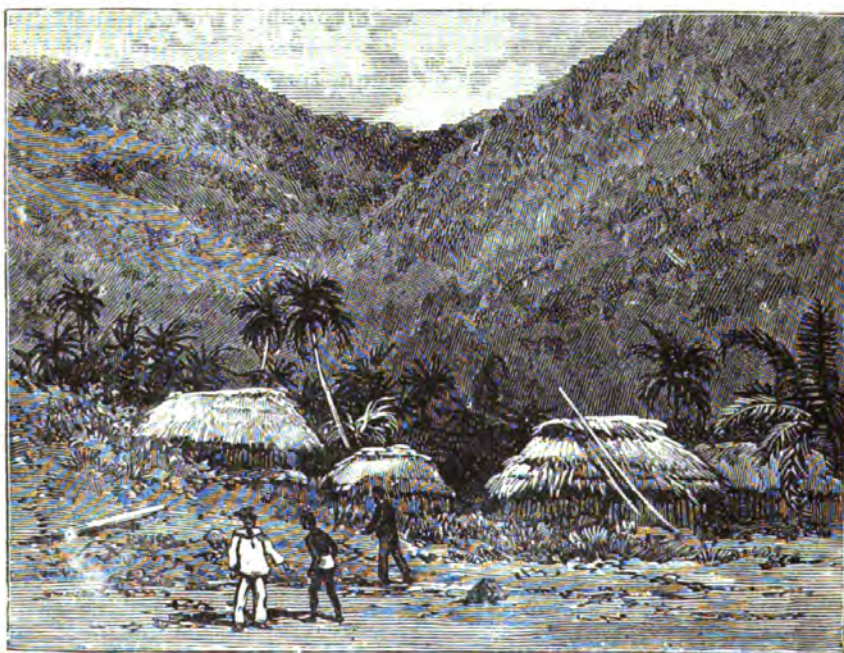
MALIETOA.

fitted with an outrigger on one side. This outrigger runs nearly the entire length of the canoe, and extends out from

the side two or three feet, the outward extremity resting in the water. It serves to keep the canoe steady, and prevents it from easily upsetting. Their war canoes are built up boats, many logs being used in their construction, and are large enough to hold twenty-five or thirty men.

The Samoan language is very musical, every word ending in a vowel. The grammar is simple and easily mastered. Like the Spanish, every word is pronounced exactly as it is spelt, and the vowels have always the same sound.

ing particularly so. It is landlocked, and once within its sheltering arms it is almost impossible to detect the entrance—high hills shutting it out from view. These hills surround the harbor on all sides, and for the most part rise abruptly from the water to a height of 800 or 1,000 feet, covered from base to summit with luxuriant tropical vegetation. The islands abound in rich level lands, on which could be raised tropical productions of every kind, such as sugar cane, rice, and cotton. The climate is generally fine, though rather disagree-



NATIVE HOUSES AT PANGO PANGO.

Their word of salutation is "Ta-lo-fa," and good-by is "Tofa."

The chief product of the islands—in fact, the only staple, is "copra," which is the dried meat of the cocoanut, and from which cocoanut oil is expressed. Hundreds of tons of this are annually shipped to Germany. In this we observe one reason for the attitude of Germany toward Samoa.

There are many fine harbors in the islands, that at Pango Pango, where the United States has a coaling station, be-

able during the rainy season. Apia is the commercial port, and only settlement of any size on the islands. Its population is about 1,500 and there is a large sprinkling of Europeans and Americans.

Mr. Harold M. Sewall, whose portrait is given, is the Consul-general of the United States to the Samoan Islands. He is a native of Maine, and but a young man scarcely thirty years of age. At the age of eighteen he entered Harvard University where he was prominent in the

social movements of the students, and also one of the editors of the *Harvard Advocate*. Taking a good place in his class, he was graduated with honor in 1882, and immediately thereafter entered the Harvard Law School, where he completed the full three years' course and received the degree of LL.B.

In the fall of 1885 he was nominated by Consul Russell at Liverpool as Vice and Deputy Consul, and was commissioned by the State Department accordingly, holding the office until March 26, when he resigned to accept that of Consul-general at Apia, Samoa. This position at the time of its assumption by him was not very highly considered among the consulships in the gift of government, but there were some of our statesmen who have for several years looked forward to the occasion when it would be a responsible station in view of international complications arising from conflicting claims of Germany, England, and the United States. That occasion seems to be in a state of evolution now.

Without going much into particulars concerning the present state of affairs, we may say that these islands lie outside of the delimitation which has assigned to England, Germany, and Spain, nearly all the islands of the South Sea. Germany desires the protectorate over them, or else their partition, in which contingency she would be likely to claim the largest and most fertile. In this endeavor she is opposed by both England and the United States, who desire the establishment of a native government—"Samoa for the Samoans" with King Malietoa as head of the same. This, however, is rendered difficult by reason of dissensions among the natives themselves, which are encouraged, it is said, by Germany, who hopes by aiding the rival king, Tamasese, to bring about such a state of affairs in these islands as will necessitate foreign intervention and the adoption of one of her plans to become owner of one of the best, if not all, of the islands. Under these conditions

(as they now exist) it is plain that the duties of the U. S. Consul-general there will not be altogether a sinecure. The predecessor of Mr. Sewall was recalled because he let his zeal run away with his discretion. The Consul at Apia is recognized as a judicial officer, holding court and rendering judgment, which he is authorized to enforce. He also governs the town of Apia conjointly with the English and German Consul-generals.

Mr. Sewall has a very fine organization—a large head and an intellect that show unusual power of reasoning. He has a judicial grasp of the principles involved in a matter and needs only to be "sure of the facts," to reach a sound conclusion. His intellect is of the deductive type rather than the inductive—which fact should give him capacity for the consideration of questions that relate to national and political affairs. His methods should be characterized by carefulness and a close regard to the risks and contingencies, while he possesses courage and much self-reliance. He is, in our opinion, well adapted to the field of diplomacy and will grow with experience into an efficient civil officer.

The portraits of the rival potentates who would rule over the Samoan kingdom—are of the type that is usually found among Polynesian races of the higher grade. Malietoa has a strong physiognomy, and intimates a nature not easily subordinated to the whims or purposes of others. Tamasese, an older man, evidently, looks more corrigible and dependent than the other "king," more likely to temporize and regard his own selfish desires in a negotiation with the representatives of a foreign power.

The other illustrations depict features in the life of the natives. Pango Pango is the United States coaling station, a harbor in itself of some importance by reason of superior natural advantages, that it is urged by some, the United States should insist upon controlling in any outcome of the international negotiations now in progress.

MRS. BENJAMIN HARRISON.

THE lady who will succeed Mrs. Cleveland in presiding over the *menage* of the White House, is of that mature and experienced character that most Americans will cordially welcome to such an elevated place. The portrait of Mrs. Harrison, in its general features, will have a good impression on the observer.

of habits so common among American women. The physiognomy is that of a person accustomed to viewing the affairs of life from a common sense outlook. We should not expect her to give support to any practice that was in any respect pernicious because it was the "vogue," or fashionable, but rather to



MRS. BENJAMIN HARRISON.

While there is symmetry and fullness in the form, the expression is pleasing. Mrs. Harrison must have been attractive in her youth, and now in middle life she retains many of the graces of girlhood. Endowed with a superior degree of vital power, she has evidently not dissipated or wasted it by the adoption

favor what was suited to the circumstances of the person and occasion.

There is a vein of the "old fashioned," indeed, in this lady, but it is not manifested in a square cornered way, for she has taste, sensitiveness, and pride enough to adapt her conduct to the circle and conditions that surround her

She is kindly, sympathetic, courteous, without subordinating herself, without the sacrifice of personal respect and opinion. She has the refinement that comes of good family and good culture, and, we should add, good health: for in this last lies more of the secret of ease, self-control, and freedom from irritability than most of us fairly appreciate.

Mrs. Harrison is of Southern birth, and about fifty-six years of age. The daughter of the Reverend William H. Scott, who in his early life was a minister of an orthodox church, afterward a professor at Miami University, Ohio, and later principal of a school for girls at Oxford, Ohio, she was not wanting in privileges and opportunities for education and culture. These, it would appear, were not neglected, as she is recognized as a lady of considerable attainment in literature and art, while at the same time she takes much pride in the thoroughness of her housekeeping.

Mr. Scott, her father, had, among his students, when at Miami, young Benjamin Harrison, and we can easily suppose that it was there the acquaintance was formed between Miss Scott and the young man who was, thirty-five or six years later, to be chosen President of the nation. In appearance Mrs. Harrison is a medium brunette; her hair, once dark, is still very abundant, her eyes dark and brilliant. In person she is somewhat under middle height, and stout. In dress and manner she shows refinement, and has obtained not a little reputation in the society she frequents for skill as a painter of flowers and in decorating china.

CARDINAL LAVIGERIE,
Missionary in Africa.

THIS face does not appear to be that of an ascetic, but rather that of an energetic, out-in-the-world working man. It is a practical face, one that might belong to a business man or a good mechanic. If he had taken up the instruments of the architect or engineer he would, in all probability, have made his way for-

ward. Those strong features show the motive or mechanical temperament, the man who craves activity—the use of his muscles—whose brain works best when arms and legs have room and opportunity for exercise. There is concentration of purpose in the look, and a suggestion of inquiry as to the possibility of failure when one is in dead earnest.

We are reminded of the picture, sometimes shown in the print shops, of a returned missionary telling the story of his work to the high authorities of the church. This face has on it such an expression as we remember is given to the missionary by the artist. One who knows the character of Cardinal Lavigerie's activity in the missionary field will be able to trace in his rugged lineaments much of the inspiration that has given impulse and force to that activity, and made it no vague sentimental journeying in lands of ignorance and superstitious darkness, but an open, aggressive crusade against inhumanity and oppression.

Charles Martial A. Lavigerie is a native of France, and was born October 31, 1825. He was ordained priest in St. Sulpice, Paris, and was created Cardinal of Algiers, March 27, 1882. A pastorate of twenty-one years in Africa has given him some chance to know slavery in all its horrors. In his address on July 31, 1888, to the British and Foreign Anti-Slavery Society, in London, the Cardinal gives a pitiful description of the ravages of the cruel Arab slave-traders, who are advancing further every year into the heart of Africa.

As was said in a late article on the Emin Bey Relief Expeditions, the most horrible atrocities are practiced by these slave dealers. Villages are burned; the negroes who resist are killed, the others are reserved for slavery. Yoked together, these unfortunate captives are forced on a long and painful journey to the market. Those that weaken are slaughtered, and the route is strewn with corpses. Many explorers have related

similar tales. In one of his lectures Stanley describes having seen 118 villages burning, 43 districts devastated, and 2,300 women and children in manacles and fetters. This was all for the sake of one man, seventy-five years of age, who was chief of a neighboring

made up of two distinct races—one, that of believers, destined to command; the other, that of the cursed, as they style them, destined to serve; now, in the latter they consider the negroes to constitute the lowest grade—that on a par with cattle."



CARDINAL LAVIGERIE.

district. In order to procure this tyrant 5,000 slaves, 33,000 lives were sacrificed. "May God preserve me," says Cardinal Lavigerie, "from accusing without compulsion any man, and especially any people! . . . But I can not resist saying that, of all the errors so fatal to Africa, the saddest is that which teaches, with Islam, that humanity is

The Cardinal thinks that five or six hundred European soldiers, well organized, would be able to abolish the slave-trade from the Albert-Nyanza to the south of the Tanganika. He cites the case of a French ex-officer of the Pontifical Zouaves who, at the head of two hundred armed negroes, is the protector of many villages. Cardinal Laverigie

is still vigorous, in spite of his sixty-three years, and expects to return to the

field of his previous efforts, and to labor therein.

EDITOR.

TRICKS OF MEMORY.

MEMORY is one of the faculties that can be improved by care and cultivation ; and, above all, by forcing the attention. When people excuse themselves for forgetfulness by saying, "I have such a bad memory," in nine cases out of ten they mean, "I am so careless, so inattentive." With a mind half asleep, thoughts vague, wandering, dreaming, their attention floating everywhere like a leaf on a stream, not anchored, not concentrated, they hear what is said to them in a woolly, muffled kind of way, as one sees objects through a veil. Nothing makes a sharp impression, simply because they are inattentive, and do not give their minds to the subject on hand ; hence they forget all they are told, and when children are reminded, plead their bad memory as an excuse for their wandering thoughts. Taken early, this kind of thing may be educated out of a person, but if the habit of inattention is suffered to take root, no after efforts will be of much avail, for the will weakens as habits strengthen, and there is besides, the accumulated force that belongs to continuance to be overcome. Hence the absolute necessity of gently correcting and sweeping out of a young mind this fatal habit of inattention, and thus improving that much maligned memory which is not really in fault.

This, however, does not touch the misfortune of a bad memory when a real defect of the brain, and not only the consequence of a remediable cause. Bad memory comes from two things, either grave preoccupation—the place already filled and taken by reason of much thought, or from the natural failing of old age. A man who has the minute details of delicate experiments, say, to think and calculate, can scarcely be expected to remember the name of the

cook that was sent away last year. He has heard it twenty times, and oftener, but, inattentive from other causes than those which make our dreamy boy, our vague and wandering girl, oblivious of all that they should remember, he has forgotten it as if it had never been, and no efforts can recall it. In like manner the memory wears out with age, and one of the first symptoms of that sad "fall of the leaf," which is so soon to leave us first bare and then dead, is in the difficulty which we have in remembering faces, facts, dates, and names, save such as belonged to early youth ; these are clamped fast on to our memory ; but the later events hang loose, and drift away altogether. Some people have been known even to forget their own names, and have a total forgetfulness for the moment, of the name and style of the dearest and most intimate friends they possess. The consequence of this fact has been that more than once an introduction sought to be made between strangers and friends has been nothing more than an unintelligible muttering so far as the last are concerned. The stranger's name was remembered with precision, but the friend's vanished into space, and remained there.

Again, too, short-sightedness generally includes a bad memory for faces, if not for facts. The cloudy obscurity of vision which gives outlines and general appearance rather than details, runs all faces, all people into types, instead of keeping them distinct as individuals, by which the memory gets bewildered with those tormenting fallacies, "false likenesses," only too well known to short-sighted people, so that they are never quite sure of themselves, and do not know if this person is he to whom they were introduced last night, or what

names belong to the faces which they do remember. Between thinking that they ought to be known to people whom they never saw in their lives before and forgetting those whom they ought to remember the lives of the short-sighted are weighted with a heavier burden than belongs to most, and, however disagreeable to others may be their forgetfulness, they are more deserving of pity than censure. And if to the physical defect of eyesight is added much intercourse with the world and a crowd of acquaintances, met at intervals, we come to the last degree of this kind of discomfort, and the ultimate misery to which want of memory for faces can bring the poor sufferer from this defect.

All great people have had good memories. It seems, indeed, as if this were one of the essential conditions for success. A good memory utilizes all that is learned; it is the true cumulative faculty by which days add treasure to treasure, solidly built up in the mind—not like those shifting sand-heaps of acquirement, when the memory is bad, which are dispersed as soon as gathered. Great intellect joined to a bad memory is like a lame giant. The strength is there, but the ability to use it nowhere! Every day begins, as it were, a new mental era in the life of such a one. He forgets much of the good got by him in the time that has gone, and though he brings glorious faculties to the study of the subject undertaken at the moment, he does not bring the full experience of that which he has gained before—the full value of that which he has already learned. Hence no one with a treacherous memory can ever hope to become absolutely successful, and all those who have been world-famous have had faithful and tenacious memories, quick, serviceable, and trustworthy. The royal memory is a proverb, but it embodies a truth greater than its apparent flunkiness, in the fact that a good memory is in its essence royal and noble and kingly, and the first rate men who have

had good memories—supremely good—can be counted up by scores. Learning by heart is a good method for improving the memory, especially learning by heart poetry and “pieces.” Many technical systems, too, have been advanced by which the memory may be assisted by mental corks and buoys, mounted on stilts and fastened firmly to central nails. One instance of this the writer remembers—and only one—out of the set of lectures given by an inventor of a certain system of artificial memory. It is the date of Henry IV. “See,” said the lecturer, “I take four eggs, and place one in each corner of this muff. The eggs will remind you of a hen, and “Hen” is the first syllable of Henry. The four eggs will tell you that this hen is Henry IV. By figures the muff spells ‘1366,’ ‘m’ being the thirteenth letter in the alphabet—eliminate the ‘u’—‘f’ being the sixth. Thus to remember the date of Henry IV., put your four eggs into the four corners of a muff.” But whether the muff meant the birth, accession, or death of this king of four eggs is a fact that not being buoyed up by any such artificial cork, is now forgotten, and has to be verified only by reference to history. But the best way for a person possessing a bad memory to avoid the inconveniences resulting, is to make careful notes of all that it is necessary to remember, and to organize his life and doings with extreme punctuality and method.

HENRY G. FOX.

••••• AFTER THE CRISIS.

What will we do? Take up the broken threads
Of life and weave them in a firmer strand
Of sacrifice,—forget the scattered shreds
And work on bravely? Weary souls that stand
Aghast ‘mid blackened ruins must gather up
The best of what remains and build again
As best they can. There is a hallowed cup
Which symbolizes bitter, bitter pain;—
The cross of shame, the death of agony,
But over all, the resurrection morn!
Our untried joy must ever mingled be
With pain, our holy peace from grief be born;
We win from sorrow what she claimed of old,
And lo! our own, increased a thousand fold.

IONE KENT.

NATHAN ALLEN, M.D., LL.D.,

FIRST EDITOR OF THE PHRENOLOGICAL JOURNAL.

IN the February number it was announced that this well-known New England leader in hygienic and educational reform had died suddenly. A man of advanced age, he was nevertheless still active and vigorous in the lines of study and work to which he had

had lately removed his family and household effects from the old mansion in Lowell, where he had resided forty years, to the suburbs of that city, and it is easy to suppose that, in making his way down an unfamiliar stairway in the dimness of early morning, his foot



NATHAN ALLEN, M.D., LL.D.

given much of his time for upward of fifty years, and that, too, without apparent loss of mental power. His death was from concussion of the brain, the result of a fall that occurred early on the morning of Dec. 16, when he was descending the stairs of his house. He

slipped, and he fell to the bottom.

After lingering for two weeks, in the course of which there were brief intervals of consciousness during which he recognized the members of his family, he died on the first day of the new year.

The readers of the PHRENOLOGICAL

JOURNAL will unite with us in an expression of regret that our magazine should be compelled to take note of the final departure of its first editor. Old as the PHRENOLOGICAL JOURNAL is, while Dr. Allen lived it has always seemed to us as one of the later products of human progression. Few men of those who esteem themselves young keep themselves so closely identified with the real progress of the time in its relation to society as Dr. Allen did; and fewer show the earnest zeal in work for the substantial development of a better sentiment among the masses with regard to the influences, secular and moral, that promote a genuine upward growth.

Nathan Allen was born at Princeton, Mass., in 1813. After finishing a course at Amherst College, he taught school for a while, and then went to Philadelphia to study medicine. Receiving his degree in due course of time, he subsequently settled in Lowell, Mass., and commenced there the practice of his profession. When the PHRENOLOGICAL JOURNAL was started in October, 1838, he became its editor, and continued in that relation for three years; and it is doubtless largely owing to the experience and inspiration of that three years that he was drawn to the investigation of the laws of population, physical culture and degeneracy, public health, hereditary influences in the improvement of stock, longevity in its connection with life insurance, causes and treatment of insanity, etc. The results of his investigations have found their way to the public in many essays and treatises.

Through these publications Dr. Allen opened a field of practical thought and discussion quite new to the majority of thinking and scientific men. Besides his numerous publications, he has scattered a great deal of useful teaching on health, hygiene, physical education, in addresses and lectures. His position on the Massachusetts State Board of Charities for twenty years, and his appointment as

Examining Surgeon for Pensions, have enabled him to exercise a marked public influence. For twenty-five years he has been a trustee of Amherst College, and chiefly instrumental in introducing the methods of physical culture for which Amherst College has taken special rank among American educational establishments. The plan which has been adopted by this institution has been more or less followed by other institutions of a like character, and now the association of a department of physical culture with the curriculum of study is generally deemed quite essential to the perfect organization of a college for young men or young women.

In 1872 he went to Europe as delegate, commissioned by Governor Washburn, to the International Congress that assembled in London to consider reform measures in prisons and other correctional institutions.

How his relation to this magazine in its initial stage affected his thought and purpose may be inferred from some remarks uttered a few years ago in the course of an address. He said: "If you take men who have worked in the phrenological field for many years, they will acknowledge that they are more indebted to Phrenology than to almost anything else: that they would not exchange their knowledge of it for anything else. I do not wish to be egotistical in referring to myself, but it is to Phrenology that I owe many of the ideas and thoughts that I have been advancing in articles for magazines, etc. Phrenology teaches that the great thing to be desired and gained is to have a well-balanced mind; to have the best development of brain, and each of the faculties well set over against the others. On looking back I find that it is to that general idea I am indebted for a correct understanding of physiological laws."

Dr. Allen was a man of the most regular habits, steady, definite, thoroughly understood, and, on account of his intelligence and connections, very

highly esteemed by all who had any relations with him. A writer said of him :

"He is systematic in his plans ; clear and earnest in his statements ; economical in his administration of affairs ; vigorous, but not noisy or specially demonstrative in his energy, and is more qualified to move quietly but persistently in an intellectual and moral channel than to enter the arena as a noisy champion of a fiercely-contested case. The head and face, as exemplified in the likeness, evince strongly, though less, indeed, than in the real presence, sound common sense, integrity of thinking, patience in the line of laudable effort, integrity of purpose, ingenuity, prudence, ambition to be approved, and that consistency and steady strength of the social nature which wins and holds friends, and renders a man popular where he is well known."

In a volume published last year, enti-

tled "Physical Development, or the Laws Governing the Human System," Dr. Allen collated a large number of his essays and papers that had already appeared, and also inserted fresh matter that was inspired by the latest data relating to the subject. This work has attracted not a little attention both in Europe and America because of its thorough and practical treatment of many questions affecting sanitary science and state progress.

There are few men in the medical profession in this country whose writings have been quoted more generally by the press, or been referred to as authority in works with a large circulation ; and if the doctrines he enunciated with so much earnestness in reference to physical development and human increase shall prove true, we are sure that his name will be honored by the world as deserving a place among those who labored for its lasting welfare.

OLD AND MODERN PHRENOLOGY.

AT a late meeting of the British Phrenological Association at the Memorial Hall in Farringdon street, London, E. C., Mr. Bernard Hollander read a paper on "The Old and the Modern Phrenology," in which he examined Gall's theory, "that certain formations of the head are accompanied by certain peculiarities of character," and its claims for a re-examination. He quoted Humphry and Benedikt in support of the harmony of shape existing between brain and skull, and after dwelling on the defects of Gall's system and the charlatanry of some of its defenders, he dismissed the arguments of Flourens and Sir Wm. Hamilton against Phrenology, they having been disproved by modern investigations.

The lecturer proceeded at some length to show that Broca's center of "the articulation of speech" and Ferrier's "gustatory center" were both known to the old phrenologists, the one as the organ of

Language and the other as Alimentiveness and similarly localized, and read extracts from Combe's "System of Phrenology" and Ferrier's "Functions of the Brain" in support of his evidence. He further showed that the experiments of Hitzig, Fritsch, Luciani, and others resulted in the location of centers for movements of certain limbs and muscles and that those movements are but the outward physical signs of mental actions, as, for instance, when the electrodes are applied to the brain-surface in the region of Alimentiveness (Ferrier's "gustatory center"), movements of mastication are the result.

Mr. Hollander agreed with Landois, that Gall's system should be re-examined, but examiners should first free themselves from all prejudice and not make such contradictory statements as Bastian and G. H. Lewes made, the former saying that "Gall considered the gray matter to have no proper nerve-

function at all," the latter, that "only the gray matter of the convolutions was considered to be the organic substance of all psychical actions." However wrong Gall's conclusions may have been, his observations were proved to be correct by "Criminal Anthropologists," for not

only is the type of criminal head, as observed by the founders of Phrenology, confirmed by Lombroso and Ferri, but the deficiencies and diseases of certain parts of the brain are acknowledged by Benedikt.

A. T. S.

THE POET OF GOOD DEEDS.

If you would make life's journey safe and sure,
Be patient to endure;
Let all your thoughts be pure,
Your aspirations high, each purpose strong,
To strive and win the victory over wrong.

Let every ill be borne with patient trust,
And learn from day to day,
To bear your cross along an even way;
'Twill win for you the star crown of the just,
And leave upon your robes no soil of dust,
Upon your souls no stains of cankering rust.

Leave scorning to the proud, and pride to those
Who dwell in clay-built huts,
Down in the marl-pits and the moral ruts,
Wherein men fall whose souls
The greed of gain o'er masters and controls.

Go, cheer the sorrowing; feed earth's hungry souls,
Starving for bread of life,
Weary and worn with watching and with strife.
They need your heart's best prayer,

The gentle, tender care
That soothes with pleasant words and acts of love,
The bruised hearts that seldom look above
Their idols made of clay,
That fade so soon away,
And leave them mourning like a wounded dove
Whose mate is dead; or, faithless, learned to rove
To other bowers within a neighboring grove.

Cheer on the young, whose race is just begun;
Sustain the aged forms
Bowed low beneath life's storms;
Bless those who rise; encourage those who fall;
They are our brothers still; oh, bless them all.
Thus will ye sow on earth the blessed seeds
That, springing up and whitening in the field,
A hundred fold shall yield
Of fruits for human needs,
And men will bless you for those golden seeds,
And angels call you "Poet of good deeds."

BELLE BUSH.

Belvidere Seminary, New Jersey.

THE IDEAL WOMAN.—The Ideal woman of the future must be a woman of grand and strong physique. Bulwer says "the match for beauty is a man, not a money chest." Equally true is it that the match for the ideal man, the coming Twentieth century man, is a woman, not a bundle of aches and pains. And woman will not have gone far in her search for health before she will have discovered that her dress is a fetter self-imposed, which she herself must summon strength to break. She must cast off her slavery to the fashion plate and go back to the freedom and grace of the old Greek ideals, and find in the deep bosomed Junos and the stately, well

poised Venuses of antiquity, with their loose girdles and flowing lines of drapery, her models in dress. She must be strong and many sided mentally. All art, all culture, all those mighty principles of physical and psychical law—of which an ancient Greek has said that "the divinity is mighty within them and groweth not old"—must minister to her intellectual wants, for how shall she give life who knows not the principles of life? Last, and best of all, she must be grand in that freedom and purity of soul which shall make her love a royal boon, a guerdon worthy of all knightly and chivalrous homage to the man who shall call her—wife.—*Caroline F. Corbin.*

PRACTICAL PHRENOLOGY.

[CONDUCTED BY PROF. NELSON SIZER.]

TRAITS REQUIRED FOR A TRAVELING SALESMAN.

THE first requisite to success is health, and that is induced by temperance and abundance of sleep, a wholesome diet, and correct habits. Without health of body, the brain works badly, the mind loses its elasticity and grip, courage falters, tact becomes dull, prudence stupid timidity, and the man in such conditions will find himself among superiors most of the time. For success in this business, one should have a good Vital temperament which gives a fresh complexion; should look clean and healthy and presentable, should have a full and prominent eye, which indicates talking power, should have Benevolence enough to make him kindly and generous, Combativeness and Self-esteem enough to give him force and courage as well as self-reliance; Secretiveness enough not to say the wrong things, and enough of Friendship to awaken in others an interest in himself. Nothing is so serviceable to a traveling salesman as a friendly spirit that will awaken in others pleasure when he approaches and regret when he leaves.

He should be amply developed across the lower part of the forehead, the region in which perceptive power lies, the ability to know and see, and that kind of ready tact which takes a hint and appreciates whatever is said and whatever ought to be said. He should be ample across the middle of the forehead, which gives good memory of facts, dates, and places. He should be wide between the eyes, so as to remember forms and recall faces. He should have a high forehead, to give reason and forethought, but not

a plumb, square one. It should be rather retreating or appear to be so from the fullness of the lower part of it. This development will give him good sense, but not the disposition to argue and discuss. His work with customers is rather historical than logical. He carries the story of his goods, and the adaptation to mingle in easy conversation. While he carries himself with dignity, he should be mellow in his manners, with a sort of easy and friendly familiarity. He may tell an innocent and very funny story, but should not be smutty or coarse, and he should aim to impress people with whom he wishes to transact business with the idea that he is of respectable stock, and has been well brought up, that he is moral and deserves confidence and respect. Among customers the traveler should never tell of any smart things he may have done in connection with his line of business. He should know all about the articles he is to sell and as much as he can about the market, but men who are buying of the stranger do not want to be informed by him that he is especially 'cute in seeing opportunities of advantage and availing himself of them; in other words, he need not give the idea that he is a "sharper," but rather that he is clear-headed, sensible, and upright.

If I were going to select and send out a hundred canvassers, other things being equal, I would not have a smoker nor a drinker among them. A man who comes in with a lighted cigar or a breath that is laden with the smell of tobacco and whiskey, will give more or less of-

fence to six out of ten of the people he may approach, and will not win, by those means, one man in a thousand who belongs to the other class. Neatness is another element of success. The teeth, the nails, the boots, the linen, should impress strangers with the idea that they are dealing with a gentleman; not a man who is starched and lordly, and dominant, but who is of good character and well behaved and understands the decencies and common refinements of life. Especially should the traveling salesman understand human nature. He should be constitutionally adapted to read mind, motive, and disposition in those he meets. A man thus endowed, entering a strange commercial house, will find out near the door, if possible, who is the buyer of the concern, will have him pointed out to him, will appreciate his drift and scope and bearing by his face, form of head, and carriage of his body, and if he sees a bustling, energetic, positive man, he should quietly request a moment of his attention when he can spare the time, and he will generally turn and say, "Well, what is it?" He will avoid contradicting such a man, or saying anything which might be offensive. He may say, "I have called to present the card of the firm which I represent and to make the acquaintance of your house." If the man is tall, dark-haired, bony, with large features and a rough and commanding manner, the more mellow and gentle the stranger can be, the quicker the merchant will come down from his high horse, unbend his austerity which he wears as a defence, and be ready to talk business. With such a man, no familiarity must be attempted. Let him rejoice in thinking he is boss. A man who is pliable, agreeable, and appears as if he might be talked with in a manner bordering on instruction, will take the stranger's word if it looks reasonable and may be led to conclusions that will be favorable to the objects of the visit. Care should be taken not to hurry the customer and also not

to linger and appear as if the salesman's time is of no value. As soon as the business shall be completed, and a proper termination of the call with politeness and friendship can be made, he should take his departure, aiming all through to make the impression that he is respectable, a person of honorable purposes, capable, that his employers confide in him, and that he is worthy of all confidence wherever he goes.

—:O:—

THE BUSINESS MAN.

OUR article on traits required for a traveling salesman properly lays the foundation for the introduction of this picture and some remarks on the business man at home. We may suppose that this man has been a traveling salesman, that he began at twenty or earlier and traveled for ten years, until he became familiar with business men and business as it is conducted everywhere.

He has the plumpness and health to lay the foundation for power, effort, geniality, endurance, and mental clearness. He has a broad head, which is well sustained by the large body through the full neck; he converts food into nutrition rapidly and abundantly, and his brain is as well sustained as a large boiler can sustain a steam engine. The anterior portion of his head has had the culture of traveled experience and every faculty of perception, memory, and criticism has been worked up to activity and power, so that he is thoroughly furnished with fact and detail for any phase of business to which he may be devoted. The back head is large and broad, giving excellent social force; he has a warm palm and generous welcome, has learned to take life smoothly and shed off, as a duck does water from its back, any remarks or conduct which are unpleasant, until he has completed the business he has in hand, and that being done, he does not wish to settle old scores, so he lets unpleasant things pass unnoticed.

The crown of the head is well rounded; it is not so high as to make him

dogmatical or dictatorial, but will give him well sustained independence. His head is wide in the region of the temples, hence he has good economic and mechanical judgment. The kind of intellect expressed in that forehead indicates

in as critics or enemies. He can do anything about his establishment from the work of the boy or porter to scanning his book accounts and studying the balances, but such a man should not spend much time at the desk, in



FIG. 10. BUSINESS MAN.

intuition, and the ready adaptation of his mind to any conditions which may be presented. The top head is high enough to give him kindness, politeness, stability, and hope. He is well calculated to train clerks to meet successful, sharp business men; he can take the wiry edge off from those who are cranky and severe, and too dignified or captious; he can make people friends who came

keeping record of transactions. It is his function to make transactions and let others record them.

This is the portrait of a self-made man, beginning his life on a farm, which gives out-door knowledge and vigor of muscle, entering business at seventeen as a boy, and working himself up to the partnership and control of affairs. He is the kind of man who in any

community will have opportunities for doing public work in town affairs or church affairs; people in difficulties will refer them to him. If on a jury, he would be chosen chairman and be the master spirit, and he has the promise of ripeness of life and a long and happy old age. His mind naturally tends toward things and facts rather than books and literature, but he is adapted to enjoy that which is literary if properly presented by men of culture.

—:o:—
HOW IT GROWS.

THE amount of phrenological reading matter which is yearly distributed among the people is great. Fifty years ago a thousand subscribers to the PHRENOLOGICAL JOURNAL was considered something to be proud of. Then there were not more than two or three American books on the subject, and but few foreign reprints; and one could carry on a wheelbarrow the whole stock in trade of Phrenology in America. No subject in that time has grown so rapidly, has expanded and taken such deep root, as Phrenology. And why should it not? Its subject is the greatest in the world, namely, MAN in all his relations. Men study astronomy and excite the wonder of the world by their accurate demonstrations, but the astronomical world is only the frame-work of the home of man. A single immortal soul is worth more than a dozen fixed stars. As mind is higher and better than matter—as the soul of man is richer and more noble than the house he lives in, the roads he travels, or the clothing he wears—the science which teaches what man is, and how to train, regulate, and guide him, as far surpasses other pursuits as mind is superior to matter—as man is better than his clothes.

The world needs more teachers of the science of man. In addition to the monthly ministrations of the JOURNAL, its publishers every autumn, beginning the first Tuesday of September, teach classes of earnest workers, who purpose

to follow the subject as a profession, or by its means be the better qualified for the pulpit, the bar, the school-room, the healing art, or the marts of business. This class instruction is given in response to a demand of the times, and in itself is a practical demonstration of the life and energy of phrenological truth among the people.

—:o:—
WORK OF A GRADUATE.

S. F. DEVORE, of the class of '87, writing from Pennsylvania, early in January, says: "Business with me is good; have had more to do this week than I could well attend to. Some of my 'hits' in examinations have been remarkable. The first day I was here a man came in for an examination, and as he had large Language, Eventuality, and immensely large perceptive, with moderate Continuity, I said he would have made a good teacher, would enjoy traveling, and learn languages easily. When I had completed the examination he told me that he could speak and write eight languages, had traveled most of his life, and at present was teaching German in the city. When twelve years old he was examined by Mr. Wells, and was told to study languages.

"Another man I told that he would be interested in politics and general news of the day; but he had uncommonly good business faculties for wholesale trade, or contracting, that, having large Size and Weight, he could judge accurately without measurement, and guess at the weight of cattle or swine almost to the pound.

"He remarked that politics was his work at present, and that he used to be a wholesale dealer, and that on that very day he had been to a 'guessing match' as to the weight of a hog, in Allentown, and that he guessed the exact weight to the very pound."

Does the mental philosophy taught in colleges enable students to read character? Harvard and Yale teach students how to read languages and measure

planets, but not how to read men or measure their mental ability, and assign each to his proper line of culture and his true sphere of effort. John Harvard and Elihu Yale did well in founding the colleges which bear their names, but Dr. Francis J. Gall did a greater service to the ages by his discovery of the true mental philosophy.

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PHRENOLOGY IN INSTITUTIONS OF LEARNING.

DURING the last six months we received for examination thirty-two sets of photographs of persons, including principal and professors connected with one Normal College in a distant State. Of course the persons were pretty well acquainted with each other, and their descriptions were read and conned among them. These cases constituted two clubs several months apart, giving time for meditation and discussion, and now, ten days after the last lot was sent home, we receive the following letter from the principal of the college testifying as to the work done:

“———, Jan. 31, 1889.

PROF. NELSON SIZER, OF FOWLER & WELLS CO., NEW YORK :

Dear Sir : I have read several delineations recently received from you by our young men. Your words of truth and encouragement inspire our students with a determination to build noble characters, and add something to the joy of society.

Others of our number, I believe, will send in a few days. I intend to send to you for a full description of myself.

Very respectfully yours,
———.”

The work above referred to had its origin in the fact that one of the teachers obtained an examination at our office, and when he reached home, he talked it up, and aided in getting up the clubs at reduced rates.

EXAMINATIONS FROM PICTURES.

THE following letter is similar to many others which reach us sometimes three or four in a day.

G——, PA., Dec 13, 1888.

Fowler & Wells Co.: I would like to ask if a photograph is sufficient and satisfactory in order that you, Prof. Sizer, may determine what special line of business the original is adapted to, and also what are the charges for the same. Having read your JOURNAL for some years, I have been greatly interested in “Echoes from the Consultation Room,” and feel that I am in need of such advice.

Very respectfully yours, C. F.

In answer to such letters we send by mail a circular called, “THE MIRROR OF THE MIND,” which by engravings and descriptive explanation shows what kind of likenesses we want for this purpose, and the other facts such as size of head, height, weight of person, color of hair, eyes, and complexion, size of chest and waist. We need a side view, a perfect profile not turned at all either way, also a front view, and the picture, tintype, or photo, if taken for our use should have the hair wet and laid smoothly to the head so as to show its shape. We have already a record of over four thousand such examinations, and not a few have expressed the highest satisfaction with the result. Here is a case in point :

In a letter to Fowler & Wells, Mrs. F. J. says : “I beg to thank you, and through you, Mr. Nelson Sizer, for the careful delineation of character he made me from my photographs. It was surprisingly accurate, and my husband, who scoffs at Phrenology, admitted that he could not have described my character so accurately, even after living with me eleven years. If I ever amount to anything I shall feel that I owe it all to you, for you have shown me just where I stand, and what it is necessary for me to do to overcome my peculiarities. I am unable to convey my gratitude in words. You ought to be very happy to be the means of doing so much good in the world, and being the recipient of so much gratitude from those you have benefited.

CHILD CULTURE.

MAKING SHORT EYES.—A medical lecturer says on this subject: Picture him to yourselves as a boy of five years old. Up to the age of five or six, at least, he sees distant objects as well as anyone. By this time he is beginning to know his letters well, and perhaps to read and write a little every day; but the lessons are short, and there is plenty of play between times, and all goes well with the eyes for another year or two. But as time goes on he is expected to do more; he has to sit for a good many hours every day with his head bent over his book, his slate, or his paper. When we look at a near object we turn both eyes inward, and this is done by the pull of the muscle attached to the inner side of the eyeball; this pull tightens up the eye, as it were, and puts the coats a little more upon the stretch. Of course there is not the slightest harm in this, in moderation; our eyes are made to look at near as well as at distant objects; but in young people the coats of the eye are not so tough as they are in adults, and if a severe strain is put upon them for many hours every day, week after week, and month after month, they are apt to stretch, the eye is thereby elongated; in other words, it is made short-sighted. To return to our school-boy. Please to imagine that he is fond of his books, and that he works hard at school in the daytime, at home in the evening. Imagine also that his school-room is not very well lighted, that his school-books are printed in small type, that his seat is not a very comfortable one, and that he is growing fast, and that his back is not very strong; that at night he has to study as best he may by the light of a flickering gas burner or a single candle.

Under such circumstances, what wonder if he get into the habit of lolling forward over his work and putting his eyes very close to it? The strain is more than the eyes can bear; little by little the coats stretch, and short sight begins. The boy can now no longer distinguish distant objects quite so clearly as his companions can. For a while this is hardly noticed, either by the lad himself or by those about him. As time goes on he rises from class to class, and gives more and more time to his books. Now he is unable to see what the master writes upon the blackboard, and he stoops over his work even more than before. He is told to "sit up," of course; but he can not sit up, for if he does so he can not see his book. And so things go on from bad to worse, and the more short-sighted he becomes the more he stoops, and the more he stoops the more short-sighted he becomes. He is not very good at outdoor games, of course, so he takes to his books more and more for company. He leaves school with a head full of knowledge, a pale face, and round shoulders, and lives for the rest of his life in a pair of spectacles. This is not a mere fancy portrait. . . . *To prevent short sight, prevent young people from using their eyes too long and too closely on near objects.* That is a simple rule, but it is not easily put into practice at the present day. Please notice that what we want our schoolboy to do is to work in a natural healthy position, with his shoulders square, his head upright, and *his eyes at least twelve inches from his book.* You can't make him do this by scolding him, but you can make him do it by more reasonable means. These are the means; he must have a comfort-

able seat with a support for the lower part of his back. He must work at a sloping desk, not at a flat table. He must be so placed that there is plenty of light upon his work, and that he is not dazzled by light in his eyes. His books must be printed in good, large, clear type, so that he may be able to read them without the slightest difficulty at

the proper distance. He must be accustomed to read with the book propped well up in front of him, so he may not need to stoop over it. He must be taught to write sitting square to the desk and upright, not twisted to one side and bending over it. These things must be attended to at home as well as at school. —*Ex.*

BEAUTY IN EDUCATION.

THIS ministry of the Beautiful should begin in the home-life of the child. Every home should, so far as possible, be made a nursery of refinement and good taste. The surroundings of the house should be such as to cultivate a sense of harmony and a love for the charms of rural scenery. The yard should be covered with a soft green sward, flowers should bloom in the garden and give fragrance to the air; shade trees should be planted around the house and along the lanes, and the birds be invited to make their nests in the branches and lend the charm of melody to the scene. Within the house, there should be an air of neatness and an atmosphere of culture and refinement. Pictures should adorn the walls, they need not be costly or rare; a bouquet should often give beauty to the table of the dining-room; there could be an organ or piano in the parlor or sitting-room so that music may lend a charm to the home life; literary gems should be read, and recited at meal time or other convenient place; poetry and history should take the place of gossip in the conversation of the household; and every practical means should be taken to make home a center of culture and refinement. Give the country refined and cultured homes, and, even if nothing be said of morality and religion, we would lift our people up into a higher spiritual life that would go far to banish vice and crime, and make our jails and penitentiaries almost needless.

The element of beauty should also be

made influential in the school-life of the child. Our school-houses should be surrounded with school grounds that may minister to the taste for the artistic and beautiful. There should be green sward, graveled walks, beds of flowers, shady trees, and singing birds. Surroundings like these, which are possible with but little expense, will do much to refine the taste, elevate the feelings, banish rudeness of behavior, and facilitate the discipline of the school. Within the school-room there should be an air of neatness and refinement. Rude furniture, soiled walls, and dirty floors, are terrible demoralizers of young children. The old school-houses, with their unpainted and mutilated pine desks and slab benches, were a continual temptation to boys to use their pencils and knives, and thus contribute to the scene of mutilation and destruction. Give the children neat and cleanly school-rooms, suitable and beautiful furniture, and you remove the temptation for destruction; and they will keep their jack-knives in their pockets, and use their pencils for more laudable purposes.

All the exercises of the school should, so far as possible, be permeated by this element of the Beautiful. The work written upon the blackboard should be neat and symmetrical, and in this respect the teacher should be an example to his pupils. A careless teacher, with awkward and uncouth writing on the blackboard, can produce a feeling of nervousness and restlessness in his class that will make them disorderly and inatten-

tive; while neat and beautiful work in grammar and arithmetic flowing from the crayon of the teacher will attract the attention, command the admiration, and create a feeling of pleasure that results in industry and good order.

DR. E. A. WOOD.

A CHILD SHOULD NOT BE A PLAYTHING.
—The slaughter of innocents goes on in different ways. Emotional prodigality is a most efficient means of removing the joys of a household. "Died of too much grandfather, grandmother, uncle, and aunt," would be a fitting epitaph for many a bright child. Emotion is the most exhausting of all mental attributes. What children do, and how much, is of far less importance than the way in which they do it. The evils of premature mental activity are without doubt very great; but to prematurely and unduly excite emotional manifestations is tenfold more hurtful. In this regard there seems to be the densest ignorance. The fact that young children's only business in life is to develop

slowly—to eat, sleep, and play in child-like fashion, is too often forgotten in the home circle. On the contrary, they are supposed to attend to their own work of growing and developing and afford fun for the family at the same time. Our tender little ones are made the playthings of the household—hugged, kissed, talked to, and made to talk, for the pleasure and gratification of the parents and friends. Their callow brains are overworked by exciting and intense emotion. What wonder they have big heads, little bodies, and hardly any digestion at all! Feebleness, asymmetry, excitability, premature arrest of growth, are some of the evils resulting from this continued tension selfishly imposed by thoughtless grown folk upon unresisting childhood. To what extent the influences under consideration can reach is, perhaps, known only to those who are in actual contact with large numbers of children, and who have made the subject of very young Americans something of a study.—*New York Medical Journal.*

THE VALUE OF OPPORTUNITIES.

ALL young persons should early learn the value of opportunities. No matter who they are, or how situated, they will have certain chances of doing good, or getting good. If ever so poor, if living in the city there is the privilege of seeing thousands of objects whose names they may learn, whose uses and materials they may acquire. If they are pleasant and honest, they may do this and that one a slight favor, and, by constant observation, may pick up good language and good manners. They can keep themselves clean, and be respectful, and somebody will want

them in a store or shop, and, once in a place, any good boy or girl can make a livelihood.

If one's home is in the country, he can learn the names and uses of every tree and stone, and learn also to know their value. He can learn the names and uses of every farm implement, the price of vegetables, and fruits, and grains. My child, be ready to help those around you cheerfully and as skillfully as you can, even if you get only thanks, or a piece of bread. You will soon get pay if you are worth anything.

V. PETIT.

HOW FREDDIE TRIED TO SAVE TWO HOURS.

A WRITER in one of the papers tells of an effort on the part of a lively little fellow to organize his daily doings so as to get two hours' extra fun,

but failed somehow to find them: My little nephew ran across somewhere a paragraph which said that anybody could save at least two hours of wasted

time a day by running on a time-table. Freddy brought the clipping to me, and asked what it meant. I told him that I supposed it meant that a person could save two hours a day by having all his work or amusement planned and arranged beforehand—such and such a thing to be done at such a time, and another thing following directly after, and so on.

Freddy seemed so much interested that I advised him to make out a time-table for himself, and try running on it for a few days. He said he guessed he would, because two extra hours a day would be a great help to him in learning to strike out the fellers, and possibly would get him the coveted position of pitcher in the school nine. In a day or two Freddy submitted the following to me :

A. M.

6.45 to 7—Gettin' up.

7 to 7.30—Bath and gettin' redly for brekfus.

7.30 to 8—Brekfus.

8 to 8.20—Prais.

8.20 to 8.30—Hard study.

8.30—Start fer skool.

9—Get there (a fellar must have sum fun in life).

9 to 10.30—Study and resite.

10.30 to 10.45—Reses (out to be longer).

10.45 to 12—Study and resite.

P. M.

12 to 12.15—Goin' fer lunch.

12.15 to 12.30—Eatin' it.

12.30 to 1—Sloos of things. Playin' ball mosly.

1 to 3—skool agen. Tuffest part of the day.

3—Skool over. Fun begins.

3 to 6—Baseball, Bisickle ridin', Goin' to walk (sumtimes with a gurl). Slidin' and skatin' in winter. Flyin' kite. Both-erin' the dog. Penuts. Goin' to ride with pa. Shoppin' with ma (wen I don't kuo it beforehand). Kandy. In bad wether readin'. Sloos of other things.

6 to 7—Dinner (grate time fer me).

7 to 7.30—Nothin' much. Don't feel like it.

7.30 to 8—Pa gets dun with paper, an' reads sunthin' alowd.

8—Sez I must begin to study.

8 to 8.15—Kickin' against it.

8.15 to 9.15—Study.

9.15—Gwup to bed.

9.15 to 9.35—Windin' Waterbury watch.

9.35 to 9.45—Undressin' and gettin' in-to bed.

9.45 till mornin'—Grate big times with dreems, but a feller can't stop to enjoy them much. Wonder wy dreems can't hang on more like reel things?

P. S.—Ware do thos' too extry 'ours cum in?

OUR LITTLE PET.

Our little pet
Is a brunette,
Her hair of jet
Is fine and soft as gossamer.
Her ringlets short
Shade lines of thought,
And they have caught
In lasso a philosopher.

The light that lies
In her dark eyes
No evening skies
Can outshine in their starry splendor.
Oh, I have oft
Seen glances soft
As light aloft,
But hers are pure and sweet and tender.

Lips undefiled
Kissed this sweet child,
And nature smiled
At loveliness so tender hearted.
Her words disclose,
A face that glows
As though a rose
Would utter speech with petals parted.

O gift divine,
Bright pet of mine,
A smile of thine
Would cheer me in my saddest sorrow;
And light the heart
As rays that dart
From clouds that part,
With beams, that promise glad to-morrow.

GEORGE W. BUNGAY.



SANITARY REFORM.

By the Author of "Household Remedies, Physical Education, Etc

CHAPTER V.—THE TENEMENT EVIL.

(Continued.)

NATURALISTS have often called attention to the curious fact that not one out of ten species of birds care to re-occupy an old nest after it has once served the purpose of the breeding-season, even if its site should recommend itself by a rare combination of advantages. Our American thrushes, linnets, and redbirds build a new nest every year, some species of prolific finches even twice a year, while crows, on their return to their old rookeries, never fail to renovate at least the top stratum of their old tabernacles.

The same habit has been observed in many varieties of nest-building mammals (squirrels, etc.), and strikingly illustrates the truth that reason, in many cases, could learn a lesson from instinct. Hundreds of city-dwellers who would rather wear linen in mid-winter than walk the streets in the second-hand garments of an old junk-store, have no hesitation about moving into a *second-hand residence*, a day after the former tenants have removed their household goods—though not such household evils as the germs of all sorts of contagious diseases. Many landlords, indeed, insist on a three months' notice of removal, to insure the immediate re-occupation of

their crowded tenements, giving preference to lodgers who ask no questions for conscience's sake and possibly congratulate themselves on the advantage of saving the trouble of house-warming, if the fumes of kitchen fires and unventilated bedrooms still linger in the atmosphere of the deserted lodgings.

A ten days' interval for sanitary repairs ought to be made the legal minimum in such cases; and the Swiss sanitarian Schrodtt advises his readers, if possible, to postpone a change of lodging to the very end of the year, and avail themselves of the first chance for insuring a fair chance of survival by freezing out the disease germs of their new quarters. "Before moving in your furniture," he says, "wait for a spell of dry, cold weather. Then wide open all windows and doors and permit the expurgating frost to reach every nook and cranny and continue its work of disinfection for at least forty-eight hours. A hard frost will kill out disease-seeds that would resist all other disinfectants, with the exception of fire and virulent poisons."

The rent-agents of many American tenement barons make a show of sanitary precautions by sprinkling the floor of a vacated room with a few drops of

carbolic acid, but aside from the perfunctory application of that specific, the prophylactic value of the drug itself is extremely questionable. Microscopic tests have proved that its strongest solutions fail to destroy the vitality of certain bacteria, and green vitrol (sulphate of iron) or chloride of lime are not only more effective but less shockingly malodorous. Twenty years ago, when carbolic acid enjoyed the reputation of an infallible disinfectant, its constant use made life a martyrdom to thousands of hospital patients—not to mention the affliction of their nurses, who had to breathe the same nauseous fumes all the year round. A time may come when the improvement of sanitary contrivances will enable our city health officer to adopt the plan of a French sanitarian, who proposes to kill out bacteria as ship-owners often kill out rats, viz., by a liberal dose of superheated steam, which could be permitted to parboil the interior arrangements of a vacant house for a couple of minutes, at the not very deplorable risk of peeling off large sections of mouldy old conglomerations of paste and cheap tapestry.

The superficial application of a wet scrubbing brush will hardly remove the visible traces of pollution, and hundreds of old tenements of every large city become veritable disease-traps, affecting successive series of occupants with the contagion of inexplicable disorders. Diphtheria, prurigo, measles, typhoid fever, small-pox, parotitis ("mumps"), and whooping-cough have often been disseminated in that manner. The more frequent pulmonary affections, too, are contagious to a rarely suspected degree. In ill-ventilated schoolhouses catarrhs often spread from class-room to class-room; and in winter more frequently than in summer only because windows are more rarely opened in cold weather. After visiting a public library, where dozens of children sit hacking and sniffing, I have often felt the premonitory symptoms of a bronchial affection within

three hours, and the late Professor E. L. Youmans once told me that a night in the stuffy "sleeper" of a Pullman car saddled him with a lung complaint that troubled him for the next twenty weeks. My Mexican traveling companion, who had roughed out the night frosts of the Sierra Madre in a threadbare *poncho* and laughed at the idea of "taking cold," came downstairs almost voiceless with influenza after passing a night in the unventilated bedroom of a Brownsville, Texas, hotel. "Those d— windows were nailed down," he grunted, "but if I had been able to foresee this trouble, I would have knocked them out or blown daylight through the skull of any god-forsaken fool that tried to stop me."

Gaseous poisons of that sort are, however, by no means confined to public lodging houses. In a magazine article entitled: "Pathologische Chronik einer Kaiserburg" (Pathological record of an Imperial Palace), a Vienna physician a few years ago traced the pulmonary troubles of the Hapsburg family to the atmosphere of their city residence, the old *Hofburg*, where a succession of generations succumbed to the same persistent, but by no means hereditary, disease which confined its attacks to the actual occupants of the palace. Minister Kaunitz, the power behind the throne of Maria Theresa, seems to have originated the trouble with his preposterous dread of fresh air, which, indeed, at last assumed the form of a monomania and impelled him to construct a vast glass-covered shed for the special purpose of taking his *horse-back exercise indoors*. The windows of his apartments in the Imperial Palace were never opened under any pretext, but in spite, or rather because, of all such precautions, his chronic catarrh got worse from year to year, and at last spread to the household of the Empress Queen, who lost her husband, Francis of Tuscany, and finally her own life by a disorder described as a "more and more suffocating difficulty to breathe." Her son and successor,

Joseph II., survived her only a few years and died of a malignant catarrh, A. D., 1790. Two years after his stout brother, the next emperor, succumbed to the same complaint, the lung-poison of the Hofburg. His successor escaped by his predilection for the country seat of Schoenbrunn, where he spent every summer and the hunting-weeks of every winter. But in 1825 he returned to the fatal town palace, where the trouble of the Imperial family at once recommenced, and moreover, involved the fate of their unfortunate guest, the young Duke of Reichstadt, the only son of the great Napoleon. In Schoenbrunn the young exile had enjoyed uninterrupted good health, but within three years after his transfer to Vienna, "chronic catarrh" had so wasted his strength that his former associates failed to recognize him, and a few months later he took his farewell of earthly hopes—"Mutter, Mutter, ich gehe unter," were his last words—"I'm going under," like one drowning in a sea of trouble. The present empress has fought that same trouble for many years, and with a curious instinct of self-preservation, flees to her hunting seats in the upper Alps or across to Sweden and England, whenever she feels the grip of the Kaunitz spectre at her throat.

Poor tenement lodgers have no such expedients, and often wear out their lives in a hopeless struggle against a demon that might have been laid years ago by a dollar's worth of disinfectants or by the still cheaper exorcism of a good frost.

In the large manufacturing towns of Europe and North America, building speculators often enrich themselves at the expense of their tenants by running up scores of cheap cottages in the immediate neighborhood of a belching factory—cotton mill, soap boilery, lead works, or that *ne plus ultra* of pestilential nuisances, a fat-rendering establishment, filling the atmosphere with the perfume of seething glue and boiling carcasses.

In midsummer when the afflictiveness of the odor is aggravated by a spell of sultry weather, the next neighbors of the fragrant establishment have often actually to take refuge in their cellars to avoid a relapse of retching fits, and the aroma of one particular institute of that sort in a populous town of the Ohio Valley has been known to travel on the wings of the evening breeze to a distance of more than eight miles. Outdoor laborers within sight of the chimney smoke were taken so sick that they had to quit work, children in arms were nauseated to the verge of convulsions, and even cart horses showed their teeth and rubbed their noses against a telegraph pole as they sniffed the overpowering perfume. Can such outrages be justified by the "interests of industrial enterprise?" Suppose that interest should induce an enterprising industrialian to soak his tanyard hides in a public cistern, would he not risk to get dosed with a strap of his own leather? Yet the contents of that cistern would perhaps be used only once a day, by people who could get better water by going a few steps further, while the stench of the glue factory nauseates every breathing entity of the township and can not be evaded by a trip of less than seven miles.

Yet it is well known that by contrivances involving only a slight additional expense, the effluvium of the pest-mill could be confined to closed vats. The alternative of heavy fines or banishment to the solitude of an out-of-the-way wilderness would not fail to stimulate inventiveness to the degree of devising a smoke-consuming apparatus, and if the wisdom of a law is to be measured by its results in the greatest happiness of the greatest number, the unconditional suppression of all city stench-factories could be justified by irrefutable arguments.

"Reform," says an able political writer, "is ever unpopular. All wrongs lie in the consent of the wronged, and what with the fierce support of those

who thrive on the abuse, and the dull, heavy conservatism of the masses . . . it is a sad delusion to suppose that the cause is won when the argument is made."

A proposition to remove air-poisoning factories from our large cities would probably be voted down by a unanimous protest of both manufacturers and their employees. But why do not the latter solve the problem by the always available expedient of removing their families to the purer air of the garden-suburbs, where rents are often low enough to equalize the small difference in the price of provisions and household commodities? "They would not move out if you offered to pay their rent and give them a chromo to boot," said an old physician of my acquaintance. "Nine out of ten laboring men absolutely decline to use any sanitary precaution till a devil of a fever has them actually by the throat. They do not care a red cent for Arcadian scenery and rural peace; they are clannish; their women prefer gossip to country air; they positively enjoy noise, I believe. Besides, they want to stay in the next neighborhood of their cheap groceries and beer shops."

Perhaps they do. But is it true that our laboring men, as a class, fail to appreciate the sanitary advantage of a country home? After a good many private interviews with mechanics and day-

laborers, I have come to a different conclusion. They are fully and bitterly awake to the health-destroying influences of their slum tenements; but they dread removal to a distant suburb as, on the whole, a greater evil. Their very existence often depends on a slight advantage in the facilities for obtaining work in their hand-to-mouth way, in their ability to keep an appointment, or enter the doors of their workshops the very minute of the stipulated time. They would eagerly welcome an arrangement encouraging the hope of combining such advantages with those of a tree-shaded suburban home, but our present system of transit facilities precludes that hope. Time, to the poor, is money, in a sense of the term often deciding the very chance of survival, and our street cars and passenger trains run neither fast nor frequent enough to justify the experiment of jeopardizing that chance.

A Vienna philanthropist proposes to remedy the tenement evil of his native city by the foundation of "workmen colonies," supplemented by free lectures on the advantages of country life. But suppose his workingmen should decline to attend those lectures? The cities of the future will probably solve the problem by a system of free minute trains to the suburbs.

FELIX L. OSWALD, M.D.

(To be Continued.)

A PREPARED BODY.

"Sacrifice and offering thou wouldst not, but a Body hast thou prepared for me."—Heb. x. 5.

MAN is a living Soul as well as a Body. The spirits that inhabit a man are of *two kinds*. Whenever I speak of good I imply evil, when I speak of evil I imply good; if all were good, why specialize the virtue of goodness? There would be no battle in life were there no evil. The works of the evil spirit, or the flesh, are adultery, fornication, uncleanness, lasciviousness, etc.

—Gal. v. 19. These works are manifest; I can see them just as I see the goodness of a man by his acts. If the body is the temple of the Holy Spirit, does not that body play an important part in life? In other words, give a body *good surroundings*, a pure atmosphere in which to grow and expand, and is it not likely that the owner of that body, the "man wonderful in the house beautiful," will more successfully cope with life's difficult problems, and come off more than

a conqueror, through the influence of those surroundings? Or, *vice versa*, place the same body, with its wonderful inhabitant, amid the weeds of the spirit of evil, the works of the flesh, and can we expect it to be a grand success morally and spiritually? I say nay. Like father, like son, is a greater truth than like priest, like people.

Do we not strike at the outset of this sermon a deep problem, viz., the question of pre-natal influence? I would note the pulpit's remissness on this and kindred subjects, which does not arise from the fact that preachers are cowardly, but arises from false teaching. A false delicacy pervades society. We should speak of these questions as responsible travelers to the next world of development, and glory rather than mourn the fearful results that must accrue from ignorance on subjects so fraught with weal or woe to our race.

A *prepared body* is the reed of the age. The Father of the Universe set a noble example. In the Mosaic age He would allow no man to serve Him who could not present a body without scar, scab, or blemish! He never allowed a club-foot to tread the priestly office. No cross-eyed or blemished man could represent the people at the house of sacrifice. No curved spine stood between the people and God! Is there any lesson in this, or does it all mean nothing? Did God have no reason for making these restrictions?

Look at some of those old worthies; they were Nazarites from *birth*; no intoxicating liquor, no stimulants. We admire Samuel, and justly; he led a careful, restricted life, plunging into no excesses; he honored his body. Look at John the Baptist; did anyone live plainer than he? "Locusts and wild honey" his diet. He spent most of his days in the open air. No stimulants to "buoy him up." His clean life kept him up; his pure life emanated from a pure body; he honored God in his body and spirit.

Paul's body was "a chosen vessel unto the" Lord, the clean jewel-case filled with the pearls of the New Kingdom. His life was simplicity personified. No grasping after riches, no feverish excitement about "corner lots." His motto was, "Having food and raiment, let us therewith be content;" his idea of riches, "Godliness with contentment is great gain." Simple food and plain raiment satisfied Paul, yet he preached before kings and governors, before the procrastinating Agrippa and the adulterous Felix. See his coolness in the hour of shipwreck. His abstemious habits and plain living make him a hero in that hour of imminent danger.

Oh! the evils of to-day. Worshipers at the shrine of fashion distorting their bodies; the red-eyed wine-bibber returning to his cups; the gouty, bloated glutton, whose broad face quivers as he moves, seating himself again at the banquet, after a long, stupid sleep to silence the evils of yesterday's engorgement. Moving stealthily along with cat-like tread is the morphine victim. The effect has just passed off, and he hastens again to get under its awful influence, lest, in a moment of desperation, he should have recourse to the deadly knife to end his miserable, wrecked life. What a picture! alas, too true! A nervous, attenuated body I see: it is the deluded creature who lives on stimulants. Fever struck his body once—it departed, and left him a wreck. The indulgent physician advised a "morning toddy. Just let your wife mix it for you; you need a stimulant." There's death in that cup, and the physician and wife have agreed to dig your grave, my fellow traveler; and when he is gone, let us not write, "Fell asleep in Jesus," but "*Killed* by alcoholic poison." They called it a "stimulant." So it was. It stimulated the life out of him; wasted the tissues of the body; dried up its juices; ruined digestion, and what could the poor body do but die?

I do not believe in total hereditary de-

pravity. Adam will answer for his own sins; his sins are not held in judgment against me; but I do believe in the grim laws of heredity, in the sense that the "sins of the fathers are visited upon the children unto the third and fourth generations." Not that God punishes the child for the sins of the parent, but herein I find a law of heredity: as you sow you shall reap, a truth that holds good in every department of life. The consequences of the "morning dram," the nicotine-soaked pipe, the epicurean gluttony, the tight-lacing, the late hours, the excesses, will all reappear in an aggravated form in your sons and daughters. Think of it, ye mothers and fathers of the future! If you could rise up from your graves and see your sons with age-marks prematurely upon their temples, as a result of your sin, you would want to creep back and hide yourselves in the solitary, cold grave. What kind of bodies did you give them? Did you leave them anything worthy the name of a body?

When should you commence the training of your child? "Twenty years before it is born."

It is not chance, but a matter of law, law, unbending law. Sin begins in the mind, and runs riot through the whole body. "When lust hath conceived, it bringeth forth sin; and sin, when it is finished, bringeth forth death."—(Jas. i. 15.) The opposite course, patiently pursued, will give life. Christ said: "I came that ye might have life, and *have* it more abundantly." I agree with the preacher who wanted to have some of the good now and now as well as by and by. The religious world is too much given to spiritualizing and etherealizing. The Gospel is not truly at work unless it is allowed to transform us from good to better, from better to best. Paul's advice to Timothy was: "Keep thyself pure." Purity is the great lever power to happiness to-day, and for the happiness of future generations. One age links to another the chain of consequences; good or ill encircles the whole human family. In this sense "no man liveth unto himself, and no man dieth unto himself." Your life and death will affect others. Shall not the church be the vanguard of reform?

ARTHUR M. GROWDEN.

TWO CASES OF EPILEPSY.

MUCH doubt is entertained by the majority of neurologists with regard to the efficacy of hypnotism or of the magnetic pass in cases of epilepsy. There is reason for this, it must be admitted, in the recorded data of the history and pathology of the disease, and I had myself been a doubter as to any benefit attending such treatment until observations of my own convinced me that some cases were amenable to this singular influence that seemed irremediable by any treatment known to the authorities. Charcot, Fere, and others have noted instances of epileptiform attacks that yielded to hypnotic control. Hysterical, neurotic persons these were, for the most part, whose convulsive attacks it was difficult to distinguish from

epilepsy, except by an examination of the history of the patients themselves, and a minute inspection of the first movements attending a paroxysm. Mr. Gowers accords so little favor to such treatment of true epilepsy in his "Manual of Nervous Diseases" that we are warranted in considering him decidedly skeptical as to any positive benefit to be derived from it.

Two cases, within a year past, of a decided character, have yielded such results that I consider them worthy of record.

Mr. S. F. came to me with a history of *petit mal* of about fifteen years' continuance. He had received treatment from several physicians and specialists without more than temporary benefit,

and had come to the conclusion that his malady, which had the unfortunate phase of seizing him without any prodromal or warning signs and rendering him unconscious for variable times, was incurable. It was likely to appear at any time, yet was very irregular. He would not have an attack for weeks, then there would be a series occurring, perhaps, with more or less violence, bordering on *grand mal*, for several days in succession. This uncertain state of course debarred him from obtaining any settled or remunerative employment. His mind was not seriously impaired, aside from a shade of melancholy that brooded over it—a result natural enough.

My first step was to obtain a degree of hypnotic control, and this proved successful. My object, it scarcely needs to be said, was to impress the mind of the patient with a strong sentiment of opposition to the attack, to animate his will, and so arouse such nerve activity as would oppose or compensate in a physiological manner the abnormal condition of those centers that contributed to the recurrence of the fits. He complained of frequent sensations of dullness in his forehead, as if there were a want of blood in that part of the head, while there was a feeling of heat and fullness in the side and back parts. It seemed to me that a newly awakened or reinforced activity of the circulation in the anterior of the cerebrum, if it were possible to induce it, would be productive of a better balance of the centers, and bring about a state of the brain that in itself would prove inhibitory of the dreaded seizures.

This in brief was the principle on which I acted after the first interview. He came to me once or twice a week and I simply applied my hands in the magnetic fashion to his head, that being placed in an attitude of repose with the eyes shut. Meanwhile he observed such rules of eating, dressing, sleeping, etc., as I deemed it expedient to advise, as

much for the purpose of giving him something to think of as to correct habits that were faulty in but a minor degree.

The effects of this treatment exceeded my expectations. Mr. F. in a month began to improve. The attacks occurred less frequently, and his health in every respect showed amendment. After a time the treatment was given at irregular intervals, two or three weeks being allowed to intervene between a sitting, and when the patient's last report was made to me he had had no recurrence of the fits for three months, and had undertaken the transaction of business that required travel and exposure, a venture that previously would have been regarded by his friends as entirely out of consideration. In the course of my observation of this case there were developed certain phenomena that will, I think, be considered extraordinary by the reader, even if familiar with hypnotic cases. I have said that when the patient first came under notice his attacks occurred without warning. He would drop suddenly to the floor or ground as if struck by lightning, and on reviving usually a severe headache compelled him to rest awhile, if not to sleep. During my treatment if an attack occurred he would be likely to come out of it with little more than a sensation of dullness that soon wore off. Twice the seizure occurred when I was within ready call, and then, to my surprise, I found that I could, in a few seconds, check the spasmodic jerks and restore him to consciousness. On one occasion he fell to the floor in the presence of several persons, and was struggling violently when I came to his side. A sweep of my hands from the head to the knee suspended the convulsions and at my command he opened his eyes and rose to his feet, and within ten minutes was able to continue the business transaction he was engaged upon when he fell.

Another noteworthy feature developed subsequently to the beginning of the treatment was that, previous to an at-

tack, Mr. F. experienced peculiar sensations, or an aura, which he could not describe definitely. These sensations were a general nervous unrest, with dullness and heaviness of the head, and perhaps some aching, which continued for a few minutes or longer, until the fit came on. If he came to me during this initial period, a few minutes' application of my hands would dissipate the sensations and prevent an attack. Fully six times this procedure was repeated with a successful result, so that little doubt on my own part and that of the patient and his family is entertained as to the efficacy of the magnetic influence in his case. Certainly, on the pathological side it is reasonable to infer that an improved circulatory relation had been produced in the brain, the permanency of which, however, could not be assured.

SECOND CASE.

Mr. P——, a gentleman fifty years of age, came under my notice about a year ago as a sufferer from the *grand mal* type of epilepsy. He had ten years previously sustained a severe injury by which the nasal, molar, and other bones contiguous to the inner canthus of the left eye had been driven inward, and the muscular attachments of the eyeball internally had been lacerated, so that, in healing, the co-ordination of the axis of vision was rendered permanently imperfect. A few years after this accident, the epilepsy developed itself, and at the time I first saw him it had assumed an aggravated form. He was then under the treatment of a distinguished specialist of New York City, whose diagnosis of the case referred its origin to the accident and the abnormality of the left eye.

Mr. P—— had learned to distinguish certain physical and mental symptoms as antecedent to an explosion of his malady, and therefore knew for at least ten minutes before that one was imminent. There was a metallic taste in his mouth, a sense of congestion in the

head, and a play of color. This last phenomenon is by no means uncommon in epilepsy and other forms of nerve disease, and it is deemed that some disturbance of the visual center produces it.

Mr. P—— was very willing to try the magnetic passes, and as his attacks occurred frequently, for two or three months I saw him at least once a week. No attempt was made to induce the hypnotic trance, but simple hand manipulation was tried, the result being as successful in its way as in the first case I have described. Mr. P—— frequently declared, as stated by acquaintances, that, if he could only reach Dr. Drayton's office in time, he would be saved from a fit.

I have had him come to me in a dazed mental state, his face turgid with blood, his respiration and voice thick, his pulse rapid and bounding, and with an anxious, excited manner, all intimating a nervous crisis. Placing him in a chair, I have at once administered the manual tactics, and in a few minutes his excitement would subside, his skin clear up, his pulse become calm and moderate, and he would pronounce himself greatly relieved and ready to go out upon the street. After this treatment he would be safe from an attack certainly for a day or two, and as the spasms were of a severe character, the relief he experienced was most gratefully acknowledged, although the prognosis on my part from the first was unfavorable as regards a cure.

An attempt to analyze the process by which the effect was obtained in this second case, if an attempt were made to be minute, would trend upon the speculative, especially if at the beginning it was assumed to define the peculiar "force" or effect that is called animal magnetism. That some derivative influence is exercised by the hand movements no one at all familiar with massage will deny, and that the consequent reduction of the pressure at the nerve centers may abort an attack whose pro-

domal symptoms have become well marked, is not too much to claim.

A mental impression well sustained exercises an important inhibitory effect. We know what the will accomplishes in suppressing a yawn, a sneeze, and the hiccoughs: why not in the disturbance of the centers that precedes an epileptic outbreak? Why may not the hypnotic pass be potent, especially if, in connection with its control, we can secure implicit observance of the rules, medical and hygienic, prescribed for the patient's every-day life? Repeated cases of control by mental impression over the paroxysms of emesis in sea sickness are recorded, the subject passing at a word from the spasm into a calm nervous state, and obtaining comparative gastric

comfort, no trance being induced, merely an assuring, imperious word or two being spoken. So also in the history of hysteria we have many positive cases of wonderful results obtained through suggestion, the will of the agent or physician appearing to reinforce the mental weakness of the hysterical, and enabling the depressed nerve centers to recover tone and to exert their normal compensation. But whether or not such reasoning as this may be accepted as applying to the pathology of epilepsy, these two cases, and others more recent, stand upon my note-book as encouraging testimony that this insidious and dreaded disease may lose much of its virulence and terror under the hand and will of the hypnotist. H. S. DRAYTON.

THE ROMAN BATH.

IN what respects a "Roman" bath differs from other forms is described in Dr. Shepard's circular, "The Hammam," and is illustrated practically in the treatment at Dr. Shepard's rooms, on Brooklyn Heights. He says of it:

This bath consists in the application of a highly refined and penetrating oil, accompanied with a half hour's rubbing by a skilled manipulator, during which the oil is absorbed, leaving the skin warm, smooth, and flexible. The process is a great luxury. It is adapted to the strong man, the invalid woman, and the delicate child. It brings into action, gently or vigorously, as may be directed, the muscular system, and all the tissues connected therewith, as well as the deep-seated vital organs. It is usually applied immediately after the Turkish bath, at which time the best results may be secured, but it is also given independently.

The physiological effects are: It promotes the circulation of the blood throughout the entire muscular system. It relieves congestion, by withdrawing the blood to other and distant parts. It builds up and strengthens the muscles

and arouses to healthful action, weak and torpid organs. It improves digestion, assimilation, and nutrition. It increases the breathing power and strengthens and develops the lungs. It soothes, quiets, and regulates disordered nervous action, and establishes harmony between the nervous system and the various bodily organs.

It prevents disease by promoting an evenly balanced circulation, and a normal healthful action of the organs of secretion and excretion. Its curative effects are most remarkable in cases of paralysis, local or general weakness, dyspepsia, constipation, inactivity of the liver, curvature of the spine, and other deformities. The employment of oils and fats by means of inunction, with a view of imparting nourishment to the system, particularly in the wasting diseases of children, is quite common, and this form of treatment is looked upon with great favor by the medical profession. To a certain extent it takes the place of exercise, like massage.

We have found the Roman bath especially useful in a torpid state of the skin, whether local or general; in stiff

or enlarged joints from rheumatism, gout, or other causes, contracted muscles or tendons, old sprains, sciatica, chronic congestion, and impaired nutrition. It is a great aid in allaying sleeplessness and nervous irritation. As a means of warming the body, and as a protection against cold, and the taking of colds, its preventive effects are most remarkable.

“THE OLD OAKEN BUCKET.”

A NEW VERSION, BY PRESIDENT BAYLES, OF THE NEW YORK BOARD OF HEALTH.

<p>With what anguish of mind I remember my childhood, Recalled in the light of a knowledge since gained, The malarious farm, the wet fungus-grown wildwood, The chills then contracted that since have remained; The scum-covered duck pond, the pig sty close by it, The ditch where the sour-smelling house drainage fell; The damp, shaded dwelling, the foul barnyard nigh it— But worse than all else was that terrible well, And the old oaken bucket, the mold crusted bucket, The moss covered bucket that hung in the well.</p> <p>Just think of it! Moss on the vessel that lifted The water I drank in the days called to mind; Ere I knew what professors and scientists gifted In the waters of wells by analysis find; The rotting wood fiber, the oxide of iron, The algæ, the frog of unusual size, The water impure as the verses of Byron, Are things I remember with tears in my eyes. And to tell the sad truth—though I shudder to tell it— I considered that water uncommonly clear, And often at noon, when I went there to drink it,</p>	<p>I enjoyed it as much as I now enjoy beer. How ardent I seized it with hands that were grimy! And quick to the mud covered bottom it fell! Then reeking with nitrates and nitrites, and slimy, With matter organic, it rose from the well. Oh, had I but realized in time to avoid them— The dangers that lurked in that pestilent draught— I'd have tested for organic germs, and de- stroyed them, With potassic permanganate ere I had quaffed. Or, perchance, I'd have boiled it and after- ward strained it Through filters of charcoal and gravel com- bined; Or, after distilling, condensed and regained it In potable form with its filth left behind. For little I knew of the dread typhoid fever Which lurked in the water I ventured to drink; But since I became a devoted believer In the teachings of science, I shudder to think. And now, far removed from the scenes I'm describing, The story for warning to others I tell. As memory reverts to my youthful imbibing And I gag at the thought of that horrible well, And the old oaken bucket, the fungus grown bucket— In fact the slop bucket—that hung in the well.</p>
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NOTES IN SCIENCE AND INDUSTRY.

Ten Good Things to Know in Housekeeping.—1. That salt will curdle new milk; hence in preparing milk porridge, gravies, etc., the salt should not be added until the dish is prepared.

2. That clear boiling water will remove tea stains and many fruit stains. Pour the water through the stain and thus prevent it spreading over the fabric.

3. That ripe tomatoes will remove ink and other stains from white cloth; also from the hands.

4. That a tablespoonful of turpentine boiled with white clothes will aid in the whitening process.

5. That boiled starch is much improved by the addition of a little sperm oil or gum arabic dissolved.

6. That beeswax and salt will make rusty flat-irons as clean and smooth as glass. Tie a lump of wax in a rag and keep it for that purpose. When the irons are hot, rub them first with the wax rag, then scour with a paper or cloth sprinkled with salt.

7. That blue ointment and kerosene mixed in equal proportions and applied to the bedsteads is an unfailing bedbug remedy, as a coat of whitewash is for the walls of a log-house.

8. That kerosene will soften boots or shoes that have been hardened by water, and render them as pliable as new.

9. That kerosene will make tin tea-kettles as bright as new. Saturate a woolen rag and rub with it. It will also remove stains from varnished furniture.

10. That cool rain-water and soda will remove machine grease from washable fabrics.

The Camel's Humps.—Structurally, of course, the humps are nothing—mere lumps of fat, collected under a convenient fold of the skin, and unprovided for in the framework of the skeleton. When the animal is well fed, they are full and plump, standing on his back firm and upright; but on a long journey they are gradually absorbed to keep up the fires that work the heart and legs, and, in the caravan camels which arrive at the coast, the skin hangs over, an empty bag, upon the creature's

flanks bearing witness to the scarcity of external food during the course of his long, forced march from the interior. A starved, small camel in this state of health far more closely resembles a Peruvian llama than any one who has only seen the fine, well-kept beasts in European menageries or zoological gardens could readily imagine.

But water is even scantier in the desert than food; and against want of water, therefore, the camel has had to provide himself, functionally at least, if not structurally, quite as much as against want of herbage. His stomach has accordingly acquired the power of acting as an internal reservoir, and he can take in as much water at the Bahrs or Wadys, where he rests for a while on his toilsome march, as will supply his needs for four or five days together. There are some differences in this respect, however, between the two chief varieties of the camel. The African kind is most abstemious, and best adapted to sandy deserts; the Bactrian, a product of a more varied and better watered country, is larger and stronger, but less patient of hunger and thirst, while at the same time it can manage to subsist and to make its way into somewhat rockier and more rugged country.—*Grant Allen.*

Function of White Blood-Corpuscles.—Dr. Ray Lankester, in an address on "The Struggle for Life," in speaking of the function of the white blood-corpuscles, agrees with the late view that the corpuscles may be educated to deal with bacteria, and the future of preventive medicine would, therefore, be the education of the white blood-corpuscles. The fact that one man, by constant use, could, without injury, take a dose of arsenic that would kill six ordinary men, was due to the fact that he had, by weakened doses, been educating and training the white corpuscles. They could be taught to eat and flourish under conditions which, if not commenced gradually, would be destructive to them, and that was the principle underlying protective inoculation. As a preventive of many fatal diseases in sheep and oxen, as anthrax and pleuro-pneumonia, inoculation

has been remarkably successful. The corpuscles first receive a weakened breed of disease by inoculation, and thus when a violent attack came, they were ready to receive and dispose of it. This education of the corpuscles, it seemed to him, was the explanation of vaccination. They received a weak dose of the poison from the vaccine, and were in that way prepared for a stronger dose in the way of small-pox. He believed the white corpuscles could be trained to receive the most virulent poisons, and he hoped this training would be carried on so as to deal with a great number of diseases.

The Whitechapel Murders.—An eminent surgeon writes on these mysterious occurrences: The crimes which have lately been committed in Whitechapel have given rise to many theories and speculations, prompted rather by a desire to account for them—that is to say, to find some motive for them—than by any knowledge of the subject. Most of those who have written to medical or daily papers have treated these occurrences as though they were unprecedented in the annals of crime. Therefore, however revolting be the subject, it seems desirable to point out that such is by no means the case; but that a certain horrible perversion of the sexual instinct is the one motive and cause of such apparently aimless acts, and that the criminal is neither insane nor prompted by pseudo-religious rancor against an unfortunate class of women. The most exhaustive and judicial treatise on this subject divides this form of neurosis into three divisions; local, spinal, and cerebral; but the individual may be affected simultaneously by more than one of these forms. The cerebral neuroses fall naturally into four subclasses: 1. Paradoxia, that is, untimely desire (in regard to age). 2. Anæsthesia, absence. 3. Hyperæsthesia, excess. 4. Paræsthesia, perversion of desires; among these last are cruelty and murder. He says (omitting certain parts): "These cerebral anomalies lie in the province of psychopathology. They occur, as a rule, in persons mentally sound, in a variety of combinations, and in them originate many sexual misdemeanors. They are worthy of study by the medical jurist, because they

so frequently produce perverse and even criminal acts."

A Pig's Memory.—On my return from a visit to a patient this morning, I discovered, by the wayside, a small pig that I instantly recognized as the one my little son had two days ago brought in a sack four miles. Knowing the interest the boy felt for the pig, I turned and called it. At once it seemed to recognize my voice, and in a few moments started on "a bee line," in the direction of my house, and at a rate that required rapid riding to keep it within sight, and it is now in the yard in perfect contentment. I think the pig was not in the least frightened, but that my voice associated home relations, and though it had evidently started back for its former home, it instantly turned and fled for the new one.



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BRILLIANT CHILDREN.

NOT long ago a lady visited us to consult with regard to the training of her boy. He was a beautiful child. A head unusually large and symmetrical with fine hair of that pale gold that young ladies are so much inclined to affect; large brown eyes, and a complexion of marble clearness, indicated the mental temperament in a very marked degree. But five years old, he showed extraordinary power of intellect; was very fond of reading books of a character far beyond his years and could memorize readily

long pieces of poetry and prose. The proud mother bid him recite for us, and he did so with an elocutionary emphasis that was admirable.

It was evident that at home this little fellow was regarded with a feeling akin to worship, and much pains were taken to bring out his fine parts. "It was so nice to have him speak his pieces before friends and acquaintances. But of course we don't care to make an exhibition of him," the mother said. Yet it was apparent that she derived much satisfaction from showing his talent to her society associates.

And did not the boy manifest the effect of the attention he received? Yes, he showed the confidence of one who had received daily applause and expected it from us when he had finished his recitation. We noted a tendency to arrogance and self-will that was the outcome of the indulgence and flattery he was accustomed to receive. Originally his disposition was of that confiding, sensitive type that avoids prominence and notice, but encouragement, tutoring, and applause had developed into strong exercise his naturally moderate self-esteem.

We said to the lady, "It would be better not to stimulate this child at all; his intellectual faculties are too active, and his physical constitution too sensitive."

"Why, you don't think that he will break down? He is healthy enough we all think."

"Yes, he may appear so because of his nervous excitability. Like a delicately constituted watch, he will run well until completely run down, and then the exhaustion may be extreme. Keep him as much as possible from books, and do

not make further attempts in the way of coaching him for private or parlor exhibition; but let him run and play in the garden and field, having associates among the children of your neighborhood. Let him be the child while a child in years, and aim to build up his body. You have, I fear, in your regard for the brain, neglected the body somewhat and now it is necessary to give most attention to the part that sustains brain and mind."

"Well, doctor, should we neglect so fine an intellect, will it not be injured by such inattention?"

"No, madam. Your fear should be for the body. If that is not strengthened and developed normally, what will become of your fine intellect ten years or so hence? You do not want the disappointment of a broken, burned-out mind; your high hopes of a brilliant future for your son blasted ere he has reached the age of manhood?"

"Oh, no!"

"Well, then, give him every advantage in your power for making his health good, and establishing a foundation of physical vigor and endurance that will last. In the maturing years of youth, and in the active pursuits of adult life he will need a good stock of vitality. His large brain, readiness of perception, quickness of thought, sensitiveness, energy, and ambition will make large drafts upon that stock, and if there is not enough, the effect will be serious, and manifested in eccentricity and unbalance of conduct and feebleness of health."

We are sorry, as a rule, for the brilliant, precocious child; so prone are the parents of such a boy or girl to neglect

the health and keep fanning constantly the nervous flame that glows in the unusual display of mental activity, that we expect a few years later to hear of a sad and plaintive ending, a young life snuffed out, whose promise was so far above the average.

Better the dull and slow childhood, that year by year adds to its capital of a solid and enduring physical constitution, as exemplified in a Webster or a Beecher, than the brilliant, excitable precocity that drains the bodily strength and is doomed to early eclipse like that of Chatterton and Keats.

A HOME FOR THE BRAIN-WORKER.

THE undertaking of Miss Fisher to establish a home or retreat for broken or weary workers in the fields of literature or art or science, is eminently worthy attention. We certainly give it such countenance as we can. The project has already been incorporated under the laws of New York, and a temporary Hotel-home opened in Brooklyn where proud and sensitive natures in circumstances of need may find an interval of rest amid an environment that is congenial and homelike. The price for board and lodging is very low, and in cases of extreme need the worthy man or woman, for no difference is made as regards sex or sect, is made welcome to the shelter and food afforded by the place.

We appreciate this new establishment because we know the need that has long existed for such a home. A few months ago we gave temporary employment to a gentleman who, by reason of serious illness, had lost his place, and for months had been subsisting on scant

and precarious charity, until, indeed, his sensitive nature was on the verge of despair. Had there been a retreat for him in the interval of his trouble, such as Miss Fisher and the ladies who co-operate with her have organized, it would have proved a haven of blessing, and saved him untold suffering. He is now filling an important station in journalism.

We commend this Home-hotel to our friends whose hearts are kind and their bank accounts of liberal dimensions.

EMOTIONAL IMPULSION.

IN an article published by Frances Power Cobbe recently in the *Fortnightly Review*, that writer maintains that emotions come to persons "by a sort of contagion far oftener than they spring up of themselves in the human breast. Any attempt to communicate our emotions by command, however, tends rather to produce the opposite feelings. In order to educate the emotions of others, we must employ this natural agency, contagion. In order to inspire a person with a given feeling, we must exhibit the feeling in ourselves. Parents, duly impressed with the importance of the subject, would carefully suppress, or at least conceal, such of their own emotions as they would regret to see caught up by their children. A teacher who has the respect and esteem of his pupils will affect their emotions for evil or good according as he betrays enthusiasm or aversion for selfish and sanguinary conquerors, according as he justifies or condemns assassins and anarchists, according as he represents science as seeking triumphs or truths, and according as he treats efforts for the elevation of

mankind with levity or respect. The companions of the young have a great influence on the development of their emotions. As regards girls, their doubly emotional natures make it a matter of moral life and death that their companions should be pure and honorable-minded. Too little precaution is taken, especially in American public schools, against the herding of innocent children with others who have been familiar with vice."

This admonition is certainly well founded in the nature of the human mind. In every-day life we are made aware of the influence of the strong expression of the sentiments, whether in a high or low, a tender and refined, or a coarse and brutal phase. The angry man awakens irritation and perhaps anger in those who are in his company; the haughty, proud man excites a similar spirit in his associates; the kind, frank, generous man arouses a warm responsive thrill to his earnest declarations.

Children are particularly susceptible of emotional influences by reason of their nascent mental growth, and it is therefore most important that care should be taken with regard to the character of their daily associates. If a boy

or girl indicates a constitutional activity in any passional direction, the fact should be noted in that practical way that is watchful for the child's best interests. Those associations and influences should be prohibited that would be likely to develop the characteristic and render it a dominant element, a breeder of practices injurious in any respect. It is neglect or indifference in this respect that renders many fathers and mothers responsible for the growth of vices of disposition in young people, a responsibility that very few parents are honest enough to shoulder.

There are good influences available for the purpose of cultivating the sentiments in the direction of a high and noble activity—a truly normal activity; so that the excuse may not avail with most people that they can not help the common exposure of their children to perversion. They have but to give some of their own time and personal superintendence to their children, to interest themselves, as a natural parental duty, in their study and play, and to find in the development of a noble manhood and womanhood not only gratification, but a higher activity in their own mature natures of the sentiments that render life desirable and beautiful.

Our Mentorial 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 pro-

pounded, if a correspondent shall expect us to give him the benefit of an early consideration.

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 small hand, or in pencil, as the compositor has to read it across the case, a distance of over two feet, and the editor often wishes to make changes or additions.

4. Never roll your manuscript or paste the sheets together. Sheets about "Commercial note" size are the most satisfactory to editor and compositor.

5. Be brief. People don't like to read long stories. A two-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 also.

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. Personal and private matters addressed to the Editor in his professional capacity will receive his early attention if this is done.

VEGETARIAN DIET.—J. B.—Vegetarians differ in their regard for milk and its products, some condemning, others using to a greater or less extent.

The good actor possesses, as a rule, a good physique, with large organs of perception, imitation, ideality, of the social sentiments, and those that contribute to calmness and self-reliance.

PHILANTHROPIST, WOULD BE.—S. M.—If you are urged by such a feeling, why not set to work and prepare yourself for it? Study anatomy, physiology, and hygiene systematically, and take a course in hydropathy and sanitary methods. If you should study medicine and get the degree of M.D., you would be the better qualified for your purpose, because you would then obtain recognition that would not otherwise be accorded. The world has need of earnest liberal teachers, and it is through them that it makes true advancement in health of body and mind.

BIG-HEADED CHILD.—MRS. L. R.—The boy you describe is probably hydrocephalic, *i. e.*, has water on the brain. We have seen a similar case, where the measurement

of the head exceeded twenty-eight inches, and there are instances in medical history that attained thirty inches or more. The dropsy appears in infancy when the bones of the skull are loosely adjusted and the tissues are soft, and the cranial growth that results is thus rendered permanent. We should be pleased to know more about the boy; if possible, have the history of the child from the physician who is acquainted with his case.

ALTERATIVE, WHAT IS AN?—G. H.—We do not wonder that you can not understand your doctor when he attempts to explain the effect an "alterative" is supposed to have. We are inclined to suspect that he is dealing with an unknown quantity. Should you resort to an authority on the subject, about all you will find may be summarized in this manner: An alterative is a drug that in some *unexplainable* manner brings about a resolution of morbid products retained in the tissues through deposits, ulceration, abscesses, etc. Later observation with regard to the use of alteratives has suggested a good deal of doubt with regard to old views on this subject.

WANTS TO HAVE MORE FLESH.—L. N.—It is a laudable ambition on your part. A lanky, weasen-faced man or woman is not an agreeable spectacle in spite of the tailor or dressmaker. Briefly, you should modify your habits. You are too excitable and "nervous," and inclined to overdo. Take the world easy; sleep eight to nine hours, and give to your meals three-quarters of an hour, eating slowly and masticating your food thoroughly. Cream, milk, bread, potatoes, peas, parsnips, macaroni, Indian corn, oatmeal, custard, tapioca, are among the articles that contribute to form fatty tissues, and eaten with prudence, other things being considered in time, and there being no constitutional defect, you should in time show a better contour of body.

IS IT PLAGIARISM?—EDITOR OF THE PHRENOLOGICAL JOURNAL.—*Dear Sir:* I beg to call your attention to two verses which appeared in the January number of the PHRENOLOGICAL JOURNAL, entitled "Yesterday and To-Day." They seem to me, rather too much, to resemble a poem of mine, headed "Two Days," and divided as "Yesterday

and To-Day," which was published some years ago in the *New York Ledger*.

The writer's poem is not half as long as mine; neither, I think, is it so broad or expansive. It is not enough alike to be styled a daughter, but more as a distant cousin, or a cousin in a remove. It is singular to me why anyone should wish to use other persons' ideas, or subjects, when the world is so full of subjects and events, and people are so variously constituted.

This circumstance annoys, but does not surprise me, as many persons have been exposed and denounced for such work in different papers in which I have written in the course of years; and there are, at present, accusations of gross plagiarism against a *well-known* writer of the day. Others are doing such work with impunity, as people do not always feel inclined to trouble themselves in such matters.

Trusting you will find room for my remarks in the JOURNAL. Respectfully,

GRACE H. HORR.

Reply: There is doubtless a similarity of ideas in the two compositions, but we think that our correspondent goes too far in her implication of plagiarism. The thought or motive of the poems is a rather common property, as we find it in the verse of many authors, and the attempt to work out such thought would naturally suggest considerations that appear in the two poems referred to. If resemblances of thought, and even of figure and metaphor, would convict a writer of plagiarism or piracy, then most of our eminent poets and writers are to be condemned. Dante borrowed much from Virgil; so did Tasso. Shakespeare appropriated old stories, and even old plays, and reconstructed them. Of modern writers, Edwin Arnold and "Owen Meredith" are known to have used old materials, but who does not recognize the talent of the reconstruction and application? Is there anything new in such a book as "Ben Hur," or "Robert Elsmere," besides the peculiar methods displayed in the management of the "materials"? If any reader of the PHRENOLOGICAL have access to the poem mentioned by Mrs. Horr as her own, we should be glad to have an opinion with regard to the evidences of similarity that would warrant the view that Mrs. Davison had borrowed her material from it.

PERSONAL.

MISS NELLIE O'DONNELL, the newly elected Superintendent of Public Schools in Shelby County, Tennessee, is but twenty-two years of age. After graduating in 1885 she became a teacher in the public schools, then a principal. She has shown not only ability as an instructor, but a decided talent for business.

A. W. LONGFELLOW, a brother of the poet, is a resident of Portland, Maine. He is about seventy years of age, and in appearance and manner is said to bear a striking resemblance to his late distinguished brother. Mr. Longfellow is a student of literature and antiquities, and spends the most of his time in his study.

WISDOM.

"Thou must be true thyself,
If thou the truth would teach."

HE who faces the sun of truth leaves all shadows behind him.

A BROKEN reputation is like a broken dish; it may be mended, but it will always show where the break was.

A GERMAN boy was reading a blood-and-thunder novel. Right in the midst of it he said to himself: "Now this will never do. I get too much excited over it. I can't study so well after it. So here goes!" And he flung the book out into the river. He was Fichte, the German philosopher.

MIRTH.

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

WHY is a hen immortal?
Her son (sun) never sets.

WHAT is that which lives in winter, dies in summer, and grows with its root upward?
An icicle.

MISTRESS (arranging for dinner)—"Didn't the macaroni come from the grocery, Bridget?" Bridget—"Yis, but Oi sint it back. Every wan av thim stims was impty."

"WHAT is your business?" "I feed the lions in a menagerie." "Must be dreary work." "On the contrary, it's very funny. They keep the table in a roar."



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 the Editor with recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

SHEDD'S NATURAL MEMORY METHOD.

This volume adds another to the mnemonic systems. One would think that there is a bonanza in this kind of intellectual enterprise if one gave much attention to the controversies arising among the authors real and hypothetical of modern systems. Perhaps there is—and it may be that it is not altogether fair that one or two men should monopolize the returns, especially when their methods may not be very unlike, so far as the mechanical formularies of suggestion are concerned and the general principle involved is of ancient repute.

In Mr. Shedd's method it seems to us there is a simplicity and a *naturalness* that render it very practicable and of service to anyone whose brain centers are susceptible of education. Certainly the principles involved require no great effort to comprehend; dullness as well as genius can see into them and a little practice develop facility in their use. We have not been disposed to give much attention to memory methods because of the artificial and arbitrary features with which most of those brought to our notice have been burdened—but this of Mr. Shedd commends itself because of the absence of such encumbrances, and seems as simple at least as any ordinary spelling lesson.

THE YOUNG IDEA, or Common School Culture. By Caroline B. Le Row, compiler of "English as She is Taught." 18mo, pp. 218. Cassell & Company, New York.

One who has read the book "English as She is Taught" may infer that the practical spirit that inspired the preparation of that is further and if anything better illustrated in this new volume. In another place we

have a note in relation to an address by a college president in favor of free college training. One who will read that address and then Miss Le Row's book will come to the conclusion that there's a failure somewhere in the system in vogue to realize the high promises of common school training. The method must be wrong or the teachers are incompetent. We think that one great fault consists in attempting too much, and thus overcrowding the juvenile mind. Miss Le Row's illustrations are from actual school life and they point the moral better than a volume of logical or rhetorical reflections. A commentator on the book pithily says:

"The methods of the schools are radically defective. Every year Harvard graduates a certain number of men whose manuscript would disgrace a boy of twelve. Yet the college can not be blamed, for she can hardly be expected to conduct an English school for adults.

"Neither can any teacher in the common school course be expected to impart training that should have been imparted far below her. There are several classes of people who should read 'The Young Idea'—among them two very large classes: Those who wish to know what is going on in the schools (presumably a large class) and those who expect soon to dispose of several turkey dinners in unusually quick succession, and who need a good deal of hearty laughter as an aid to digestion. The funny side of the book is almost constantly in the foreground to the reader, although it has been purposely slighted in this review."

HOW TO BE SUCCESSFUL ON THE ROAD AS A COMMERCIAL TRAVELER. By an Old Drummer. 12mo, pocket form; pp. 83. Fowler & Wells Co., Publishers, New York.

This convenient brochure commends itself at first sight to the business man. The picturesque cover is suggestive of experiences that every traveling commercial man must encounter. Written in easy, colloquial style, the pages abound with valuable hints and direct counsel that the young business man would find of great service. The author does not offer a funny book; he strains not to be humorous but to do a real service to his contemporary workers in the great realm of mercantile life, and it must be said that he has made no failure. His pages are, so

to speak, bristling with "secrets" that reveal the how to do it in dealing with buyers of different temperament and constitution. The fact that the good "drummer" is a good judge of human nature is well illustrated, and the employment of such judgment in the emergencies of the "trade" is shown to be an essential. A series of routes with good business stopping places is given, in itself a valuable feature. Price 20 cents.

HANDBOOK OF MATERIA MEDICA, PHARMACY, AND THERAPEUTICS. By Cuthbert Bowen, M.D., B.A., editor of "Notes on Practice." 12mo, pp. 365. Published by F. A. Davis. Philadelphia and London.

The purpose of this work is the laudable one of furnishing students and practitioners of medicine a *resumé* of the points in *Materia Medica*, *Pharmacy*, etc., that will be of practical service. The large encyclopedic volumes on these subjects have been sifted and in a compact form we are given what is considered of essential use. The complaint of overcrowded dispensaries and pharmacopœas is a just one, and they who look to drug resources for medicaments should thank the publisher for placing such a snug volume at their command. The student cramming for the dreaded examination will find a friend in this book, and be much assisted by the question and answer arrangement.

PUBLICATIONS RECEIVED.

INTERNATIONAL POCKET MEDICAL FORMULARY. Published by F. A. Davis, of Philadelphia and London.

A substantial "vade mecum" for the practitioner—and most useful. Besides the extensive and well classified list of formulas it contains a posological table, the recent antiseptics and antipyretics being included—with formulas for inhalations, suppositories, nasal douches, eye-washes, gargles, hypodermatics; also the use of the thermometer, antidotes for poisons, medico-legal and post-mortem examinations, artificial respiration, ligature of arteries, urinalysis, differential diagnosis of fevers. Pulse, temperature, and respiration tables, motor nerve points, and other features that constitute modern medicine, a scientific procedure. Compiled by C. Sumner Witherstone, M.S., M.D.

THE CONSTITUTIONAL PROHIBITIONIST, or Prohibition by the People. Compiled by J. N. Stearns.

A convenient hand-book for the Temperance advocate, furnishing official votes of

States, and numerous testimonies showing "High License" no remedy for the evils of the drink; also quotes from a large number of religious and secular newspapers; the opinions of distinguished citizens, deliverances of religious bodies and of national temperance organizations, forms of amendments in fourteen different States, and a variety of anecdotes and illustrations adapted to a Prohibition campaign. 12mo, 64 pages. Price only ten cents. National Temperance Society, New York.

EOCHONDROSES OF THE SEPTUM NARIUM and their Removal. By Carl Seiler, M.D., Philadelphia. A monograph on abnormal growths of the nasal septum, their effects and treatment. Published by W. R. Warner & Co., Philadelphia.

FIFTY SEVENTH ANNUAL REPORT of the Trustees of the Perkins Institution and Massachusetts School for the Blind for the year ending September 30, 1888.

A most interesting document this that Mr. Anognos, the secretary, has sent to us. Liberal space has been given to the history of such remarkable cases as Helen Keller and Edith M. Thomas, and properly so, as they are worthy the careful study of psychologists the world over, and are very creditable to the institution.

A POCKET MEMORANDUM BOOK, lately designed by Mr. D. B. Bradley.

This is a very convenient and well made article for the business man and mechanic. Besides divisions for large and small matters of value, stamps, tickets, etc., and a blank book of two hundred pages or so, there is a perpetual calendar, and a little book closely printed, tucked in a convenient opening that gives in a twinkling a great amount of arithmetical data, and the rules for quick calculations in almost every line of science, business, and industry. The whole bound in fine morocco. Price from 50 cents to \$2.00.

PERIODICALS THAT PAY CONTRIBUTORS. Compiled by Eleanor Kirk.

A convenient list for the writer who would live by the pen, or add to his revenue by occasional contributions. The editor has labored to make it trustworthy. For sale at 786 Lafayette ave., Brooklyn, N. Y.

THE HOLY SUPPER IS REPRESENTATIVE. A brief consideration of its use and emblems. By J. R. Hoffer.

A REVIEW of the Rev. Edward H. Jewett's "Communion Wine." By John Ellis, M.D.

Two papers, in one cover, by earnest writers and reformers. Published by J. R. Hoffer, Mount Joy, Pa.

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has obtained 15 International Awards, and is now sold in every city in the world. It can be had of nearly all Druggists in the United States, but be sure that you get the genuine, as there are worthless imitations.

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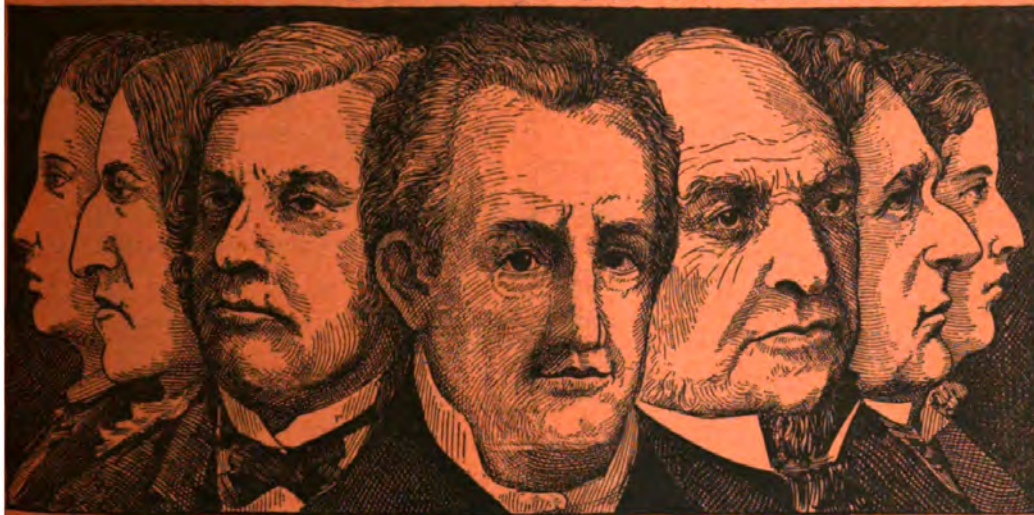
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See other page.

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ANNOUNCEMENT FOR MAY.

We have in preparation and shall probably publish in the May number sketches of General B. F. Tracy, the new Secretary of the Navy, and John Wanamaker, the new Postmaster-General; also Mr. J. V. Williamson, of Philadelphia, and President Diaz, of Mexico. Other features are Dreams, by Mrs. Bella French Swisher; Some Recent Observations in Cerebral Localization by Hypnotism; Gnostics and Agnostics, by John Waugh; Hereditary Statesmen, Why We Sicken and Die; a summary of Mr. Hollander's paper on the Centers of Ideation, read before the British Anthropological Society; Gymnastic Training Schools, a fresh installment of Dr. Oswald in the series on Sanitary Reform.

The Phrenological Journal is published monthly at \$1.50 a year, or 15c. a number. To each new yearly subscriber is given either the Plaster Paris Phrenological Bust or New Lithography Phrenological CHART Premium, a new plate, 19 x 24 in., with ring for hanging. When the Premium is wanted, 15c. extra must be received with the subscription to pay postage on the JOURNAL and the expense of boxing and packing the Bust, which will be sent by express, at expense of the subscriber; or No. 2, a smaller size, or the Chart Premium, will be sent by mail, postpaid.

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THE
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AND
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NUMBER 4.]

APRIL, 1889.

[WHOLE No. 604.



WILLIAM WARNER.
Commander-in-Chief, G. A. R.

NOTABLE PEOPLE OF THE DAY.—No. 18.

WILLIAM WARNER.

Commander-in Chief, G. A. R.

THE rapid growth of the organization known as the Grand Army of the Republic, until it numbers 400,000 men, all survivors of the late war, and "every one with a clean record," as a zealous writer puts it, makes it worthy of more than passing comment. Posts or branches have been established in all the states that contributed levies to the Union armies, and effort is made to enroll every worthy survivor, whatever may have been the nature of his service, on land or sea. A body of men so large, composed in the main of "the bone and sinew" of the country and now at a distance of twenty-five years from the period of their military activity, so that they can review with calmness the civil and political issues that entered into the great conflict of North and South, must exert a great influence upon national sentiment. We can not wonder that attempts have been made to use it for political ends, and it is a matter of great credit that the organization has resisted any such attempts and maintained its principles of non-partisanship. This is certainly wise. The intelligent G. A. R. man knows full well, if he knows anything of associated life, that to favor the movements of one party to the prejudice of another will bring disorder and disintegration, and what is now a harmonious and mutually helpful order would be broken up.

Ambitious demagogues look with longing eyes on so strong and influential a company of men, and would rejoice at the opportunity to employ it toward securing emolument and advantage in state or national politics. By avoiding the scheming, tricky political leader and acting the part of the quiet, loyal, independent citizen, the Grand Army man will serve his country and his home community best. The man whose name

is given above, and whose portrait accompanies these remarks, voiced our sentiment at St. Louis, Mo., on the occasion of the encampment of 1887 by saying boldly :

"I trust, comrades, that the day will never come in the National Encampment of the Grand Army of the Republic, that it shall be a recommendation for a man to any office within the gift of the Encampment, because he belongs to this party or that party. Nor that it shall be a badge of disqualification because he was a soldier, as has been said by some of our Delegates. Let me say to you here, now, as I have announced in a state where it costs something to make the announcement, that strong as my ties may be to my party, when that party comes between me and my comrades, I will unhesitatingly trample upon those ties."

Major William Warner, the recently elected Commander-in-Chief, G. A. R., is of Western birth, having seen the light first in Wisconsin while that region was yet a territory, about the year 1841. There his early education was obtained, first at the district school, and later at the Lawrence University, at Appleton. Later in life he attended the University of Michigan, after which he studied law, and returned to his home, where he was admitted to practice.

The civil war had commenced in the meantime, and the need of men to do battle for the country inspired the young lawyer ; so, in 1862, he raised a company, and with it joined the 33d Wisconsin Regiment, of which he was made adjutant. At Vicksburg he acted as captain. He subsequently accepted a commission as major in the 44th Wisconsin, which position he held until mustered out at the close of the war.

He took part in the Red River Campaign, and at Tupelo was A.-A. General

to Gen. T. K. Smith, then commanding a division.

At the end of the war he settled in Kansas City, Mo., and commenced the practice of law. A year or so later he was elected City Attorney, and in 1868 was made Circuit Attorney for the Counties of Jackson, Johnson, Lafayette, Cass, Pettis, and Saline. He was elected Mayor of Kansas City in 1871, a Presidential Elector in 1872, and in 1882 was appointed U. S. District Attorney of Western Missouri. He was elected to the 49th and 50th Congresses, but absolutely declined a re-nomination to the 51st Congress.

In Grand Army affairs he has been prominent among the promoters of the organization in his state for many years. And it was in recognition of his merit that the Encampment at St. Louis, in 1887, tendered him the position which he declined then on account of being a member of Congress, but to which he was unanimously elected last year.

The portrait indicates a man of promptness and high spirit. He is alert and awake through and through. Large perceptions and an inquisitive regard for whatever comes within the domain of his intellectual activity distinguish the working of his mind. He is keen in discrimination, rarely fails to catch points of difference, and can show them with clearness and effect. His ability as a speaker is shown by the anatomy of the eye. Not affluent in the use of words, not a Niagara for gush and richness, he is, or should be, known for clearness, definiteness, and point. He neither multiplies nor minces words, but is acute and logical in their application.

He has a very strong will, and it is backed up by a marked self-respect and circumspection enough to make him hold firmly to his convictions. He is a staunch opponent, one quick to take advantage of the weaknesses in the armor of his adversary, but he hates treachery and meanness, and they who are dis-

posed to trickery of any sort are quickly read by him, by an intuitive discernment that is natural to him. A good judge of character, he is generous and cordial toward friends, and very sympathetic and earnest in his domestic life.

M. EIFFEL AND HIS GREAT TOWER.

THE projector of this great structure which will rank, when completed, among the world's wonders and be scarcely second to any of the works of human handicraft, is a man of very marked characteristics. Like all engineers of distinction, his head is of unusual breadth and the faculties in the lower margin of the anterior lobe are strongly marked. Form, as shown in the portrait by the remarkable separation of the eyes, is very large, and the qualities of Size and Weight are by no means small. He possesses abilities, therefore, of a peculiar kind in the way of design and of construction, should be a practical man rather than a theorist, and therefore not inclined to take a personal interest in anything that seems wanting in solid, basic principle. In temperament he reminds us of Brunel the designer of the Thames tunnel and of Roebling whose splendid monument arches the East River and binds New York and Brooklyn together.

M. Eiffel is a man of iron nerves and positive views. The whole contour of the head and face intimates resolution and power. He means to accomplish whatever he attempts, and opposition has little that can intimidate him, when once his feet have begun to move forward in the line of executing his purpose. There is iron, indeed, in his blood, and it impresses his energy with a tenacious spirit, just as it is evidenced by his physical elasticity and endurance. M. Eiffel is well on in years, but like M. de Lesseps, his capacity for the projection of large enterprises may grow with years.

He was little known this side of the Atlantic until the newspapers an-

nounced the great project with which his name is associated, but he has been well known among the engineers of France, and is at present President of the National Society of Engineers. At the early age of twenty-six, he was intrusted with the supervision of the building of an iron bridge at Bordeaux; and his subsequent achievements have been the colossal Viaduct of the Garabit, one of the finest works of its kind; that of

ing, and from this elevation upward the tower tapers like any ordinary structure of its kind. Near the summit will be a balcony for observation, the whole being terminated by a dome, which in turn will be surmounted by a smaller dome, around the base of which will be placed a small balcony for the use of those who may be venturesome enough to mount to the very top.

The four columns forming the base are joined by circular arches, and at this level, its framework, resting upon the crown of the arches and upon the columns, is erected a balcony, called the first landing. As the graceful architectural effect of the structure depends largely upon leaving unobstructed the central space beneath the arches, the stairways and elevators by which visitors will be able to ascend and descend are placed in the legs. The French commission of experts has selected two elevators of the manufacture of the American firm of Otis Brothers & Co., of New York. These elevators will be constructed on a large scale, two stories each, with seats like those of a railway car, and capable of carrying fifty people. There will be seven elevators alto-



M. EIFFEL.

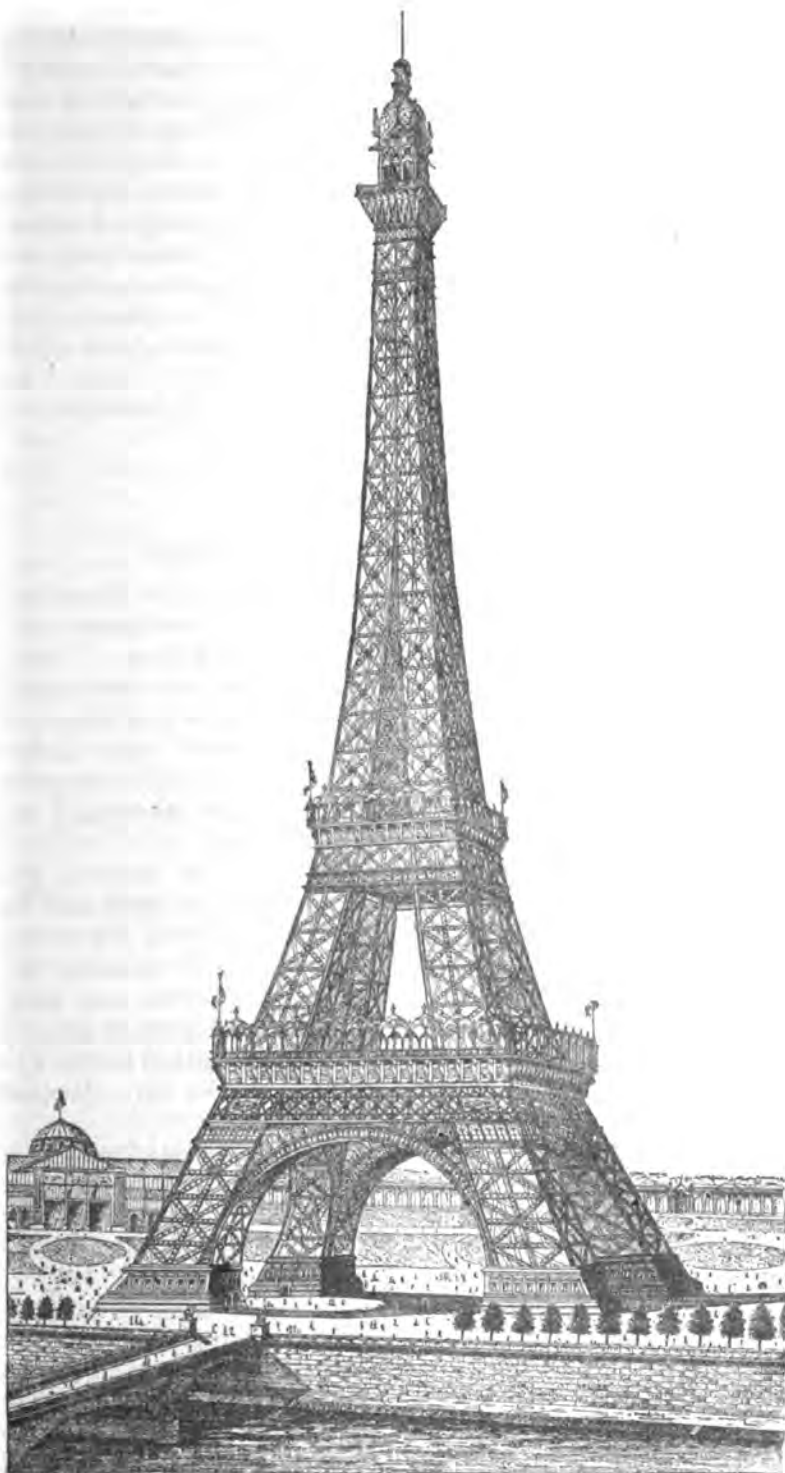
the Douro Porto; and also the gigantic locks of the Panama Canal.

The tower will be constructed entirely of iron—disposed in an open framework, to realize the utmost strength consistent with grace and lightness. As shown in the engraving, it stands upon four great "legs," or lattice columns, each placed at the angle of a square, whose sides are 375 feet long. At a point 480 feet above the ground, the legs meet at what is called the middle land-

gether: four to the first stage, two to the second, and one, capable of carrying sixty-five persons, up to the top gallery.

The price is fixed at 3f. to the first stage or 5f. to the top, on week days; but on Sundays it is to be 1f. and 3f. respectively.

Two years ago, when it was announced that to add to the attractions of the Universal Exhibition of 1889 it was proposed to build a tower 1,000 ft. high, it



EIFFEL TOWER AT THE PARIS EXPOSITION.

made some people smile and shrug their shoulders. It was asked, what would be the use of such a tower after the Exhibition was over? It would cost a great deal of money, but the French are very much like Americans in their fondness for doing things, whenever possible, on a bigger scale than other nations. They would like to erect a tower which would be twice the height of the tallest monument in the world, and of course outdo the Washington monument that lately achieved that distinction. The idea was taken up, and in a very short time a company was formed, the necessary funds were subscribed, and at the commencement of 1887 the foundations

were laid. Since then, the works have been steadily progressing; and the building has now attained the tremendous height of 250 metres (780 ft.).

This great tower will probably be the chief feature of the Exhibition and afterward it may serve a very valuable purpose as an observatory, which, in fact, was part of the original scheme. Many scientific men have proposed making use of it for various researches. At the great height of a thousand feet, owing to the clearness of the atmosphere, it will be possible to make observations which can not be satisfactorily made at lesser altitudes.

EDITOR.

THE GALL COLLECTION IN BADEN.

FEW phrenologists, I think, are aware that Gall, when he quitted Vienna for Paris, left a large collection of skulls and casts in the former city. This collection, to which Professor Benedikt called my attention, is now on public view in Baden, and forms part of the so-called "Städtische Rollett Museum," which was presented in its entirety in 1867, by the sons of the late Dr. Rollett, an eminent physician of the town. Gall wrote from Paris in 1824, presenting Dr. Rollett with the collection, and thanks are due to the doctor and his heirs for the care which they have taken in preserving these valuable and venerable objects.

During my holiday rambles in the Swiss and Austrian Alps last summer, I visited Baden, principally to see the museum and to make the acquaintance of the custodian, Dr. Hermann Rollett (the son of the founder and a distinguished poet), to whom I had an introduction given me by Professor Benedikt. The museum, a large building in the Franzens Strasse, close to the Park, is open free to the public twice a week, Thursdays and Sundays from three to six o'clock. I visited it on Sunday, 22d July. A flight of stairs and a spacious hall

communicated with three large rooms, at the end of the second of which I found the gentleman I was seeking. He greeted me with true Austrian politeness and seemed to be pleased that I had not come merely out of curiosity, but as a follower of Gall, to examine the objects on which his ideas of Phrenology were founded.

The collection contains 67 skulls of lunatics and criminals, and 108 original casts, taken during life or after death, from persons of eminence (kings, men of science, artists) and persons with peculiar formations of the head. Most of them are marked in Gall's own handwriting, and all were classified by Professor Benedikt.

Dr. Rollett showed me also some medical literature, contemporary with Gall, especially journals with reports of his lectures, speaking very highly, almost worshipfully, of him.

Men of science, of rank, poor men, artists, and tradesmen, have all visited this collection, have admired the museum, and expressed themselves accordingly. However, no direct good has come from the collection, for Phrenology never had a serious footing in Austria. It appears to me that, at the present

day, we must look to the United States for the home of Gall's science. We shall find among Americans the largest number of supporters. My view is fully confirmed by Professor Buchner in his "Physiologische Bilder," Vol. II.

He says: "Especially in the United States of America, where there is a vivacity of talent, together with a want of sound scientific knowledge among the educated and semi-educated classes, the number of zealous adherents to the phrenological theory is said to amount to millions. The PHRENOLOGICAL JOURNAL has a circulation of 20,000 copies, and one single publisher turns over about \$100,000 yearly only with phrenological literature. This shows the want that there is of scientific training and enlightenment. Like a great many similar subjects, Phrenology is practiced in America with a certain amount of fanaticism. I made many enemies on my lecture tours on account of my opposition to Phrenology. Especially the editor of the New York *Democrat*, Dr. Blode, showed his hatred, from the moment that I spoke against Phrenology and Spiritualism, by writing against me, not only in his own, but also in other papers. Altogether, it appears to me that Americans can stand the truth less than Europeans."

I leave it to the candid to comment on Professor Buchner's criticism. Such and similar writing does not affect me any longer, for I have found out long ago that it is in vain to argue with prejudiced minds. I consequently set to work on a different basis to get Phrenology recognized by the learned men of Europe.

On the 12th February I read a paper on "Centers of Ideation," before the British Anthropological Institute, in which I lay the basis for a scientific Phrenology, at the same time showing that the experiments of modern physiologists have confirmed the localization of several phrenological organs. The Anthropological Institute has hitherto refused to accept any paper on Phrenology, and blackballed one phrenologist on account of his profession. At first the committee hesitated whether they should accept my paper, and left the same in the hands of an expert for examination and subsequent report. My arguments seemed to be convincing, and so I was allowed a discussion on February the twelfth, in which many of our leading scientific men took some part. I shall send to the PHRENOLOGICAL JOURNAL a report of the affair in a short time.

BERNARD HOLLANDER.

BUDGET OF PAPERS ON PHRENOLOGY.—No. 7.

JUDGE CHURCH AND HIS COURT.

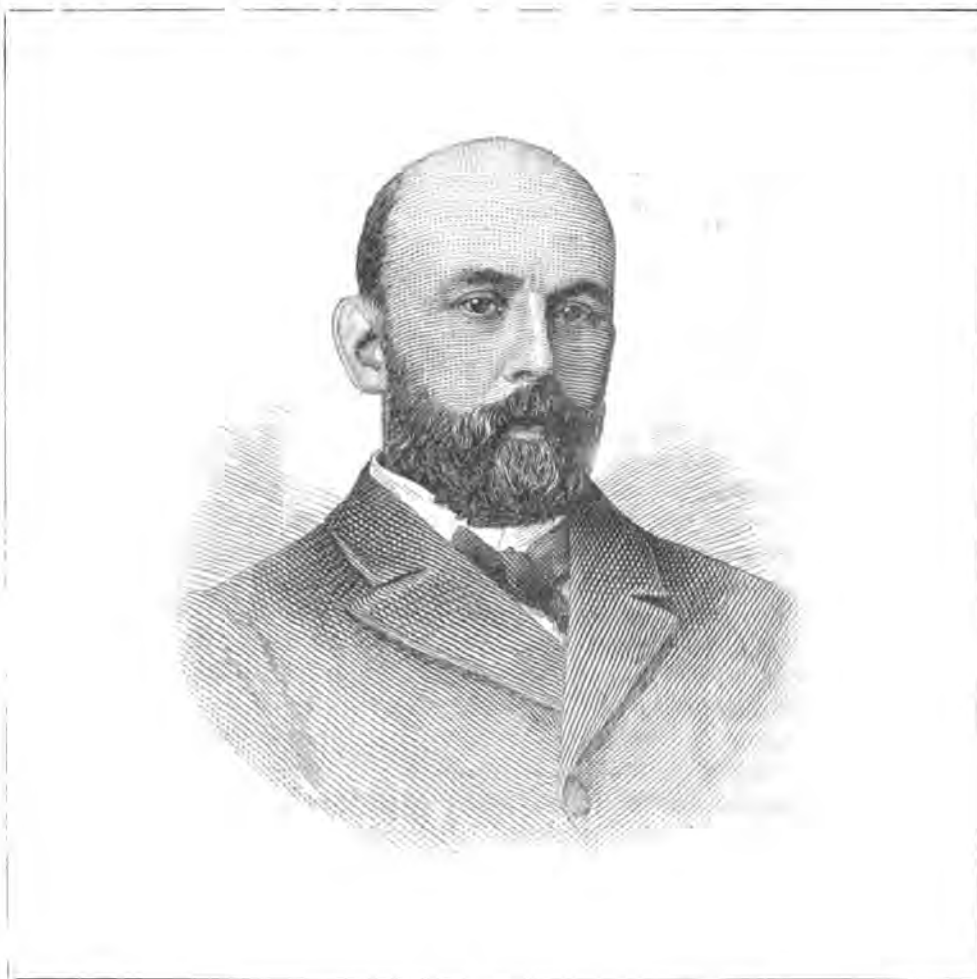
THIS paper, the seventh, will be anthropological rather than phrenological. A rest to the reader, perhaps; in which you can recline at ease and imagine the scene of the Dakota Black Hills, the city of Deadwood, the Judge's home, the court room, the Judge; and from what knowledge of heads you may have gleaned from "Heads and Faces," and from the pages of the JOURNAL, you can "Phrenologize" and judge for yourself even the Judge; and in the expressive, but not elegant, language of Boston's profes-

sional bump-maker, "put a head on him."

If the Honorable Judge had only had a larger nose perhaps I might have been a married man long before this. I know he will not take offense at this personal reference to his smallest feature when he knows how much it cost me, for the Judge is a man of large sympathies. I had been invited to a Western home of high standing and some renown, and there met a most charming person a young lady of great refinement, exquisite taste, beautiful and graceful, queenly

and dignified. Mounted upon her spirited white charger she was not a phantom, but a beautiful reality. So taken with the excellent taste shown in her costume, so much admiring her lofty mien and queenly dignity I had scarcely noticed the separate features of her face. The effect of the whole was so pleasing.

to be unphilosophical, or a phrenologist off his guard. "Do you really believe," said she, as her horse plunged along, I proudly keeping an oversight of herself, her saddle, her bridle, etc., and well abreast of her charger—"in Physiognomy?" "Yes," I replied, "though it is scarcely a science." "Mention please



WM. E. CHURCH.

I was by her side—a most enviable position—mounted on no inferior steed, a pure blooded Hambletonian. She knew that I was a graduate of the American Institute of Phrenology, and so tried to draw me out in conversation on that line. Galloping alongside of a beautiful woman on a spirited white charger is a time when even a philosopher will be apt

then some one we know, some public character." "Take, for instance, the Hon. Judge Church." After describing the great and good man, I referred to his nose and the corresponding development of the brain. Why should she lose her color! Had she fainted? or had the silent cartridge of some noiseless Flobert pierced her heart! No!

For no Indians at that time were near the Foot hills, and the crack of their Winchesters can be heard as far as flies the lightning-like lead. No! *But the tip-end of her nose was gone!!*—and so were all my chances. And once more I settled down to a lonely bachelorhood and plunged into missionary work, awaiting another chance. But to this day you can not get me to converse on Physiognomy.

JUDGE CHURCH AND HIS COURT are worthy of a more skillful pen than mine. I must make quick dashes and sketch rapidly. First, his surroundings. In Morristown, New Jersey,—from the suburbs of which I am now writing—William E. Church was for years one of the firm so well known in legal circles of Morris County, as “Mills & Church.” Beloved and respected by all as a godly, righteous man; as an honest, painstaking lawyer: President Arthur appointed him to the bench of the First District Court and the Associate Justice of the Supreme Court of Dakota. His headquarters were at Deadwood, where the wide-awake, quick brains of the intelligent men of the Black Hills were not slow to appreciate his worth. If his Eastern friends had or still have any thoughts that he was to be the judge of inferior men or to preside over a court of half-fledged lawyers and backwoods attorneys this article is intended to enlighten their ignorance and to dispel their sorrow on his behalf.

The Judge made his home in Deadwood, the metropolis of the Black Hills, renting a pretty place on Engleside just at the angle of the two aisles of the great natural amphitheater in which Deadwood lies. Just in the immediate rear of the house and on all sides around it, for the circle is not more than a mile and a half in diameter, rise the mountains some two thousand feet above it; while the city itself is built five thousand feet above the level of the sea. One thousand feet above the city lies the cemetery where—

“The hill-side for a pall,
To lie in state while angels wait,
With stars for tapers tall,
And the dark rock pines like tossing
plumes

Over his bier to wave,”

is true of saint and sinner alike, for there is the grave of “Wild Bill:” his head board bearing this sentence, “Good by, Pard. Will meet you on the happy hunting ground.” Passing through the cemetery and climbing the overhanging crags you have a sublime view for over one hundred miles of the far-stretching prairies, which commence some twelve miles below at the foot of the Foot hills. The clearness of the Dakota atmosphere can not be imagined. I am glad to learn that from this eyry a dark serpent can now be seen winding its way through the prairie grass: whose hiss is steam and from its nostril it belches forth fire and smoke. It was not so then, only four years ago. But even then, several years before the people of Morristown, N. J.—the home of Morse and the telegraph, and said to be the wealthiest place of its size east of the Mississippi—were enjoying the electric light, the whole amphitheater of Deadwood was ablaze with it, though at that time the nearest railroad was two hundred miles distant across those wild picturesque prairies and the famous “Bad lands” of historico-geological interest. The center aisle of this scene was one that pained the eye of the sensitive mind. It was filled with the debris of the devastation and ruin of homes and dwellings, sacred and secular institutions, public and private buildings destroyed in the great flood of a few years before. But the energetic inhabitants ant-like went to work immediately, and soon even finer brick buildings were reared on the high eminences beyond the reach of all risings of the water of the mountain streams whose sands are of gold. Millions have been taken out of the hill sides and the streams; and millions more await the finding of him who seeks and labors

persistently. The gold seeker and the bread winner alike must earn their bread by the sweat of their brow. This is the law of God. It is final. But where common wages were three and a half and four dollars a day to the miner with his pick, where board and rent are low, it is much better than—

“Down in a coal mine, underneath the ground,
Where a ray of sunshine never can be found”—

and only a dollar or a dollar and a half a day, if even that.

I am describing Deadwood as it was then the home of the Judge. Of the present I am unable to speak. Two dailies, whose prices were respectively \$12 and \$8 per annum, and two weeklies honored the little metropolis of only three thousand inhabitants; and, by the way of suggestion to our Eastern press, the generous press of that city deliver their issues every morning at the door of the minister of the Gospel with no expense to him, and—as generously insert all matters that advance the interest of the churches. Generous West! God, true to his faithful promises, fills thy barns with plenty. And thus it will ever be if thou art ever generous. Two banks did a larger business than is usual, I am told, in places of ten times its size in the East. Of three groceries, doing apparently an equal business wholesale and retail, the writer was informed by one that they were doing a business of thirty thousand dollars each month. Three well established churches with faithful pastors and a missionary worker of a fourth denomination, and a large brick structure, standing unfinished, of a fifth showed their religious zeal.

The writer had the honor of occupying for a limited period the pulpit of the Congregational Church as a pastor, when his duties as the General Missionary and Missionary Superintendent did not conflict. Of it he can speak freely and with honest pride. The choir for the morning service was composed of four solo-

ists. Each had been a salaried singer in the East. In the evening a trained quartette of male voices sang three selections from the classic compositions of the masters of sacred song, and a closing hymn in which the congregation joined. In the Sabbath school, second to none of its size in the United States, were to be found at their appropriate classes, the Hon. Judge Church, Judge Bennett, Judge Kingsley, and often Judge Van Cise, who formerly taught the Bible class formed of business and professional men. Other men there were of Western renown in this good work, such as Cushman, of Central City, Col., Miller, of Helena, Montana, and Bent, of Deadwood, who was the superintendent of the school and the leading man in the church; and of godly women not a few. But judges and business men honored the school no more than the young men and ladies, and the boys and the girls; a manlier or more womanly lot I have never seen in any clime.

The reader is now prepared to see the Judge on his bench. Not far from his home was the court house, a substantial structure of brick. Enter the court room, and if you are a clergyman, of whatever denomination it matters not, you will meet with the respect shown everywhere in the West to your profession; you will be invited to a chair within the railing; you will not be left to find it for yourself, but will be politely escorted to it; and you will feel it an honor, as did the writer, to sit in the presence of the Hon. Wm. E. Church and his court.

The Judge, a man of rather small stature, has a fine-grained intellect, disciplined and well trained; and a finely tempered organization. A large-hearted, whole-souled man; greatness, fineness, and goodness impress you rather than corpulence and strength; quality rather than quantity. There is nothing about the Judge that suggests the tricky lawyer. Honor and honesty; argument and proof; justice and judgment, every

one could read in his gracious countenance as he presides over the court.

Before the Judge on one side of the tables sat the attorneys for the plaintiffs ex-Judges Van Cise, Bennett, Kingsley, and John R. Wilson, of the firm of Van Cise & Wilson, who have the case in hand. On the other side ex-Judges McLaughlin and Moody, and Col. Steele, of the firm of McLaughlin & Steele, who have charge of the case for the defendants.

The case is the important one of the *Richmond vs. the Sitting Bull Mining Company*. In a word, the Sitting Bull Company are working their patented claim every day, with rich returns of silver ore. They have run their tunnels, two of them, out of their side lines from the perpendicular; following, as they say, the natural dip of the ore vein or stratum as the law permits. In so doing the longest tunnel passes through "The Tiger," their own property, into and through successively "The Surplus," "The Fraction," and "The Silver Terra:" all the property of the Richmond Mining Co. The latter claim was also patented. A second tunnel had progressed as far as the middle line of "The Surplus," when the legal proceedings now in process stopped all further workings in these tunnels. The case held the attention of the court for sixty full days; cross-examining one hundred witnesses; and listening to the mining experts, who exhibited their models of marvelous skill, constructed at great expense. The argument occupied five days. The expense of all this was not far from fifty thousand dollars; and the property involved was not less than a quarter of a million.

Before you, at work on this case, are an array of attorneys of which any Eastern court might be proud, although I do not forget the many names never to perish from the pages of this nation's history. The leading plaintiff is Judge Van Cise. Tall, manly, of fine physique, a genial face, high head and forehead he was wor-

thy to lead the winning side. The noble, godly man whose mouth unclean words or tobacco never soiled, started his life's work as a preacher of the doctrine of universal salvation. His partner, John R. Wilson, "by his indomitable energy," as one of his colleagues says, "and close watch of the progress of the case, his quickness to see and to supply gaps in the testimony, contributed largely to the successful presentation of the plaintiffs' case." Judge Granville C. Bennett, whose history is condensed in these few lines from a government report, "was educated at Howe's Academy, Mount Pleasant, and Washington College, Iowa; studied law and entered upon the practice at that place in 1859; served in the Union army as a commissioned officer during the war of the rebellion, from July, 1861, to August, 1865; was elected a member of the State House of Representatives of Iowa in the fall of 1865 for two years, and to the State Senate in the fall of 1867 for four years; was appointed Associate Justice of the Supreme Court of Dakota February 24, 1875, and resigned, on being nominated as a Delegate, August 23, 1878; and was elected to the Forty-sixth Congress as a Republican, receiving 10,455 votes against 8,493 votes for B. Tripp, Democrat." Though at that time 200 miles from the railroad, you could have found in his home, which was graced by a most loving and lovable wife, the latest magazines and the successive volumes of the *Encyclopædia Britannica* as they were issued.

Judge W. C. Kingsley was on the bench in Colorado, a constant student of philosophy, shrewd, conscientious, and upright. Six months before he entered into communion with the church he gave up the use of tobacco as the Christian's duty. I wish all would do this. Whenever it was announced that, in the absence of the pastor, Judge Kingsley or Judge Bennett would lecture in the church Sabbath evening, on "Paul" or "David," the church was packed to its

utmost capacity. Of the plaintiffs I have spoken; to meet them would increase your respect for them. They were men of no inferior minds; large-hearted, godly Christian men. The honored Judge and all the ex-Judges on the plaintiffs' side were to be found in the Congregational church, prayer meeting and Sabbath school. It was through no fault of the attorneys for the defendants that the case was decided as it was.

"Col. Steele," said one of his opponents, "has few peers and no superiors as a lawyer in the West." He was formerly a member of the Cheyenne bar, and at one time a delegate in Congress from Wyoming.

Judge McLaughlin was said to be a very devout Roman Catholic. Again I quote from another: "Judge McLaughlin is a solid, substantial man with strong and rugged ideas, and a forceful way of putting them. A man of much native ability, and no little tact and shrewdness as an attorney."

Judge Moody was the predecessor of Judge Church. He is a prominent lawyer and a well-known politician. As the counsel for the Homestake mines he receives, it is commonly reported, ten thousand annually. These were all save Col. Parker who was retained by the plaintiffs; and T. L. Skinner by the defendants should certain emergencies arise.

I think no one can fail to see that superior men of Christian character and noble manhood surrounded the Judge, himself a man of godliness. It has not been the writer's privilege to enter many Western court rooms, but when he did, it always seemed to him that he ought not to be there. Blue with tobacco smoke, foul air, bad men and worse women. But to enter and sit in the presence of Judge Church and his court was an honor and an inspiration to better mental work and to more thorough study. More careful sermons were prepared for the hearing of such men.

But now for the decision. I quote

only three sentences from the decision, which occupies seven and a half columns of the weekly now before me: "I am compelled, therefore, to hold that this outcrop found in the Sitting Bull location is not the top or apex of this vein, lode, or ledge, and that such top or apex is not within that location. I must regard that outcrop as merely an exposure of the edge of the vein on the line of its dip." Consequently the Sitting Bull company had no right to follow it out of their perpendicular lines; hence this important sentence: "The decree must be that the plaintiffs are entitled to the relief demanded."

It would have pleased the people more if the decision had been the other way. It stopped the workings of mines then in action and threw many men out of work. But a true Christian judge fears to displease God rather than men. Judge Church stood the test of the cyclone temptation of his first great mining case: though they burned his effigy at Galena, where the miners were thrown out of employment. His wife once remarked to me: "I don't suppose the lawyers think he looks through their long documents, but he does, every one of them, sitting up far into the night in order to do so."

Besides his city home, Judge Church has a summer ranch in the Southern Hills, on one hundred and twenty acres taken up by himself as a soldier's claim. A beautiful spot the haunt of the deer out of which flows ever a boiling spring of thermal waters, winter and summer alike at 67 degrees Fahrenheit. It gives me pleasure to speak thus freely these grateful words of a pastor's pleasant memories, though I regret, with an over-driven pen.

A. CUSHING DILL.

I know not where his Islands lift
 Their fronded palms in air;
 I only know I can not drift
 Beyond his love and care.

-- *Whittier.*

THE NORTH AMERICAN ABORIGINES.

WHEN the sun of civilization arose over the Western Continent, its golden beams were deflected from the wild races here. Light and freedom and peace to the white man, was darkness, bondage, and woe to the Indian, and as a result, the red man of to-day is no less a savage than he was four hundred years ago. But these primitive peoples were not all degraded. Some, even of the northern tribes, lived in a kind of barbaric civilization. They wrought curious implements of stone, and also a kind of rude pottery, cultivated their maize fields, and exercised the forethought of the enlightened husbandman in their simple system of agriculture. They taught the white man the difference between the old and new lands, and the extra needs of the former, and also how to supply those needs from the rivers, which abounded with fish; and the corn fields ask no better aliment to insure a harvest now than the Indian gave them in the early days.

But for this instruction and aid to the pilgrims, and the gift of fertile meadows by the water courses, the founders of New England must have perished, and the country remained the unknown land the adventurer John Smith so early found and left again with only a name. The coast tribes were the wealthiest. The shores—especially of Narragansett Bay—abounded with the shells from which the wampum was made, and the Narragansett Indians were probably the wealthiest of the New England tribes. Their shell coinage was legal tender for many hundred miles inland.

With this commodity King Philip, of Mount Hope, bought in the far land of the Mohawks long auburn hair to ornament his "royalties," which relics of this noble and unfortunate chieftain are still preserved. The story of the auburn tresses will only be found in the imagination, for mystery will always surround the sad fate of the fair young

owners. The tribes of the distant South also eagerly sought to obtain some of the Narragansett wampum-peg.

There were no extensive monarchies in Central North America, as was the case in Mexico and Peru, but scattered tribes, not strictly nomadic, but moving from place to place in their own tribal domains. Their hunting lodges were in the forests, which abounded with game, and with the return of spring, they removed near the shores for river and shell fish, and by the meadow lands where maize, beans, and pumpkins were raised.

The government—strictly patriarchal—rested chiefly with the head sachem, who exercised supervision over all, and usually punished offenders, even capitally, with his own hand. When seeking favor or pardon for an offense, the suppliant placed his hand caressingly on the chieftain's shoulder.

The aboriginal social ladder contained but two steps, and to the higher belonged in a great degree, the intelligence of the tribe, the chieftain's sannaps and warriors; these planned the wild forays, told the moons for hunting, and when the time for planting was at hand. With the true poetry of nature, they counted time by moons and suns, by harvests and snows. They watched the Great Bear through its yearly round, as did the oriental nations four thousand years ago, some of the natives even calling that constellation by the name given it in that old world time—Ursa Major, or words signifying that name.

For a long time the colonists believed the Indians to be destitute of all religion as they had no visible objects of worship of their own device, and but few rites that could be termed devotional, yet the North American Indians were on a higher spiritual plane than any of the old world barbarians. They believed in a bright and beautiful land in the far Southwest where the spirits of the brave and true forever pursued the de-

lights of the chase, with no hunger, fatigue, or cold. There were, too, dark abodes of misery for the coward and recreant.

When the white man landed on these shores, with his heart and mind stored with intellectual and spiritual lore, the aboriginal mind was ready to receive this knowledge, but the colonists, absorbed in their own struggle for civil and religious liberty, and borne down by their own hardships, forgot the darkened race, within whose lands they sought a home, and never absorbed them in the civilization planted here.

The scattered roving tribes were pressed farther inland, and when overcome in the struggling warfare, were either exterminated or sold out of the country into slavery, Barbadoes and other of the West India islands offering a ready market. These facts are more humiliating, because the colonists professed to be working for the glory of God and the advancement of the Christian religion. But in justice to our New England ancestors, it must be borne in mind that the times at home were rugged and cruel, and the people bore rude traits with them to the New World, and too often failed to recognize the bond of common brotherhood existing between themselves and the native owners and occupants of this land. Then, too, men believed slavery to be a divinely appointed institution, and the victors believed that they were rightly disposing of the Indian prisoners.

Refugees from the dungeon and the stake never overflow with the milk of human kindness, and the early colonists were of this class. Later, adventurers and lawless men came hither, and warred upon the Indians on the slightest pretext. But the foundations of the commonwealth were laid by sober, God-fearing men. A church was the corner stone of the early towns, and the church laws extended over the township. Through the middle of the 17th century this order of affairs continued. Later,

proprieties were formed by Royal grants of land to individuals or small companies, to be effective when the Indians should be removed—keeping in view the fact that the Indians *were* to be crowded off as soon as possible, either by purchase of the land at a nominal price, or by exterminating warfare.

In this way new towns arose, sales were continually negotiated, hands were ever reaching out to grasp the red man's land and to drive him therefrom, instead of gathering him in to share the blessings of Christianity and the white man's civilization. This policy has always made the Indian a sufferer from civilized law, and given him no share in its blessings and protecting powers. The old chroniclers relate that the first meeting house in New England had guns mounted on the roof, thus combining the church and fortress. And these precautions were needed, for the natives, though gentle, peaceable, and trusty in the beginning, soon learned to become crafty, wily, and vengeful foes.

The early settlers, though expatriated refugees, were men of learning and culture, and for the first forty years of their New England life, instructed their children at home, there not being a large enough number of inhabitants to establish a school system. In 1663 the question of schools for reading and writing appears to have first taken definite form and very soon after followed this quaint enactment by the court—legal authority in those days—"that every town of seventy families who are without a Latin grammar school, shall be fined, to the end that learning be not buried in the graves of our fathers." From this time the school was a settled institution of the people. The product of the Cape Cod fisheries, the dead whales cast ashore sometimes numbering several in a year, was devoted to this laudable enterprise; also the product of certain lands, denominated "school lands," were among the ways and means to establish free schools on a permanent basis; but the

records of those days unfold no plans for meeting the spiritual or mental needs of the native race.

Both town and proprietors' records are very explicit concerning the affairs of those days, but they contain no words of comfort or help for the Indian. The titheing man was the only officer appointed strictly for Indian service—not for their civilization and education, but to note their faults, and report them for punishment!

The introduction of intoxicating liquors among the natives sank them in to still deeper degradation, besides arousing their savage nature from its lowest and darkest depths. One of the most pathetic pages of American history is the record of the protest of the aboriginal chieftains to King Charles of England, through the king's commissioners, to the effect that the king's subjects should not be allowed to distribute strong drink among their people, as they "became worthless and soon died from the effects." Among these remonstrants was Weetamoe, queen of Pocasset. This native sovereign sent her son to Harvard to be educated, but she ever remained true to the land of her fathers, and perished during King Philip's war: a noble specimen of an aboriginal princess.

It is a sad truth that the free institutions of our great Republic have not one foundation stone for the aboriginal race to rest upon. The policy of one administration is very often set aside by the next corps of legislators, and the Indians have been entirely thrown out of consideration, if we except treaties made with them for the purpose of taking their lands, and too often never paying for them. The pages of the nation's archives have often been stained with the records of these dark transactions.

At the close of the Revolutionary War, the infant Republic possessed thirteen small colonies, weak, impoverished, and in debt. These colonies held a narrow belt of country along the Atlantic coast—the entire Mississippi valley yet

remaining in the hands of primeval owners. The Mississippi River was known indefinitely as the "South Sea," and sometimes as the "Western Ocean." All beyond was chaos, as far as history and geography were concerned. One of the earliest plans adopted by the first Federal Congress, when the framework of this nation was being laid, was to establish their commonwealth and pay the national debt by the sale of the Indian lands, still held and inhabited by the tribes. In the Journals of Congress for 1784 is a draft for an ordinance to press the Indians off their lands as fast as possible, and to establish a Federal Land Office, where these lands might be sold and all kinds of Federal securities received in payment, thus establishing a sinking fund to extinguish the debt incurred in their contest with the mother country for national independence.

The Indian lands between the northern boundary and the Ohio River, though still in possession of the tribes, were estimated in extent, and a price per acre affixed to this estimate, at a rate at which the proceeds of their sale would cancel the national debt. The same policy was pursued in the South. A fixed market value was placed on extensive tribal lands still peopled by their native owners. The topography of this country was almost entirely unknown a century ago. The western bounds of the "old thirteen" were very indefinite; even Massachusetts and Connecticut extended to the "Western Ocean," that is, to the Mississippi River, and land claims in Ohio, arising out of these old boundaries, were in the courts there very recently, if they are not pending even now.

The 19th century has been filled with events concurring with those of the early time, and the Indians have been swept westward through all the years. The wave of conquest has continually engulfed the race, and a great commonwealth stretches out its arms to the nations of the earth, and far off people are

gathered under protecting laws, where but a few years ago the bark wigwam stood, and the frail canoe only navigated the lakes and streams. Here in a land of golden plenty, where church spires gleam and lofty mountains are crowded with observatories and far-seen beacon lights of learning, a native race, intelligent and capable of receiving civilization and education, has been left in savagery, in distant and often barren lands, where they have been driven by the white man's bullet. A quarter of a million human beings still exist in the Western territories, living in a wild state, while enlightenment shines with noon-day splendor in the land of their ancestors.

The wave of European civilization has swept the aboriginal race far westward, an oncoming tide from the shores of the Pacific rolls eastward—the Indian must perish or mingle with the great ocean and become a part of it. The power of

a Christian civilization can save them from the vortex of the waves. The Indian is indigenous to the American soil, and he always, even as in the days of Miles Standish, "dies hard," but the last fifty years have been particularly fatal to the tribes, many thousands of whose people have been gathered into the domains of the dead each year of the 19th century.

Only within the last decade has there been any dawn of a better day for the Indian. The heart of this great nation is beginning we trust to throb in pity for the darkened beings in its midst, and in obedience to this feeling, the red-handed policy of our forefathers is changing.

What has been done to elevate the red man is a brief and meager story. Righteous laws and Christian philanthropy have a great and extensive labor to perform, to atone for the errors of the past.

ANNIE E. COLE.

JOSEPH A. S. MITCHELL,

CHIEF JUSTICE OF INDIANA.

HON. JOSEPH A. S. MITCHELL was born in Franklin Co., Pa., Dec. 21st, 1837. Like a vast majority of country boys, his early life was spent in working on a farm in the summer and attending the common district schools during the winter. After he had acquired all the learning he could in the common school, he attended a short time at an academy. When he was about eighteen years old, he began teaching, and thus obtained a little money with which to make his start in life. He studied law in the office of Messrs. Riley & Sharp, Chambersburg, Pa., and was admitted to the bar in 1859.

Shortly after this, he began the practice of law at Goshen, Ind., but on the breaking out of the war he enlisted in the Second Indiana Cavalry. He spent two years in the service, during which he was promoted to the rank of captain

and was made a member of Gen. McCook's staff. When the war was over he returned to Goshen, and gave his whole energy to the practice of his chosen profession. The twenty years from 1865 to 1885 were, for him, years of hard and unrelenting toil. The greater portion of the time he averaged fourteen hours of work a day. By means of his unflagging efforts he built up a large law practice, and acquired the reputation of being one of the best legal scholars in the state. In 1885 he was elected for six years to the Supreme Court of Indiana, and, at the last session of that body, he became Chief Justice.

In politics Judge Mitchell is a Democrat. Although he has always labored zealously for the advancement of the interests of his party, he has never been a bitter partisan, and at the same time he has been averse to office-seeking

The only office which he ever held besides the one he now fills was that of Mayor of Goshen, to which he was elected in 1872.

In November, 1865, he married Mary E. Defrees, a daughter of the late Hon. Joseph H. Defrees. They have had three children, two of whom are living.

Captain Mitchell, as he is familiarly known in the vicinity where he resides, is a square-built, solid-looking man, about five feet eight inches in height.

their rights as citizens are concerned; and, though he has achieved prominence for himself, he does not on that account look down on his less favored brother.

He is a man of excellent judgment, especially in matters relating to the law; slow in forming his opinion, but when it is once formed, he rarely has occasion to change it. He is a deep thinker and logical reasoner, taking comprehensive views of all subjects that require his



JOSEPH A. S. MITCHELL.

Although but fifty years old, he has had a long and useful career, and appears to have many years of usefulness yet before him. He is not a brilliant or showy man, but nevertheless a man of sterling worth. He is very modest and unassuming, easily approached by those who know him. There is no person, however poor or humble, that does not feel perfectly at ease in his presence. He regards all men as equal, at least so far as

consideration. He is very steadfast, so much so, that when his mind is once made up, nothing can swerve it. Whatever he attempts, he accomplishes; difficulties that would appall less courageous persons, only spur him on to more vigorous efforts.

He is a man of the strictest integrity, and this is generally known, so that his word is considered as good as his bond. Having always led a pure and virtuous

life, he exercises a wide influence for good among his fellow-citizens

Such are a few prominent features of a man whom the State of Indiana delights to honor, and here is a life full of valuable lessons for young men ; an example of what a man of pluck and energy and purity of character can do. With duty uppermost in his mind, and

with an invincible determination to exert an influence for the right, he has achieved the highest and best success. May those who read the record of his life, as well as those who are fortunate enough to enjoy his personal acquaintance, be encouraged to put forth greater efforts for the attainment of a true and noble manhood. H. S. BARTHOLOMEW.

LIVING POEMS.

IF you have the gift of poesy, and can not write it, live it.

If there is an immeasurable song in your soul, don't try to measure it. Let it sing itself out in your daily life. If there are some pure spirits in the region of your imagination that refuse to be materialized, do not drive them from your mind. Sit down and commune with them, or take them as companions in your labors. Their presence will sweeten toil, and make your life nobler and better. You are a poet. You feel it in every nerve, in every pulse. Poetry is an element in your composition.

But there are springs in the forest of which no man comes to drink, and they bubble and gurgle on in solitude for hundreds of years, sending out tiny streams that trickle down the hillside and go to join the great rivers of which men drink, and upon whose bosoms boats come and go.

Are you shut in ? Are there Sloughs of Despond and Mountains of Difficulty all around you ? Can you find no outlet for the spring of music that is murmuring in your soul ? Are you groping blindly for the path that leads to fame ? And growing discontented and unhappy because you can not reduce to an article of merchandise the spiritual life that is within you ?

Don't put out the fire that glows upon your hearthstone because you can not sell the pictures which its flames paint on your walls. Warm yourself in its ruddy glow, and throw open your doors that your friends and neighbors may

come in and share your comfort. If you have a gift, however small, appreciate it, cultivate it, and share it with all who are within your reach.

Don't go down to your grave burdened with a useless package hermetically sealed, and labeled, "Unappreciated Genius."

If you have a song bird, hang its cage on your front porch, where every passer-by may be comforted by its trills. Is not that better than to kill it because all the world can not hear it sing ?

Write, if you will ; be successful if you can ; but don't sacrifice to wealth or fame, or any other worldly god, the pure inspirations of your soul, nor shut out from your life the longings and the loves of others. You can not afford to be selfish. Selfishness may lead to success, but it can never lead to happiness.

Circumstances — cruel, immovable, unpitying circumstances—may deny you the rapture of seeing your name attached to a published volume of poems ; but they can not prevent you from making a poem of your daily life. And you can make it as grand as you choose ; as rhythmical, as beautiful, as true ; and it will be read and appreciated. Moreover, like the spring in the wilderness, it will not only refresh the flowers and trees and birds around it, but it will send out tiny streams of refinement, of cultured thought, of loving kindness and human sympathy that shall gladden the hill-sides as they go, and finally join themselves to the great rivers of intellectual progress.

A. M. COSTELLO.

PRACTICAL PHRENOLOGY.

[CONDUCTED BY PROF. NELSON SIZER.]

BALANCE OF DEVELOPMENT.

THE following extract from a written description of character recently made will show some phases of the subject of balance :

"Your organization is pretty fairly *balanced*, and that means really more to us than the word would commonly mean to others. We find by contact with mankind that it is not a common thing, in this age of progress and change, for men and women to be well or harmoniously balanced. We had, for instance, a man, a short time since, under our hand who had a head measuring 24 inches, and he weighed but 125 pounds, when he should have weighed 195 pounds. Another came in an hour later with a head of 24 1-4 inches, and he weighed 305 pounds. He had 105 pounds too much, but the other had 70 pounds too little. Neither was balanced, especially the lighter man. The heavy one weighed a good deal more than was necessary, which could easily be reduced, but that was better than weighing so much less than was necessary, which, with the weak vitality, could not be brought up to the proper point. It does not do much harm for a lamp to be a third larger than is required, but it is unfortunate for it to be so small as to need filling twice for one evening, or to be set aside. A wagon wheel runs smoothly when it is perfectly round, but if the spokes were two feet long on one side of the wheel and two feet six inches on the other side, it would make a man astonished who should drive rapidly and ride in such a wagon. The man with the 24-inch head, weighing

125 pounds, was like a lamp that needs two fillings for one evening. He lacked the bodily strength to nourish his great brain, and hence he could do but little work that required manly grip and breadth and vigor of mind. At least he could not work long at a time without resting, or think long; he had to let the mill-pond fill up, as the millers would say. This prepares you to hear what we want to say about your balance of organization.

Your head measures 21 1-2 inches, and that is exactly right for a man whose weight turns the scales at 140 pounds. If your head measured 22 inches, you should weigh 150 pounds. If it measured 23 inches, we should claim that your weight ought to be 175 pounds. You can work easily, actively, earnestly, and your brain will inspire you to efforts such as you can properly make, and you get tired all over, head and body together. The impulse which the brain gives will be vigorous, and hold out as long as the vigor and the endurance of the body continue. So when your body is tired out, your brain is also ready to sleep, and you are not so likely to overdo as you would be if the proportions between head and body were different.

There is another way in which we study the balance of organization; that is to say, between one part of the head and the other parts. For instance, the front part of the head is devoted to intellect. Sometimes that is very large for the size of the head, and other parts are smaller. Sometimes the back head, or

middle-head, or top-head, or the crown of the head may be uncommonly large, while the forehead, where the intellect resides, may be small. Then we would have an affectionate, energetic, proud-spirited, moral man, with narrow intellectual life. He would be excellent and loving, but not know much.

The different sections of your brain are pretty fairly organized. So we give you credit for balance of character. One set of your faculties do not run away with the whole mental make-up. You have seen men who, when they get tipsy, are dangerous to the whole neighborhood. Their force of character, located in the base of the brain, gets inflamed, and they have not the restraining reason to hold it back. Others that know a good deal, and are good, but have very little energy, if they get maudlin in their cups, will sing funny songs, perhaps

'I won't go home till morning, till daylight doth appear.'

You now begin to see what we mean by a balanced head.

To come down to particulars, your head, from the opening of the ear backward, and from the opening of the ear forward, indicates about the right proportions. The lower part of the forehead gives practical intellect; and that part of your forehead is amply developed. You are hungry for facts, anxious to acquire information, inclined to pick up knowledge as you have opportunity. You can work your own way in gaining knowledge. You could look on and see men work, and when you had seen a man make three barrels, you could take the tools and make a barrel nice enough to hold flour or salt. If you were to watch machinery, you would study out its adaptations, and soon learn how to handle it, control it, and take care of it.

You could learn a mechanical trade, for instance, that of machinist, or carpenter, or mason, and could go into a factory and learn the different ways of

cloth-making, and be an accurate and rapid workman. You could learn educational matters, languages, or science, or you could learn to be a physician.

You are a clear-headed and keen judge of strangers. You could learn to be a merchant, and judge of the quality of goods and their relative value, and also manage your customers with skill.

You have a good memory of what you see and do, and where you go. You can pick up facts and information, and make yourself intelligent on a great many topics. If you had been taken fifteen years ago and put into a first-rate school, you might have become a classical scholar, and to-day have stood up as an educated man, qualified for most departments of duty in which scholarship is required. Your force of character and your self-reliance will enable you to take and hold good positions, and not be always in danger of losing them. If you are not remarkably strong in any one direction, you have no weak points which indicate probable failure."

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HUMAN CAPACITY. :

IS the human race endowed with talents, tastes, and capacities so as to furnish to-day the requisite number to conduct the varied affairs of life and business, so that every department could be properly filled, and all be occupied?

In reply to this question, we may say that human nature is susceptible of varied culture, and that all the *faculties exist in all men* (except idiots), but the faculties are naturally developed by the incidents and circumstances which may act upon given tribes or classes of people; and if the question were asked, "Are all men now qualified to adapt themselves to the different economies of life?" we would say "NO." A great majority of mankind to-day are adapted to the commonest drudgeries only, because the majority of the race have not been cultivated so much in the faculties of philosophy, and ethics, and æsthetics,

and mechanics, as they ought to have been; hence some nations are behind in arts, science, and literature.

On the sea coasts we find men developed in reference to following the water, and seamanship chiefly is the result, and men have become almost amphibious. In other sections we find that the mechanical elements have been cultivated until the strength of the character finds its outlet in mechanism. We know of a town in Massachusetts where they nearly all tend toward the ministry and missionary work. Somebody has succeeded in that direction, and others have followed, until the strong current in that town is toward the ministry, as in other towns in the same state the current is toward navigation, especially the fisheries, and in others toward mechanism. In Kentucky there is a public sentiment that runs toward fine horses, and fine horses are the result. In other sections, not denying Kentucky her share, law, politics, statesmanship, public affairs, seem to be the aspiration of the people, as in California and Colorado mining is the drift, and millionairism is the prayer, if not ultimately the song, of the people. The Spaniards have made most of their colonies on the false basis of hunting for precious metals, and their colonial civilization is faulty. The English have colonized for homes, farms, mechanism, and trade, and their footsteps have been firm, and the results permanent and powerful. France cultivates ornament and æsthetics, and we have a nation of fancy, style, and decoration. The Scandinavians, by necessity, followed the sea, and they became navigators and the explorers of the world.

If we could find a country with the soil and climate adapted to the development of every useful trade, art, or occupation, doubtless the public would become classified so as to adapt a proper number of persons to each department of effort and achievement pertaining to all the phases of an excellent civilization. New England could not raise

wheat, and Illinois lacks the water-power to be, like New England, a manufacturing region. The faculties become cultivated by practice, and practice is invited by necessity, and necessity is met or not met by opportunity, hence culture in diverse directions depends largely upon the wants of the people and the opportunities for such development. A hundred years from now this country may illustrate a harmonious division of talent and its adaptation to the different pursuits and attainments of life.

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A MOTHER'S STORY.

A LADY recently called to tell us that she brought her boy to us a few years ago, who was so self-willed, headstrong, and contrary, that he ignored or repudiated common restraints and dictation which seemed to be necessary to regulate his conduct and character, and we described him as being headstrong, obstinate, and difficult to manage, but that he had enough of the elements of integrity and manly ambition to fortify him if he was not teased and annoyed, but that his Self-esteem, Combativeness, and Firmness were so strong, that anything like coercive measures simply exasperated him, and made him ten times worse than he would be to let him alone; we gave them the directions to treat him kindly, not exact anything of him that would be onerous or displeasing to him, and let him take a year or two of growth under the kindly skies of beneficent influence, and that he would come out all right if they did not spoil him. She said that they adopted our advice, much against their previously formed opinion, viz., that they must restrain and repress and punish if they wanted their boy to be good.

As soon as they modified their treatment the boy's character was modified; he began to study his lessons, and be obedient to the ethics of the household, and he has now become a leading

and popular salesman in one of the largest carpet houses in New York, and there is nothing to be desired which he does not manifest, and to use the lady's words, "I have thought it over many a time, and felt that I must come and tell you, because I have such reason to be grateful for apparently saving our boy, and I am sure that his character is well established, and that we have nothing to fear and everything to expect in his behalf."

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THE MOTHER HAPPILY DISAPPOINTED.

TWO years ago, Miss L., of New York, obtained a full written description of character from us at our office. She was described as having excessive Conscientiousness, Cautiousness, and Approbativeness, with deficiency of Self-Esteem, and consequently that her life was largely blighted and made unhappy by these facts, being thus made wonderfully timid with reference to going forward in the line of duty, and exceedingly sensitive as to the opinions entertained of herself and her doings by her friends with a constant sense of fear, unworthiness, and incapability growing out of the action of these faculties.

To-day, July 25th, she came in and said: "When I came in two years ago, and you examined my head, describing me as I really was, though I did not know it, opening my eyes to the working of my mental life, and the way I was affected by the opinion of the outer world, giving me the philosophy of internal influences upon my mind and character, I was amazed to be so completely revealed to myself, and wondered that I had never understood it.

"When I got home I told my mother what I had done; she said: 'Well, my daughter, I think you have spent \$—— more unwisely than I thought it possible, that you with your good sense and prudence could do.'

"In less than a year, so changed had I become in my ability to act, and in my method of regarding the influence of society, and the opinions of the world, my proper sense of duty and method of taking hold of affairs, and being master of myself and my conditions, that my mother and my other friends had noticed the change for the better, and my mother was kind enough to say to me: 'My daughter, I must take back what I said about the money you paid for your examination; I now say that if you had paid a hundred dollars for it, it would have been the best outlay, considering the richness of the return, that you have ever made.'"

Such facts as these are a comfort to us in several ways. First, that we are able to earn our bread in such a manner as to do our customers infinite service, beyond the cost of the compensation they make us. Second, if one makes a coat or a pair of shoes for a customer, and he pays the normal value, the account is square; but if one puts another on the right track of better living and higher personal character, he may "save a soul from death, and hide a multitude of sins;" in other words, he may double the man's happiness; he may increase the term of his life, perhaps a quarter of a century; he may start forces in some good man toward better and stronger living that shall go on for indefinite ages, multiplying in generations to come all beneficent influences.

It is not mean to do good, honest work of whatever kind for our fellowmen, and render them, as the good bootmaker does, an equal return for value received, dollar for dollar; but when one can guide a boy to nobler manhood, who might otherwise go astray, or open to the life of a girl a pathway of success, health, and well-sustained self-hood, and thus augment her life and her happiness a thousand fold, the result can not be measured by dollars. Although in this world of want, the dollar is necessary, but thank God it is not the

whole of a man's wages, when he can work for human improvement while he earns his own support. He who can double the power of a person to know, achieve, and enjoy, does not realize his full compensation when his bills are paid.

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"APPLES OF GOLD."

THE following extracts from a letter dated January 10, 1889, and addressed to us with a renewal of subscription for the JOURNAL, may encourage others to look upon Phrenology with more interest and confidence :

"I will now add something of a personal nature. I am more than sixty-five years of age. In my early life I indulged in card playing, whisky drinking, and generally in a reckless life, including doubting the truth of Christianity. I accidentally got some of your publications, including Combe's 'Lectures on Phrenology,' and his 'Constitution of Man,' and carefully read them. These led me to a higher standard of living. Indeed the teaching contained in these works revolutionized my life. I abandoned my whisky, my gambling, my reckless life, and my skepticism. I learned that the development of the brain exhibited the talents given me by a Divine Being. I have since been striving in a humble way, to cultivate and encourage my talents. I felt the benefits so much that I wanted to extend them to my children. Consequently I sent one of my sons to the 'American Institute of Phrenology,' and paid the \$100 for his six weeks' tuition, and the result of his teaching was so satisfactory that two years later I sent the other one through the Institute, and paid \$50, the price having been reduced. In his case also the result of the lessons has been to greatly improve him in the way of life, and as I believe, to fit them for any position in life which their talents may qualify them to fill. Though I am an agriculturist and my life mostly spent on the farm, and possibly my sons may take the same course, yet I believe their lives like mine will be, by Phrenology, much refined and made much more happy." Truly Yours, —. —.

B——, Ill., Dec., 1888.

Fowler & Wells Co.:

The phrenological description made from photographs is received. It is, as I supposed it would be, truthful and accurate. I believe I will follow your advice in regard to the pursuit you recommended. My interest in Phrenology will never die out, for there is much in it to elevate. Yours Truly, —. —.

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GOOD WORDS WELL RECEIVED.

A VALUED lady friend and patron, of New Mexico, writes us, Jan. 5, 1889, ordering several books and also the PHRENOLOGICAL JOURNAL for the year, and adds :

This is my New Year's present to a friend in California.

I had the two dollars this month to send for the JOURNAL and as you have so generously reduced the price, I can have the extra fifty cents for other good things. I am always more anxious to receive the PHRENOLOGICAL JOURNAL than any other that comes to me.

I wish you financial prosperity this year, 1889, and that great good may attend your efforts to educate and free from mental narrowness, the masses who read, and in one way or another are influenced by your publications.

When I was sixteen years of age, my father purchased a number of books at a sale of second-hand-books. Among these was "Physiology, Animal and Mental." Father gave me the privilege of first selection of five volumes. My first choice was "Physiology, A. and M.," by O. S. Fowler.

This was my introduction to the Fowler & Wells publications. After reading that book I was hungry for more of a similar kind, and my appetite was increased with the years. I have expended a considerable sum of money during the past twenty-five years for books and charts sent out by your house, and hope to have money in the future, so that I can give to others as well as to supply our library with this wholesome reading. If the youth of this age could be induced to read the PHRENOLOGICAL JOURNAL and similar works, and let "Yellow back literature" go to the flames or receive no patronage, the children of thirty years hence would be vastly superior to any that have yet been born. We must work and pray for the good of our fellow-beings, Men, Women, Brothers and Sisters, Equals.

CHILD CULTURE.

CHARACTER—HOW FORMED.

THE oak is regarded as an emblem of strength and of stability; the ivy of weakness and sensibility. The oak is self-reliant, the ivy dependent.

These are types of human character, not of masculine and feminine, but of the strong and the weak. The oak begins its existence as humbly as the ivy; it is, like its neighbor, a tender plant, which an insignificant worm might destroy. But the elements of a great tree, a monarch of the forest, lie hid in that tiny embryo. But the proper conditions are necessary to its development. What are those conditions? They are darkness, light, dew, rain, wind, storm, cold, heat, as well as soil. It must drink the dew and the rain, absorb the sunshine, breathe the air, and suck up the soil. But what part in its development does the storm, the night, the frost play? Aye, they develop its character; they make it strong, self-reliant. The hurricane threatens to uproot it, the whirlwind to shiver its heart in twain. But the one causes it to send its roots deeper into the soil, the other to knit its fibers closer together. Jupiter Pluvius sends the rains in torrents, as though he would dissolve the solid earth in which it is rooted, but the tree drinks up the flood, and with it the nutriment dissolved by it, and grows strong on what threatened destruction. Watch its career, and see it calmly turning every circumstance, whether apparently adverse or fortuitous, to its own account in promoting growth or developing character.

The history of men bears strong resemblance to the history of trees and vines. Some are born with the elements

of greatness in them in such large measure that from the first they are masters of the situation. They turn every circumstance to advantage. Poverty, privation, sorrow, every so-called evil becomes a blessing, a means of development. Poverty compels labor, and labor knits muscles, strengthens will, and develops power of endurance. Sorrow quickens sensibilities, and sweetens affection. Opposition or persecution develops courage and independence of character.

Others there are who have no grasp on fate, no control on circumstances, no power to win the prizes of fortune and fame. Drifting or skulking through life, and clinging with nerveless grasp to whatever or whoever seems to promise support, they sink at last into nameless graves, their lives unhonored, their deeds unsung.

But the large majority of men are neither imbeciles nor intellectual giants. They are simply commonplace, endowed with common sense and surrounded by conditions that give average opportunity for development. These lack the genius that achieves extraordinary success despite opposition; but they are safe from the necessary fate of those who spend their lives in the prison house of despair wearing the chains of circumstance. Within certain limits, and those quite wide, they are free to choose what manner of men they will be, whether educated, refined, intelligent, virtuous, honorable and useful, or ignorant, boorish, and vicious, a curse to themselves, their families, and society. But much also depends upon the start in life they get.

"Tis education forms the common mind,
Just as the twig is bent, the tree's inclined."

Education, by which is meant developing, as well as training, guiding, and disciplining, is the circumstance chiefly instrumental in giving bent to character in the average child, and education begins at birth. Every look, word, thing, or person which a child sees, hears, or feels, leaves an impression more or less distinct upon its character.

As the child's mind begins to unfold in the realm of reason, its own responsibility begins to supplement that of its parents and teachers, and when the boy steps upon the plane of manhood he takes his fate solely into his own keeping. It is now a personal question, "What course in life shall I pursue, what sort of character develop?" for remember the education is only fairly begun, not finished. You have simply passed from the preparatory academy to the college, where the lessons are harder and longer, and where you are put upon

your own responsibility as to behavior and progress. Your school is now more practical, your lessons being chiefly those of experience, the most valuable of all lessons if rightly used. The observance of a few fundamental rules is essential to the formation and perfection of true character in this college of the world where men and women are trained.

To be honest, to be courageous, to be magnanimous, to have absolute faith in the right, to be fixed in the conviction that a good deed never fails of its reward nor a wrong action of its punishment, that vice never succeeds nor can virtue fail, that any apparent triumph of wrong is only an apparent success, which is in reality a stupendous failure. Discriminate clearly between reputation and character; between what people think you are and what you know yourself to be. To others one may seem what he is not; to himself he stands revealed. Reputation is what you pass for; character is what you are. T. A. BLAND, M.D.

AIDS TO KINDERGARTEN WORK.

TO make Kindergarten work effectual, and have it accomplish results to the full extent of its possibilities, the work of the teacher should be supplemented by the work of the mother, in the home. While the young hearts and minds are in the developing process, then is the time when every moment is precious. Not by cramming, not by stimulating the young brain to undue activity, but by guiding and directing into the safest and best paths of knowledge. One great aid in this direction is story telling. Every child loves to listen, and will remember. One of my earliest recollections, which ever gives me pleasure to recall, is sitting with other little ones of the home circle at our dear blind grandmother's knee and listening to her quaint old stories. If you have not a fund of stories in reserve, read to the children. Many wise mothers are very much op-

posed to this, as they fear it will make the children lazy and selfish; that they will never become readers themselves. It is often hard to decide just what are the best methods to adopt, but certainly there is much to be said in favor of this plan. Children will not learn to read as early, perhaps, but that will only make their progress so much the more rapid, when they once get their interest awakened, and they will also read more understandingly. It is also a great help and ally in governing children.

There is no wide-awake boy or girl but that will leave quarreling or disputing to listen to the charming stories told or read, of "Jackanapes," "Water Babies," or "King of the Golden River," not to mention the old old stories of the Bible, always new, and a source of unfailing delight to every child who is so fortunate as to hear them.

The promise of having a chapter read

in some favorite volume, will call them away from their doubtful companions and cause them to give up cheerfully some cherished plan or pleasure. It takes the mother's leisure, and some think children need disciplining, not coaxing, into obedience. They will get plenty of disciplining, never fear, and a little coaxing sometimes is better than hasty punishments given often in anger. We will never regret any little pleasure or happiness we can give our children in a healthful, wise way. Teach them self-denial by example, as well as precept; make them feel by the whole home atmosphere that the only true way of living is living for others, in doing little every day kindnesses. Teach them at the holiday season the pleasure of giving; give them fewer gifts, and let them spend any surplus money for gifts to other and less fortunate ones. Give them plainer clothes and plain, wholesome food, and let your extra indulgences come in the form of reading, and they will not be injured by it. In following this plan children will learn to speak correctly and express themselves clearly. When you are reading illustrated books explain the illustrations; thus give them the love of the true and beautiful in art. Avoid reading silly stories, of which there are too many, even in our Sunday school libraries. Our best authors and poets have nearly all something for the children. Read the best, refreshing your own memory, at the same time giving your children a taste for the best, and when they learn to read for themselves they will care nothing for trash as their taste is framed for better things. By reading to the

children, you can often select books that the average child that makes his own selection will pass over as dry and uninteresting, and by omitting that which is beyond the child's comprehension, find much to interest and instruct.

Children that are not read to and that learn to read young, often become regular gourmands, and read all that comes in their way, without judgment, because they have none, and it becomes a form of dissipation. On questioning these children, one is surprised to find how little they retain of what they have read. On the other hand, children that are guided by kind hands in this matter, may be backward in their studies, but surprise their teacher always by the amount of general knowledge they have. The children themselves often wonder where they have learned this or that.

I knew of a thoughtful little boy coming home one night and asking his mother when he learned about the growth of plants? His teacher had given the class a lesson in botany, and he was the only one who could answer a question. His mother reminded him of a little book she had read, and of the walks they had taken when they had gathered the flowers by the way, and talked about them. He had learned unconsciously; and so it will come to these our little ones, even till they advance to the higher schools of learning.

Blessed are all little ones that have the path made smooth to their tender feet. Rough, stony places will come soon enough, and the care and love given now will be help over hard places by and by.

MRS. S. B. BOWERMAN.

REPRESSION.

WOULD it not be better to let children have their own way more than we do?

"Their own way, indeed! That is what is spoiling them," I hear some straight-laced parent exclaim, and in rare

instances it is undoubtedly true, but I believe that more children are injured by injudicious restraint than by too much freedom. It may be a trite saying that children are miniature men and women, but a truer one never was uttered, and

in order to fully appreciate the child's feelings, suppose we try to imagine how it would seem to be repressed here, and thwarted there, until we have no individuality left.

Children have likes and dislikes, wishes and plans, just as real, just as reasonable as our own. They may lack judgment in carrying them out, but will they not always lack if never allowed the privilege of using the little they have? It is indeed the parent's privilege to direct his child's judgment, but not to deprive him of it, by thinking and judging for him.

Many times we err thoughtlessly in this respect. We tell the child to do this or that, never stopping to think that he may have had some little plan of his own he would like to have perfected, the carrying out of which would not have interfered in the least with our own arrangement, had we possessed the foresight to have perceived it, but having received our command, he feels in duty bound to give an unquestioning obedience while his own little project goes to the winds.

There are parents, I am sorry to say, who regard a child's plans as something unworthy of notice; to such the following brief incident would seem scarcely worth the telling. The teacher of a small district school had promised his pupils a visit to a neighboring school a short distance away. But little else was talked about among the younger mem-

bers of the school, and girl-like they had talked over among themselves what they should wear.

"I shall wear my plaid flannel, shall I not, mamma?" said little Jennie Deane, rehearsing their plans to her mother after school.

"Yes, and your muslin apron."

"O mamma, must I wear an apron?" protested the little girl.

"I think you had better," her mother answered, and no more was said upon the subject until the morning of the expected visit, when as she was making preparations for school the little girl ventured to broach the matter again.

"Must I wear an apron, mamma? None of the other girls are going to."

"Oh, yes," answered her mother thoughtlessly, and the child obeyed, though the big tears stood in her eyes.

Now this desire to dress like the others was perfectly right and natural, and what justice was there in her mother's persistence?

Children are oftener wounded by thoughtlessness than unkindness, unless these may be called synonymous terms. Few persons are intentionally unkind to their little ones, while many are so through want of thought and lack of sympathy. It may be well to frequently recall memories of one's own childhood, as the child of to-day is much the same as that of fifty years ago.

MRS. S. E. KENNEDY.

THAT STUPID CHILD.

THE stupid children are not numerous in any one school, and yet they are the torment of the average teacher's life. What can be done for them? What can be done with them? The teacher's success and comfort depend largely upon his methods with these few. They require individual attention, but great care must be exercised not to make them uncomfortably prominent.

The first few minutes of each recitation should be directed to them unsuspectingly, through clear statements and attractive presentation of the main features of the lesson. To begin the recitation by asking questions is fatal to the interest and profit of the stupid child. The first requisite is to "get hold of" this child, and unless it is done before attempting to get a grip upon the lesson, it will not be done at

all, while if the teacher awakens the mind at first he may hold it through the recitation. Stupid children need an intellectual tonic. Some teachers ease their consciences by administering intellectual narcotics that make them rest peacefully in their stupidity; others apply a counter-irritant by means of some caustic remark about their dullness, while still others merely furnish intellectual stimulants to make them think they know

something, content with self-conceit. The thing needed is tonic. The recitation hour must not be used to find out how much the dull child does not know, but to invigorate his mind to know and do something. Such tonic can be furnished if the first few minutes of the recitation are given to a bright, spirited, entertaining introduction to the lesson, so directed as to make them think and talk to their own enjoyment.—*Ex.*

TWO WAYS OF TEACHING.

BY the first long lessons are given to be memorized, many examples to be wrought, the teacher, so called, acting as stern inspector to see if the pupil has worried through it all. By the second the memory is not hard pressed; a few problems for illustration; the teacher, idolizing no book, clears the way ahead, illumines the subject; and at the recitation, if not before, helps up the weary. It is understood that some pupils, on certain branches, should be excused. Method one prevails in high schools; method two in universities. The high school is the Egypt of tasks in the long march of education. It will remain so until parents, committees, and the press demand that the lads and misses whose health, happiness, soundness of brain and nerve are of supreme consequence, be more gently and naturally led through the high school course. Oh that our numerous Roman Catholic brethren would yield the parochial, and give their influence to further rationalize the entire public school! None understand better than they how to teach without torture, how to impress without distress to the mind or injury to the physical system; how to have instruction and yet allow for the existence of other things in life.

L. H.

ANOTHER INSTANCE OF PRECOCITY.—
The interesting case of a precocious

child, related in the article from *Baby hood*, and reproduced in the February issue of the PHRENOLOGICAL, when interpreted to my mother, reminded her of a similar case in our own family—one of my eldest brothers. At about three and a half years he showed remarkable ability for calculation—in fact, he promised to become a genius in mathematics. So proficient was he in figures that, when sent to school, the teacher was astonished to find that he could not teach him anything in that direction. He had a wonderful development of Language. Being given a number of letters forming a word, he would immediately pronounce the word, and usually correctly, and this before anyone thought of teaching him the alphabet. He also possessed a high degree of constructive and inventive talent. Being of feeble health, and for that reason unable to perform any work requiring strong physical efforts, he utilized his time by carving and whittling in wood many curious things, some of which he invented himself. He taught himself to knit—a very useful occupation in those days—and many a visitor, after returning from an inspection in the field or elsewhere, was surprised at the increased size of a stocking or some woollen garment left in the house, and wondered how it came to be so. His large brain was not properly sustained by vital forces, however, and he died at fourteen.

C H.



THE BARBARISMS OF FASHION.

ACCORDING to the Mosaic record, the necessity for dress appears to have been a penalty inflicted on our first parents for the sin of disobedience. But, it must be admitted, that does not justify mankind in being so foolish as to be constantly adding to the curse of that infliction, by wasting their time and means in constantly devising plans by which to develop and increase the evil of their proper punishment. We have to bear it, but we should never forget that it is a penalty, and consequently should not pay quite as much attention to the ornamentation of the chains we are compelled by nature to carry.

Although, at the present time, fashion in dress appears to tyrannize over woman more than over her helpmate man, history teaches us that there have been long periods when both alike were subject to its sway. In England, from the fourteenth to the end of the seventeenth century, noblemen were not unfrequently beggared by the cost of their clothing, and its ridiculousness was usually fully equal to its extravagance in price. John Rous, or Johannes Rossi, as he Latinizes his name, the most eminent English historian of the fifteenth century, gives the following description of the dresses worn by the dandies of that time. He says :

"Nowadays our beaux and fine gentlemen can not walk, until the points of their shoes are fastened to their knees with chains."

This fashion was not confined to England, but was general throughout Europe. It was condemned by Papal bulls and by the decrees of Councils, yet it prevailed for more than two centuries. In A. D. 1463 an Act of Parliament was passed in England prohibiting the use of boots or shoes with pikes exceeding two inches in length, and forbidding cord-wainers (as shoemakers were then called) to make shoes or boots with longer pikes, under severe penalties.

The same historian tells us that the heads of the dandies were dressed as ridiculously as their feet. He says :

"On their heads they wear bonnets of silk, cloth, or velvet, adorned with precious stones. Sometimes their mantles are so short as to be quite indecent, and sometimes so long that their sleeves touch the ground when they walk."

Occleve, a poet of that period, satirizes the latter fashion in the following quatrain :

"Now hath oure land lytell neede of broomes
To sweep ye fylthe out of ye streete ;
Sin syde-sleeves of ye penillesse groomes
Will ytte uplick, be it drye or weete !"

Historians also tell us that when Henry, Prince of Wales, waited on his father, Henry the Fourth, to make his peace, he was dressed in a mantle or gown of blue satin, full of small eyelet holes, with a needle hanging at every hole by a silk thread.

One fact will suffice to show the extravagance of fashion in the dresses of

the women at that time. When Isabel of Bavaria, wife of Charles the Sixth, kept her court at Vincennes, in the beginning of the fifteenth century, it was found necessary to make all the doors of the palace there both higher and wider to admit the head-dresses of the queen and her ladies. To support the breadth of the same, they had a kind of a horn on each side of the head, bending upward, on which ribands and other ornaments were suspended. The historian, Dr. Henry, from whose writings the sketch is taken, adds :

"From the top of the horn, on the right side, a streamer of silk or some other light fabric was hung, which was sometimes allowed to fly loose, and sometimes brought over the bosom, and wrapped about the left arm."

Such were some of the barbarisms of fashion during the dark ages. We can compare our modern styles of dress, both for males and females, with our immediate progenitors with advantage, but it will not answer for us to measure modern fashions with those that were in use in the classic age. In order to prove the truth of that statement it is only necessary to point to the costumes of the ancient Grecians and Romans as evidences of the present degeneration of mankind in regard to taste in dress. It is considered a very bold act in a sculptor to dare to depict in marble a modern hero in the garments now generally worn; in most cases the artist prefers to enfold the bust or figure in the more simple and chaste attire formerly known to the ancients. Judgment, therefore, is given against us, we ourselves sitting as the court and rendering the decision.

It may also be said that the fashionable costumes of the ancients were not only more becoming but have proven more durable than styles that have succeeded them. Our grandmothers and grandfathers, in the dresses of their times, look ridiculous to us, and so, undoubtedly, will our representations

seem to our descendants. On the contrary, the flowing and graceful draperies of the Grecians of the classic age retain their supremacy and need no alterations. They were beautiful in the past, are so in the present, and will remain so in the future. It is really singular how the fashionable world with such patterns before it, can endure its present extravagances, or tolerate the absurdities that disfigure our modern styles of apparel.

As specimens of willful deformity take, for instance, the coverings of our heads. What can be more grotesque and inconvenient than the stiff stove-pipe hat generally worn by men, or more ridiculous than the bonnet, which, though towering to the clouds, only half covers the heads of fashionable women? What can justify the wearing of hoops as in the past, or the indecent protuberance of the present style of dress worn at the present time? The male sex also, with regard to the follies of fashion, are but little better than their helpmates. In the early part of this century our grandfathers long submitted to put their heads in the stocks by incasing their throats in stiff cravats, because George the Fourth did so to conceal a natural defect in his neck.

But, although foolish human beings may be excused for submitting tamely to the fashionable caprices of the age and disfigure their outward appearances, it is the bounden duty of all to rebel when fashion essays to deform our bodies. When Powers first exhibited his statue—"the Greek Slave"—a lady critic objected to the size of its feet. "Madam," replied the sculptor, "I follow nature, not fashion." We pity the Chinese women in this particular and deplore the folly that induces them to crush their feet into shapeless lumps of flesh. But are not many of that sex here equally reprehensible? Which is worse: to disfigure the feet, or by lacing to render the upper part of the human body, which is naturally convex, concave, in obedience to a false taste, and by

a base submission to the unnatural decrees of fashion.

There were hopes, some time ago, that the vehement remonstrances and forcible expositions which were made on that subject would have had a good effect. It is believed that they have not been entirely uninfluential. It is lamentable that there are any women who continue to endure punishment for the sake of appearances, or through a false fear that an honorable and intelligent distinction in dress, might, by the unthinking, be attributed to affectation. But we must yet wait and hope for the entire success of this very necessary defiance of the barbarism and brutality of fashion, the success of which is closely identified with the health, strength, and longevity of civilized humanity.

Some of our readers may deem the discussion of the Barbarisms of Fashion to be not of sufficient importance to occupy the attention of social science reformers.

They greatly mistake. Every week fashion plates by the million are being scattered over our country, and fathers and husbands too generally know the effect of such illustrations.

No one who examines them and sees the things dressmakers, milliners, and tailors propose to make of human beings, ought to be unwilling to admit that the time has fully arrived when the frivolities and cruelties of fashion should meet with general public exposure and reprobation.

R. W. HUME.

BLOCKING HIS OWN WAY.

THE improvident man must surely see the cause of his failure, disappointment, and loss; yet he continues year after year to follow in the same beaten path of non-success; whereas the same energy which he now displays in the pursuit of a negative good would, if turned toward the proper channel, result in a positive success, and so lead on to fruition of all his hopes. As it is, he is only half a man, and loses one-half of his real existence. But though he loses say one-half, he is losing more than he thinks he is. He is paying too much for his "whistle."

While it is well to have a will of one's own, it is equally certain that society can not exist on the principle, "Every man goes as he pleases." Partners in business, husbands and wives, parents and children, do better by consulting each other's wants and wishes, if they govern themselves accordingly. The jar of conflicting interests is often thus avoided, and things run on smoother. One difficulty avoided, new complications do not occur. How many a lawsuit might never occur were a little timely

thought exercised! How many a case of sickness has been neglected for months and years till it has become chronic; and after the expenditure of large sums of money, time, and happiness, the patient sinks into the grave, cursing the whole race of doctors, as though his own ignorance and thoughtlessness were not to be charged in the account! Wives disagree with husbands, they will not look at and amend their *special* faults, and thus remove the cause, but stubbornly defy the worst, and thus the divorce court severs the knot. Husbands drink to excess, or use rough language, or neglect their better-halves, or do some specially foolish thing; they cling to this "last straw," but this straw usually breaks their own back. Happy are the woman and man who can see their own fault and decide to have it out, like a bad tooth—the emblem of decay and pain. But a moral wrong, or a bad principle, are more injurious than a merely physical evil; we can alleviate the latter, but the first depends on self-will, pride, and wrong-doing. It is death in life.

Mr. John Holden was a young man of vigorous frame and mind. He was intelligent, and, with close study and more perseverance, would have developed his natural powers to something practical and "telling." He was a mechanic, and his work was of a rather severe description. Up to thirty-five he continued to work steadily, and owing to some business speculations which did not turn out very well he did not save much. His wife was no better manager than himself, and perhaps this did not add to his wealth. When about thirty-two years old, he got a situation at which he could do quite well, and for some four years he went along, holding his own, so to speak. He had a little money in the bank.

He got a new and more lucrative situation where he was not overseen by any other man. He was almost his own master, in a business sense. Now, one would think, was his real opportunity. But it proved the very reverse. He became addicted to the intoxicating draught, and the wind of fortune only blew him more strongly the wrong way. For about fifteen years he kept up his devotions to Bacchus, and this is the account in mere currency: \$5,680. This is a low calculation, as I have no ledger to refer to. It would, perhaps, be nearer the true sum if we called it \$8,000. This

amount, invested in New York real estate, would have probably doubled itself by this time; at all events, the return would have been very satisfactory. John is paying rent (nearly a dollar a day) while he might be, if he chose, living under his own roof, with a garden to boot. John is a slave in many ways.

Mrs. H., feeling lonely, had her niece come and live with her. She was an artist and, like all struggling artists, rather more in need of the necessities of life than the beautiful. She entertained her friends, and occupied the best rooms, and for some six years was virtual mistress of the house which should have been her aunt's. Of course this was not very pleasing to John Holden; but his wife and niece concluded that it "served him right." What business had he to drink? He was having his recreation, they would take theirs in their own style. Hymen now stepped in and carried off the little artist; and I suppose she will repeat the experiment of life, to illustrate which we have tried in this article. Shakespeare says: "I may not achieve success; I'll deserve it." Happy is the man who is happy with success. Happiness is not impossible on this mundane sphere, but I am afraid the man does not exist that can exactly measure the word.

R. DONALDSON.

CATARRH.—No. 6.

EXPOSURE AND ZYMOSIS.*

PATHOLOGISTS designate several types of catarrh by names like these: acute, chronic, hypertrophic, atrophic, syphilitic, scrofulous, etc., showing that the sources of the trouble may greatly vary, and an intelligent study of a given case that obstinately resists the ordinary treatment may involve much antecedent history. Some of these types have been already considered, and at a later time when we come to consider

treatment we shall have something more to say regarding them. The mucous membrane of the nasal passages is chiefly involved and attracts our first attention; but with our knowledge of the relation of the general systemic state, and that especially of the nervous system, to the mucous function, we know that the local disease will never be cured unless the real and perhaps *remote* cause is disposed of.

It is in place here to touch upon a very commonly associated cause, con-

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stipation. My experience leads me to believe that fully seventy-five per cent. of the cases of nasal and pharyngeal catarrh are accompanied with this abnormal condition of the intestines. The residua of digestion accumulate in the alimentary canal, and therefore add to the work of the excretory membranes of all the organs. Constipation is dependent upon an abnormal condition of the alimentary canal, usually the large intestine being the main seat of the trouble. There may be a sluggishness merely in the procedure of digestion due to defective liver or gastric secretion; the peristaltic action of the bowels may be impaired; in either case there is a want of nerve stimulus, which may be due to central or superficial disturbances of nutrition. The person may be over-fed or under-fed; in either case an impaired excretory function may be present and traceable to neural disturbance as an immediate cause.

A sudden suspension of the skin's function, as we have seen in a recent installment of this series of papers, is followed by very disastrous consequences in the way of ailment. So is it with the effects of a suppression of the excretory function of the alimentary canal; they do not appear with the promptness that is always noticeable in the case of our cutaneous garment, but they are quite as destructive. Perhaps even more so, because a man who is annoyed by a "cold" will adopt some treatment promptly for relief, while he may permit a torpid state of his bowels to continue weeks and months, careless of the fact that he is storing up a woful amount of sickness that will ere long indicate itself in rheumatism or typhoid fever.

Effete matter retained in the system anywhere is a source of poison. Absorbed into the blood it is carried through the circulation, and in parts of the mucous membrane that are weakly and out of function or actually diseased it is prone to aggravate the trouble. Modern research demonstrates the fact of the

presence of living organisms in inflamed and hypertrophied tissue. These organisms, micrococci, bacteria or bacilli, or whatever else they may be termed, are the creatures of poisonous infection, and, finding nourishment in the tissues, live and propagate therein until they are either destroyed or they have consumed the substance in which they are lodged.

Nature of course rallies her vital forces, the leucocytes, and charges on the parasitic enemy, and may succeed in routing it, if the patient aids the attack by hygiene and antisepsis judiciously.

In catarrhal disease the mucous membrane is more or less infested with the parasite. Examine the nasal secretions of a chronic case under the microscope and we shall be sure to find *vibrios* or other microbes. In those old cases that show extensive degeneration of the nasal structure by persistent and offensive excretion we may find immense numbers of these minute creatures.

In my opinion the recognition of the leading part played by destructive parasites in human diseases is a grand stride in modern therapeutics. It has simplified treatment immensely by indicating the true way to assist nature in the struggle incident to sickness and disease. Instead of hampering nature, and giving the destructive germs time and opportunity to develop and do their pernicious work, as it is now clearly enough seen was the effect mainly of the old methods of drug treatment, the physician can employ agents whose property is the destruction of the germs, while he "supports" the general organization of his patient with proper nourishment, rest, good air, pure water, and a cheerful environment.

It is unnecessary now to have the spectacle of a dozen doctors in attendance upon a wealthy invalid, each with a dozen remedies, and all uncertain as to their final effect upon heart or liver or kidneys. The diagnosis well made suggests the procedure in most cases,

and it is briefly comprehended in the phrase "supportive and symptomatic." During the past winter I have studied upward of fifty cases of typhoid or enteric fever in various stages of development, from the second or third day of recognized onset to the seventh week, and in all the treatment was merely antiseptic and a careful hygiene. What else was there to do? Our knowledge of the internal lesion in this dreaded affection shows that we have to deal with an enemy that takes up his residence in the alimentary canal and there begins his deadly work, ravaging the tissues and disturbing every physical function. This direct interference with the nutritive function strikes at the source of vitality, and hence the rapid enfeeblement.

We can truly say that this malignant disorder, one of the more common enemies of medical practice, has a close relation to the subject of our inquiry, for we know how typhoid fever sets up a catarrhal inflammation of the air passages, the throat, trachea, bronchi, and may develop a serious pneumonia.

The onset of typhoid fever is signalized by more or less pronounced chilliness and other sensations that resemble the phenomena of a "cold," but the real cause is an internal one, and that must be understood in the outset if efficient treatment of the malady is to be undertaken.

An acute catarrh or "cold" is not to be obtained by experimental exposure. That has been shown, we think, by Dr. Page. Nevertheless we shall not be able to persuade many people from believing that their humid eyes and snuffling noses are not the consequences of the walk they took a day or two ago in

the driving rain, when their shoes were "soaked through," or of being compelled to sit in the draught from an open window at church. Dr. Becker, of Toledo, looking at the ætiology of "catching cold" with the eye of a German physiologist, does not believe that mere cooling of the surface of the body can produce a "cold." He says: "We get from daily experience a negative result; the cooling does not produce in general a disease. In spite of the fact that feeling cold is disagreeable, it is not dangerous; on the contrary, it is useful by repressing the blood from the skin, and in this way protecting the interior of the body from too much chilling. There will be seldom a man who would not trace a bronchitis, a pleurisy, a paresis of muscles or nerves to his having changed his clothing too early in the season, to his having been out late on a cool evening, to his having been exposed to a draught on the porch, or something else." He suggests, also, as an evidence in support of his view, the exhibitions we have at bathing places of young men springing warm and sweating into the cold water, and thus cooling themselves "intensely and suddenly" without being made sick. I do not advise any reader to make this *experimentum crucis*, for although the theory advanced is a good one, to expose the human organization to a shock of such great severity is certainly unreasonable, and not warranted by the most liberal views of physiological compensation. I can recall two or three instances of paralysis resulting from such shock, and death has been known to result promptly from the internal congestion that was produced by it.

H. S. D.

A SERMON WITHOUT A TEXT.

THE body must be made to keep pace with the mind, or the mind must be restrained to the capacities of the body. Every thought, every motion

destroys more or less of the nerve cells and tissues of the body, but thought is the much more wearing force of the two. While engaged in the perform-

ance of one duty the mind is busy running ahead, planning another. When that other is reached it must again go over the ground, and thus, if we come to observe these things, we will find that the mind is nearly always doing double duty and frequently does its work three times before it is done. All this is a very great as well as utterly useless tax on the vitality which can not be manufactured as fast as it is consumed and consequently the mother (not to mention business men, teachers, and all other classes) is usually tired, worried, broken down, nervous, and thoroughly wretched.

The greatest misfortune—I had almost said sin—of all is that her children are *born* in this same state; going through life melancholy and blind to all that makes life worth living, through no fault of their own, but because another—and that other the one from whom they have a right to expect better things—deliberately closed her eyes to the joy and sunshine of life, and in so doing, sealed theirs beyond the probability of opening until they open in the great beyond.

She, during the years of their childhood, continues to impart to them her own nervous state, exciting theirs, and discord and contention rule where only should be love and harmony. The mother thinks hers the “worst children she ever saw” (and never loses an opportunity of telling them so) and wonders why God should choose to afflict her in this way, forgetting that “As ye sow so shall ye reap,” and the sadder truth that the children must also reap what she sows.

But attempt to explain to the overwrought mother that the trouble lies in unnecessary mental action, caused from very love for her family and her desire that nothing in the way of food, clothing, and home comforts shall be lacking, and she will say that one *must* work when there is so much to do; there is no time to rest, and the work of to-morrow must be planned to-day.

But did you ever try resting and working at the same time?—resting the *mind*, I mean, and if you keep that in good condition the body will usually respond. While you are washing the breakfast dishes do you ever think—“I will do but this one thing now—I will think of nothing else—I will forget that there is anything beyond,” and enjoy the thought that you have nothing else to do or think about *just now* but the light occupation before you? It is as grand a thing to train the mind to forget as it is to remember, and nobody knows the possibilities of mental control until he tries.

Do you ever think of the extra strength you expend when only a light effort is required? Can you not put forth only just the strength you need—no more—and save the surplus for a stock in trade?” “O, but one can never get along that way; it would take all day to do nothing. One must fly around or she will never get through.” So it would seem, but it is only seeming.

By doing only one thing at a time—mentally—the mind is clearer, you see at once, when the time comes—what you want to do, and how, with scarcely any mental effort. “It thinks itself” and you are cheerful, happy, enjoy your home and your family, and you come to wonder that you could ever have considered your lot hard or your duties irksome.

Train your mind so that when you quit work you instantly forget it; when you put your sewing away for the day, put away all thought of it at the same time. Don’t be mentally draping and fitting while physically you are peeling potatoes. Save that mental force until the time it is required. It will reward you by thinking just the right thing at the right time and you will be surprised to see how easily it “goes together.”

If you can sing you will find singing at your work or during leisure moments a great aid in keeping your mind from wandering where you would not have it

go ; besides the cheerfulness it adds to the household atmosphere. Above all, put all else out of your mind during meals, and give yourself up to the thorough enjoyment of them. This will aid digestion and assimilation and help to furnish the extra vitality you so much need. Also attend religiously to the calls of na-

ture ; many cases of distressing troubles are brought on by neglect to answer these demands at the proper time—a very disgusting and unladylike habit, even if nature did not punish us for our disregard of her admonitions by entailing serious consequences.

M. C. F.

MEAT AS AN ARTICLE OF DIET IN THE NURSERY.

A MEDICAL writer contributes to the *Boston Medical and Surgical Journal* an interesting article on meat-eating as a diet for children, in which he says :

“ Meat is usually given to children as a matter of routine, as soon as they are able to eat it without indigestion ; and the question whether it is a food suited for childhood has received no very careful consideration. Yet it seems to be generally recognized that meat has peculiar effects on the organism as compared with other kinds of food. The fact that meat has a well-established position in the diet of adults is not alone a convincing argument in favor of giving it to children, since there are other articles, such as tea and coffee, which are generally believed to be good for adults, and yet almost as generally believed to be bad for children.

“ Dr. Clouston, of Edinburgh, says : ‘ My experience is that children who have the most neurotic temperaments and diathesis, and who show the greatest tendencies to instability of brain, are, as a rule, flesh-eaters, having a craving for animal food too often and in too great quantities. I have found, also, that a large proportion of the adolescent insane had been flesh-eaters, consuming and having a craving for much animal food. My experience, too, is that it is in such boys that the habit of self-abuse is most apt to be acquired, and when acquired, seems to produce such a fascination and a craving that it ruins the bodily and mental powers. I have seen a change of diet to milk, fish,

and farinaceous food produce a marked improvement in regard to the nervous irritability of such children. And in regard to such children, I most thoroughly agree with Dr. Keith, who, in Edinburgh, for many years has preached an anti-flesh crusade in the bringing up of all children to the age of eight or ten years. I believe that by a proper diet and regimen, more than in any other way, we can fight against and counteract inherited neurotic tendencies in children, and tide them safely over the periods of puberty and adolescence.’

“ My experience has not been drawn from any extended observation of such cases as Dr. Clouston describes, yet I can fully believe that his statement is a fair one. I have become convinced that children fed largely on meat have a capricious appetite, and suffer from indigestion, constipation, and also from diarrhoea ; are subject to catarrhs of the mucous membranes, and have an unstable nervous system, and less resistive power in general. As a rule, the more children are allowed to take meat, the more they want it, while the appetite for other kinds of food is apt to diminish.

“ In families where meat-eating has been put off or given up for any considerable period, I have found the children to have more freedom from little and great ailments, and to be less inclined to colds and diarrhoea. In 1884, Dr. D. M. Cammann, of New York, wrote an article on ‘ Milk Diet in Childhood.’ After advocating milk as a food of great value, and quoting the above passage from Dr. Clouston, he says : ‘ During the past

twenty-five years, in a large institution in this city, meat has been omitted from the dietary of children under eight years

of age; and it must be admitted that this has been long enough to test fully the value of the diet adopted.' "

SOME CURIOUS REMEDIES IN INDIA.

A LITTLE Hindustani servant who is a bit of a book worm, reading everything he can lay hands on in his own language, and who has made a small beginning in English, was asking me, a few days since, some curious questions about English books. One of the things he was most anxious to get was some English book, the reading of which, or listening to its reading, would cure disease. He affirmed so confidently that there were many such books in the Hindustani language that possessed this remedial charm, that contradiction, argument, or explanation was simply impossible. This called to mind certain experiences of a year ago, when, with some members of my family I was entertained in the Nawab's summer palace of a neighboring native state. The only available room for us was one immediately adjoining that occupied by the Nawab. The character of the building was such that the least sound in any part could be distinctly heard in any other. It is the Nawab's custom to take a daily nap from one to two o'clock, at which time the palace and surrounding grounds were silent as the grave, though there were over two hundred courtiers and servants in the palace and camped about the gardens. One day as the siesta hour approached, we heard from the ante room next to the Nawab's, the voice of the Lord High Treasurer reading a story in Hindustani. As the noon quiet deepened, the treasurer's voice grew less animated, little by little the pauses grew longer, a half suppressed yawn would be followed by an apparent attempt at wakefulness, to lapse into a sleepier drone than ever, and finally died away altogether and the silence was profound. The waking hour approached and the Treasurer's voice

again took up the story as though he had only ceased for a wink or a yawn, and gradually grew in volume and animation exactly as it had before waned. Waking the Nawab, however, proved rather difficult, but when he did awake, though he had been far from well in the morning, he was ready for two hours' hawking on his elephant and in the hot sun. The drowsy reading in conducting to sleep was probably not without its merit.

A carpenter in our employ told me of an infant in his family, but a few days old, that seemed oppressed for breath and suffering from pain in its chest. The man was one of more than ordinary quickness and intelligence. One morning a little son of his, after a considerable hunt about our grounds, found a bushy kind of weed, which on being broken at some of its joints, disclosed a small white worm. Several of these were to be beaten to a paste and fed to the baby as a remedy with the confident expectation that it would cure, for they had known it to be successful in other cases.

This reminds me of a cure for rheumatism of which I heard some years ago among the Germans in Milwaukee, Wis. The extracted oil of earth worms was the highly recommended remedy, better than the "potato in the pocket" which for a time was a fashionable cure for rheumatism among native born Americans.

A few evenings since, a member of my family on opening a bath room found a large cobra stretched in front of the door. Happily, but two days previous, the feats of a snake charmer had impressed this person that it would be well to abandon the careless habit of going about the house in the evening

without a lamp in this snaky country. But for this warning he would have stepped directly on the cobra in the dark. A few well directed blows dispatched the snake, and saved some sorrow. The next morning as several of the servants were looking at the ugly carcass, some one said that they would extract its oil, as a cure for inflamed wounds. The method is to put the snake in a large

round earthen jar which has a small hole in the bottom; beneath this a deep saucer is placed and securely plastered to the jar with clay. This is set over a slow fire, and as the snake roasts, the oil falls drop by drop into the saucer. About a small teacupful is obtained from a snake four or five feet in length.

MRS. S. L. HAUSER.

Bareilly, India.

NOTES IN SCIENCE AND INDUSTRY.

The Nicaragua Canal.—The attempt which has been made by M. De Lesseps and others to construct across the narrow Isthmus of Panama, a water-way that would sever the two Americas, and cause to be connected the two largest oceans of our world, thus facilitating the carrying

and unstable support; and it is to be regretted that an enterprise so influential should involve a loss of upward of 400 millions of dollars besides the severe personal experiences of hundreds engaged in the work. The expected failure of the Panama Canal enterprise, as undertaken by the French,



GREYTOWN.—ATLANTIC TERMINUS OF THE PROPOSED CANAL.

trade and affecting in one way or another all nations that have an interest in the trade with the American southwest, appears on the verge of a collapse, if it has not failed utterly.

The probable causes of the weakness of this grand and far-reaching scheme are to be found in poor management and inadequate

and the discouraging reports of American engineers with regard to operations on the Isthmus, have had the effect of causing careful and accurate investigation in the matter of the Nicaragua transit scheme, so long since mooted by daring constructors.

A bill which provides for maintaining the construction of a canal through that part of

Central America known as Nicaragua, by the means of private enterprise, was introduced in Congress a little more than a year ago; the passage of such bill has been de-

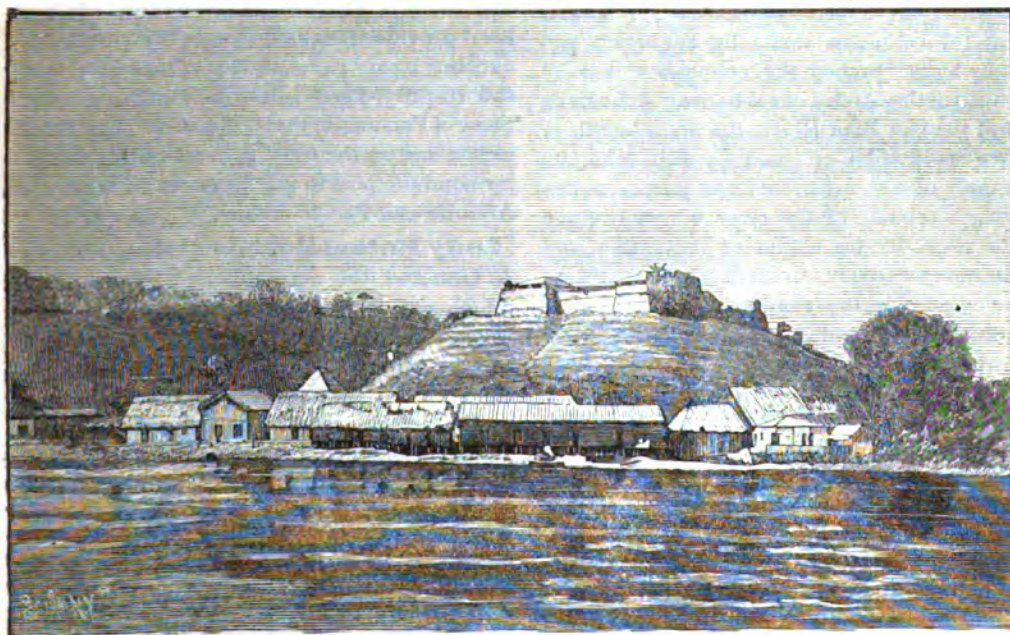
construct an inter-oceanic lock-canal by way of Lake Nicaragua. The total distance from ocean to ocean by the proposed route is nearly one hundred and seventy miles, and



A NATIVE HABITATION.

layed by numerous amendments and conditions touching the organization of a private company, but has finally passed both houses. The purpose of this company is to

of this there are fifty-six and a half miles by lake, and eighty-four and a half by river and basin navigation, thus the length of actual canal is reduced to about twenty-



OLD SPANISH FORT.—SAN JUAN RIVER.

nine miles. The outlet of the lake to be utilized is the San Juan River which is at present navigable for light draught steamers nearly throughout its length, and would require but little deepening for the purpose intended.

The elevation is somewhat great, there being a level stretch of one hundred and fifty miles, one hundred and ten feet above the sea. The proposed canal will have six locks, three on the Atlantic and three on the Pacific side, and they are to be of sufficient size to transfer the largest vessels afloat. With a uniform depth of thirty feet and a varying width (never less than eighty feet) according to the condition of the bed, there can not be found any objection to the capacity. The illustration of Greytown, the Atlantic terminus of the canal, gives a fair idea of how that place appears; it is of itself something of a harbor, although numerous sand bars significantly prevent an extensive usage as such. This would be remedied by means of effective dredging and by strengthening with piles and stones, etc. The harbor of Brito, on the Pacific coast, will have to be deepened and improved and when protected from the breakers of the turbulent Pacific by means of breakwaters, will afford a desirable terminus.

There have been several surveys and careful estimates made by engineers and they have reached the conclusion that by constructing such a canal by way of the Lake and the San Juan River, the great length of free navigation afforded by that lake, its supply of water for lockage purposes, the long stretches of the river which exclude the necessity for extensive excavation, and the comparatively low elevation of the ridges on either side, the location will prove a most commendable and expeditious one.

According to an expedition which was sent out in 1885, to provide data for estimates, the total cost was fixed at \$65,000,000 and later surveys have practically confirmed these figures, and it is said that the whole work can be easily completed so that the canal will be open for navigation in 1895. In regard to the nature of the country the climate is said to be temperate and healthful, a decided improvement on the Panama country.

The course which the proposed canal takes will lead its builders through swamps and lagoons, through high and dry localities to low and damp regions, yet with the employment of improved machinery and the energy of good superintendence, there will result no very protracted stay in uncomfortable neighborhoods nor any dangerous proximity to distasteful locations.

The old fort which is depicted is an ancient landmark, found on the San Juan River, and suggests the fact that this region did not escape the close scrutiny of the avaricious and plunderous Spaniards. It is also said of this region that it contains valuable mineral deposits, while cocoa, indigo, coffee, and fruit are its principal agricultural products. One of the illustrations shows a native hut with all the out-of-door suggestions of a warm climate, and freedom from the cares of our upper civilization.

The population of the country is chiefly native, as of every thousand in Nicaragua and the State of Costa Rica, there are but forty-five whites; the great mass is of Indian or unmixed blood. The negro is found there but in the very small percentage of five to a thousand.

The effect upon the world's commerce and especially upon that of the United States, which the opening of the Nicaragua Canal will cause is probably incalculable. It has been canvassed for many years by publicists and our large merchants. Without doubt the country itself offers advantages over those of Panama, in that it is a more healthful region and on the coast prevail those peculiar winds helpful to sailing craft in both the Atlantic and Pacific oceans. A. I. D.

Lady Entomologists.—Miss Eleanor A. Ormerod, the accomplished English entomologist, is reported as having done, and being still engaged in doing, most excellent and praiseworthy work for that country. Among other special investigations pursued by this lady is that of the warble fly (the gadfly, which lays its eggs in the backs of cattle), so annoying in England and also over large portions of the United States. Miss Ormerod has written a pamphlet on this especial pest. A British journal states that this pamphlet has run through editions aggregating 48,000 copies, which have been gratuitously distributed by the author. It

is added that this publication, which contains a description of the attacks of the fly the methods of prevention, and the remedy has proved of great value to British stockmen. America has also an accomplished lady entomologist in the person of Mrs. Mary Treat, of Vineland, N. J. Her work on "Injurious Insects of the Farm and Garden" is considered an authority, and she is a valued contributor to several periodicals on entomological subjects.

Trade vs. Invention.—An inventor recently perfected a discovery, for which he has been working during a number of years. It is India-rubber in a state of solution, in the preparation of which no sulphur, ether, or naphtha is employed. He applied it to a number of materials to demonstrate its varied and great usefulness, among them to a piece of black silk. A friend introduced him to a leading silk importer, who sent for his chief expert to examine a piece of material treated. After a very careful examination the expert said:

"This increases the luster of the silk?"

"Yes," assented the inventor.

"Increases its body?"

"Yes, yes."

"Renders it thoroughly waterproof, while the rubber is not discernable?"

"Just so."

"And vastly increases the durability?"

"Exactly so. Just the four things that I claim. I am delighted that you recognize them."

"And nothing is further from our wishes than to see such a thing introduced. We want silk to wear out, not made to last forever."

The merchant indorsed that view, and politely bowed the inventor out.

Cooking Animals' Food Unnatural.—O. S. Bliss, of Vermont, who occupies a prominent position in the agriculture of that State, comes out flat-footed against cooking animals' food, and does not believe the Creator made any mistake in not providing animals with a means of cooking food. He argues that it is a curious fact, but nevertheless true, that while the exterior form, habits, and dispositions of animals have been more or less modified by the aid of man, no change whatever has

ever been effected in the interior organs or any of their functions. An abnormal development may be produced and sustained for a time by unnatural methods, but reactionary effects will sooner or later be felt. Mr. Bliss asserts that most of the diseases and ailments of domestic animals are due and traceable to unnatural methods of feeding, and states that all animals with which he has experimented do better upon dry food, and are less subject to irregularities of the digestive system, diseases, and ailments of all sorts than those fed upon cooked or wet food. This idea may put a new phase upon the question of the use of ensilage which is so earnestly advocated at the present day by some.

The Satellite of Neptune.—M. Tisserand has presented a report to the Paris Academy of Sciences concerning some remarkable observations of the satellite of the planet Neptune, which was discovered in 1847. The angle which the plane of the orbit of this satellite made at that date with the ecliptic was about 30 degrees, but this angle has now been increased by at least 6 degrees. The satellite moves round its principal in an opposite direction to that usually followed by other satellites, so that a question might be raised whether in course of time this variation in the inclination of the plane of its orbit, might not end in its movement around its principal becoming normal. M. Tisserand shows that this variation of inclination was due to the oblate or flattened condition of Neptune at its poles and that it will complete its limit within a period of 500 years, at the end of which time it will again be as it was in 1847.

Discriminate in the Use of Your Words.—Pretty refers to external beauty on a small scale. Grace of manner is a natural gift; elegant implies cultivation. Well-bred is referable to general conduct, rather than individual actions. Beautiful is the strongest word of its class, implying softness and delicacy in addition to everything that is in similar words. Courtesy has reference to others, politeness to ourselves. The former is a duty or privilege to others, the latter is behavior assumed from proper self-respect. Benevolent refers to the character of the agent acting, beneficent to the act performed. Charitable is

restricted to alms-giving except when used in reference to judgment of others. Lovely is used only when there is a combination of

personal beauty and pleasing manners. Faultless features do not make a lady lovely who is disagreeable in disposition.



NEW YORK

April, 1889.

NOT THE SIXTH SENSE.

THE instinct that enables animals to find their way home has been a subject of inquiry to Dr. G. M. Gould, who has ventured to designate it as the true sixth sense. He endeavors to explain its exercise on the basis of a peculiar sensibility to changes in electric and magnetic tension, due to position on the earth's surface. The home, he says, is the animal's north pole. By habit it is accustomed to the magnetic conditions there, but when away is restless and finds its way homeward by this mysterious compass.

Such an explanation is certainly fanciful, and will scarcely be accepted by physiologists. One objection would lie, we think, in the necessity of frequent change of polarity in the case of the animal's frequent removal from one home to another. Another is that animals of the same species differ much in the expression of the instinct. The phrenological theory is better of a cerebral organ or center of Locality where development or activity governs the conduct with reference to home and its

relations to other places. A man with strong Locality is able to find his way easily from point to point, and rarely becomes embarrassed. A child with strong love for home and strong sense of Locality, may be let to run loose in a city and not be lost. The editor of the PHRENOLOGICAL as a little boy was very fond of rambling, watching every chance to slip out of doors and run off, but never found any trouble in getting back home when he was ready to return—say about dinner or supper time—as indicated by certain gastric cravings. On more than one occasion when less than four years old, he strayed far into the suburbs of the city, led away by the rural attractions of spring or summer time, and returned home directly enough at nightfall to find the family and intimate neighbors in a state of much excitement over his prolonged absence.

The center of Locality has much to do with the memory of places, their appearance, and geographical relations, and is therefore indispensable to the traveler, pilot, guide, scout, navigator, etc. We can scarcely conceive a good student of geography, or a skillful topographical engineer without this faculty in activity. But the "homing instinct," as it is called, is not a simple sense; is a compound of the Inhabitive element and Locality. The former gives the animal, bird, or fish its fondness for its house, its nest, or spawning ground, the latter helps it to find its way thither. This analysis in brief seems to us to preclude the necessity of ascribing the homing instinct to a new sense.

AN AMERICAN PENAL SETTLEMENT.**THE LABOR PHASE OF IT.**

IN our discussions of this subject, that have occasionally appeared, little if any reference has been made to convict labor. This matter has been made a point of issue in political circles, and for obvious reasons. The occupants of the numerous penal institutions of the country have become competitors in the world of industry with the mechanics and laborers who are striving to earn an honest subsistence, and those who champion the cause of free labor have good warrant for the protest that is made against the open marketing of the cheap products of the convicts. It is certainly unfair for a state or government to farm out the men and women that are supported at the expense of the taxpayers, on the plea that the able-bodied convict should do something to support himself. Such a plea has its reasonable side, it is readily admitted, but if to provide work for the idle prisoner is to do that which must operate harmfully in either a direct or indirect manner upon the industrial classes of the community it were better that he were kept in idleness.

But says the economist, if the State would deal fairly with the inmates of its prisons it must provide employment of some kind for him. To keep him in idleness is inhumane and fraught with serious consequences to both mind and body. The object of the prison is two-fold: (1) punishment, (2) correction. The punishment consists mainly of the deprivation of a man's personal liberty. The correction consists in such means as conduce to his improvement in moral stability. This means the education and

training of the prisoner's mental faculties, so that at the expiration of his term of confinement he may return to freedom prepared to enter upon the life of an honest self supporting citizen. As occupation is the prime essential to practical integrity the prisoner must be supplied with facilities to render himself useful in some field of every day service, and this means that he should learn a trade.

In theory this reasoning is unexceptionable, and were there a few hundred convicts and offenders only in the stone bound wards of our state institutions its practical application would awaken little question; but when our prisons and penitentiaries contain tens of thousands, and to carry out the plan of employing their time in useful ways would be to establish two or three hundred large factories or work shops whose output of staple good would invite purchasers because of their great cheapness, are elements of disturbance menacing the trading relations of society. The proportions of this element of disturbance may be estimated from what we are accustomed to hear of "tariff reform," and of strikes and protests in the world of labor, and the fact that state and national politics are compelled to give some attention to the complaint of the manual toiler, whether it be on the score of alleged injustice done him by a powerful corporation, or through the indiscriminate admission of foreign workmen, shows the trend of the movement.

If we add the instrumentalities of depression that competition between imported and foreign labor forces upon our trade to the product of the prison contractor, how cheerful becomes the prospect of the American artisan! An ab-

rogation of the customs' taxes on foreign products would have much less effect in reducing the prices of home manufactures than the agencies mentioned above in collusion or co-operation. Gen. Harrison in a speech made last summer to the workingman touched upon that branch only of the labor subject, and said: "If it could be shown that your wages were unaffected by our system of protective duties I am sure that your fellowship with your fellow toilers in other industries would lead you to desire, as I do and always have, that our legislation may be of that sort that will secure to them the highest possible prosperity—wages that not only supply the necessities of life, but leave substantial margin for comfort and for the savings bank. No man's wages should be so low that he can not make provision in his days of vigor for the incapacities of accident or the feebleness of old age."

That the dissatisfaction so marked among the working classes must be adjusted and that ere long, if the integrity of our national institutions is to be preserved, no one can doubt. The development and progress of our country owe too much to the vigorous hand of the working man, and he is sufficiently intelligent to know his value and power.

Such a disposal of the convict as would withdraw his products from the field of industrial competition would be, one great factor of advantage in the adjustment of our labor complications, and to effect this disposal we have yet to learn of a better plan than that exploited in our scheme of an American Botany Bay.

In Alaska, as we have repeatedly sug-

gested, there is ample room for a convict state. The inmates of our prisons and penitentiaries, who are serving out sentences for major offences, once placed in a colony where they would have ample out of door freedom and at the same time be compelled to work for personal subsistence, how great the relief to the home communities! It has been shown in former discussions of this plan how much more easily and cheaply such a colony could be guarded and governed than the hundred or more penal institutions that cover so much good land in the centers of our best civilization and render it worse than waste. We have shown, too, how instrumentalities for the intellectual and moral education of convicts could be more efficiently put into operation at such a place.

But we hold that in view of the one point which it has been the purpose of this item to bring to the notice of our readers, viz.: the industrial troubles arising out of the forced competition of cheap prison labor, should the public through its legislative bodies carry into effect the plan of a convict station the results to the workingman would prove of more value in dollars than all the cost of the present system of the penal servitude.

In a future item we propose to consider the immigrant side of our proposition.

INAUGURATED!

THE new administration of affairs at the Capitol is fairly launched. In the midst of weather that an ancient sooth-sayer would have declared unpropitious but which the Signal "Clerk" assures us was merely the effect of a South-

westerly Low holding sway at the time over a large area of country, Mr. Harrison was becomingly inaugurated, and made a speech distinguished for much good sense.

Mr. Cleveland did the honors in the last few hours of his authority with great good nature, and retires from office, we think, with the good opinion of the majority of the American people. So far as parties go he has pleased neither, having shown a degree of independence and backbone in his relation to affairs that is rare in an executive. When a man presumes to turn his back on the leaders of his party, and to act as he deems it expedient or just on a momentous question, he necessarily incurs their resentment and reproach.

We admire backbone and are ready to award credit for it wherever found, and without regard to the party name the man may bear. A stout maintenance of personal opinion, a vigorous and reasonable defence of a stand taken with regard to any public measure dignifies the man and ennobles the office.

We expect much of Mr. Harrison. He has called to his support a band of able men, able they have certainly shown themselves in different spheres of private activity and a few have acquired prominence in public affairs. We hope that the grave and urgent questions now agitating all classes of people will receive earnest and manful attention, and be disposed of as far as possible promptly. Vale, Cleveland! Salve, Harrison!

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.

ALWAYS write your full name and address plainly. If you use a pseudonym or initials, write your full name and address also.

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. Personal and private matters addressed to the Editor in his professional capacity as a physician will also receive his early attention.

ANOTHER INVENTION.—C. F. and others who have inquired with regard to the truth of the story recently published in the St.

Louis *Globe-Democrat*, and which has been going the rounds of the press, may be informed that it was the invention of a newspaper man. That writers for the press should go to the extent of using eminent names in making up false statements and palm off such wares upon respectable newspapers, seems incredible; but this is done over and over again, to the deep injury of some person or thing, and the consequent degradation of journalism. We have reason to know that the operation described by the writer as performed, never was performed by Dr. Sands, and a note to the editor of the St. Louis newspaper seeking for information as to the source of the statement, has elicited no reply. Probably the fact of being so egregiously fooled by a clever rascal of a correspondent is a bunch of sour grapes that the editor does not care to say much about.

ADVANCEMENT OF SOCIETY.—A SUB.—

The marriages of well-assorted people will certainly tend to the improvement of society. The children of the ameliorated stock will, it is most likely be in sufficient number for marriages among themselves. Given the disposition toward physical and mental elevation, there will not be wanting the aids necessary for its promotion in the association of the sexes. The law of adaptation will the better fit as people become more intelligent in regard to heredity. Your anxiety on this point reminds us of the apprehension entered by the boy when told that there was another glacial epoch coming and might be upon us 5,000 years or so hence.

IS CELIBACY INJURIOUS?—A COR.—We think not, if the man lives properly. Certainly we have good examples of health and longevity in the Shakers, who are strict celibates. We think, however, that at this stage of human progress marriage is the normal condition of the great majority. Statistics show that people *en masse* live better and longer in the bonds of matrimony than the unmarried. But judicious adaptation of one's life to the state of "single blessedness," which means employing one's time in a vocation that involves industry, soberness, purity, and high aims, will not be at all likely to hurt him. We should expect decidedly good results. Suppose you try it.

SUPERNATURALISM AND CHRISTIANITY.—*Question:* In a sermon by Bishop Jagger, of Ohio, I find the doctrine of Supernaturalism plainly stated as being necessary to Christianity. He says: "There is no possibility of yielding the supernatural without sacrificing Christianity." And again: "There is no possibility, therefore, of compromise upon the question of the supernatural in Christianity. The great fact of the resurrection is the foundation of Christ's throne in history."

Is this idea held by the Episcopal Church generally, and what is the teaching of Phrenology relative to it?

W. A. K.

Answer.—We believe the idea of what is known as Supernaturalism is held generally not only by the Episcopal Church, but by most, if not all Protestant denominations. As to your second question, Phrenology has nothing to say about this or other

theological matters. Such questions are as much out of its domain as are those of geology or astronomy. We would remark, however, that it is probable that a knowledge of all natural laws has not yet been attained. Many things are natural now that were deemed supernatural only a hundred years ago. We would suggest that you read Spurzheim's "Natural Laws of Man."

PERSONAL.

CAPTAIN JOHN ERICSSON, the world famous engineer, and the inventor of the Monitor, died at his home, No. 36 Beach street, New York, on March 8, last. Captain Ericsson had been sick for two weeks with inflammation of the bladder.

The old engineer was eighty five years of age and had been actively employed in his workshop until his malady assumed a serious form.

PROF. J. J. WATSON's experiment of teaching children music is certainly commendable in many respects. According to a rather full report of an afternoon's lesson it is likely to be productive of permanent effects upon the musical sentiment of New York. Prof. Watson is a true student of human nature as well as a most zealous worker in his chosen profession, and the happy thought that he is now carrying into effect may strike one at first look as very philanthropic, which it certainly is, but it is more. Out of that school of 200 children he will be likely to find some who will develop a genius in art that will make society their debtors.

By the death of Dr. John C. Dalton, Feb. 12, last, the College of Physicians and Surgeons of New York has lost a most competent instructor. He had occupied the chair of Physiology for nearly twenty-five years, and his abilities had doubtless contributed much to the growth and reputation of that medical school. As a physiologist he was an earnest, progressive student and as modest and free from bigotry and dogmatism as he was learned and capable.

WISDOM.

"Thou must be true thyself,
If thou the truth would teach."

SORROW is only one of the lower notes in the oratorio of our blessedness.

KNOWLEDGE, like money, increases our responsibility in proportion to the amount obtained.

The hearts that ever tranquil rest,
And never fight with wave or woe,
Lose in repose their richest zest,
And never stronger, braver grow.

From the Italian, Mrs. Millard.

INCONSISTENCY.

WHOM most we love, him give we unearned
praise,
Whom most we hate, him of his fault we
chide;
Man flattered doth but gain in empty pride;
Who knows his lack will oft-time turn his
ways.
One's fault we make, the other one's we
mend;
Pray, tell us, sage, which one should call us
friend?

JOHN BOSS.

MIRTH.

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

THE red-haired girl's hair is undeniably her own, and that is a splendid point in its favor.

THE following conversation took place in an office: "Did you ever realize anything in the lotteries?" "Yes, sir. I tried five times and realized that I was an idiot!"

HE—"What kind of goods is that dress made of Laura?" She—"Camels' hair." He—"Of course; now that you are turned around, I can see the resemblance."

"Good gwacious, Fweddy! You left youah fine plug hat out on the wack. Ahn't you afwaid that somebody will steal it. Lots of stwange fellows in this dining-room."

"Steal it, Cholly? No, deah hoy, I'm not afwaid. Th' isn't anothah man in the city that can put it on his head, bah Jove!",



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 the Editor with recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

ELECTRICITY IN THE DISEASES OF WOMEN.

By G. Betton Massey, M.D., Physician to the Nervous Department of Howard Hospital, etc. 12mo, pp. 210. Price \$1.50. F. A. Davis, publisher, Philadelphia.

Nothing in medical treatment has shown more marked advance than the application of electricity. The galvanic battery is in some degree taking the place of surgery and offering a mild or at least unterrifying procedure in place of the knife. For some painful diseases peculiar to woman this—in the hands of a skillful and experienced physician—benign agency has been proved of high remedial virtue. Apostoli, Engelmann, Hutchinson, Cook have obtained results of surprising efficacy in cases where the physician had pronounced a radical operation of doubtful value. Dr. Massey offers in this new and compact treatise a special discussion of the uses of electricity in diseases of women, and in this he has sought to group the counsel, methods and experience of the best authorities. For physicians who would employ galvanism—and what progressive physician would not? in the treatment of pelvic disorders, the book is a convenient manual and deserving of his study.

THE LAST AMERICAN. A Fragment from the Journal of Khan-li, Prince of Dimph-yoo chur and Admiral in the Persian Navy. Edited by J. A. Mitchell. Cloth. New York: Frederick A. Stokes & Bro.

In the year 2951 a company of adventurous Persians visit the once great and prosperous Western land of Merikah, but which has long been a desolation, its cities in ruins, its people extinct. These Persians clamber over the site of New York and find many startling vestiges of its past glory. They also visit Washington, and there in the still grand yet dismantled Capitol find the "last Amer can." An unfortunate controversy arises during which the giant relic of a departed race slays a large number of the exploring party and then dramatically dies. The satire of the story is keen and will be appreciated by the reader, although much of its edge however sharpened by truth, is dulled by the dry humor of the style and language. Who knows that in the course of seventeen centuries this ambitious nation will not be like—

"The glory of Athens and splendor of Rome,
Dissolved and forever like dew in the foam."

OUR HEREDITY FROM GOD. Lectures on Evolution by E. P. Powell. 12mo, pp. 416. Published by D. Appleton & Company.

This is a fresh volume on the subject of evolution—a topic that can not be said to be losing interest for the cultivated thinker. The range of its discussion, indeed, has much extended in the past few years, and now it is no longer a forbidden topic in the circles of religion. The spirit of Mr. Powell's discussion of the subject may be in part understood by this remark: "Earnest and honest men can not too soon comprehend that our only salvation is in that evolution which has led from the primordial cell to Jesus and Plato, and has lifted life from the hunger for protoplasm to the hunger for righteousness."

It is a book differing from that of Mr. Ferris in that it does not recognize so close a relation to the religious side of human life as the author of "A New Theory of the Origin of Species," but endeavors to show that the theory of evolution as advocated by scientists like Cope and Montgomery is consistent with man's best activities, intellectual and moral. The lectures relate to a variety of topics; the social, industrial, educational, ethical relations of the modern man are analyzed, and we are usually pointed to signs of progression and improvement that can not but cheer the reader. Mr. Powell is much of the optimist and he talks therefore on the side of hope. "The religion of evolution, is peculiarly the religion of an endless process of living. It hates disease and degeneration, and abhors also the consequence." In another place: "Nature is eternal progress. There is a divine uplook from the beginning. Gravitation and all unorganized force tend toward meliorism, producing out of chaos order and rhythm."

The reasoning of the book is in the style of advanced evolutionists, the moralizing is that of a soul that looks upward in the hope of a higher and better life.

PUBLICATIONS RECEIVED.

REPORT OF THE COMMISSIONER OF EDUCATION for the year 1886-87.

A bulky volume covering in its closely

printed pages very complete statistics relating to American schools, and also more or less extended papers on methods of teaching in different states. The Western states compare well with the Eastern for number of educational establishments and facilities, and the growth of manual training and trade schools is a very interesting feature. Statistics of Libraries are also included in the report.

SHOE AND LEATHER REPORTER ANNUAL, 1889.

A compilation of data of interest to the trade mentioned, including a directory of boot and shoe dealers in various parts of the country. The publisher of this volume has sought to make a complete book evidently, as he devotes upward of fifty pages to a list of the dealers in raw and manufactured goods that have their headquarters in Canada and Europe.

ORTHOEPY MADE EASY. A Royal Road to Correct Pronunciation. By Marcella Wood Hall. 12mo, pp. 103. Syracuse, N. Y., C. W. Bardeen.

This little book will be found helpful to young people in their efforts to master the tenebrious mazes of our English pronunciation. It is the product of much careful study. The system of introducing words that are commonly mispronounced into reading exercises is very helpful; the young student by association so quickly obtains impressions that in this manner the correct rendering is fixed in the mind. Many geographical and historical names and scientific terms are introduced with items of information that are valuable.

IN MEMORIAM—Clemence Sophia Lozier, M.D.

A fitting tribute to the life work of an earnest woman, one who in the cause of social progress labored ardently, and, believing in the right of woman to stand evenly with man, fearlessly pushed forward as a pioneer to open the way for her sisters in branches of science and art hitherto deemed the exclusive property of men.

FOOTPRINTS OF A PROFESSION, or Ethics in Materials and Methods. Address delivered before the Maine Dental Society at their 22d annual meeting, Waterville, July 19 and 20, 1887. By Horatio C. Meriam, D., M.D. The *Dental Journal*, St. Louis, Mo.

THE HIGHER EDUCATION as a Public Duty. An address by J. Edward Simmons, LL.D., President Board of Trustees College of City of New York. A plea in behalf of free academic training. Published by the Board of Education, New York.

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The biographical sketches given, though brief, have been carefully compiled from authentic sources, and are intended to give individual notoriety in a nutshell. As a school book it will be a most interesting assistant in the study of literature. A good plan for its use is to call attention to the names given for the day, and encourage the pupils to communicate what knowledge they already possess concerning them. Talk of their writings, if authors, and their worth to the world in other directions, if inventors or scientists, etc. If a specified time is given for the daily exercise, pupils will soon be found ready with additional information, gathered from various sources, and the brief sketches will be expanded into biographical chapters. Thus a two-fold benefit will be derived, inasmuch as language is cultivated in expressing the ideas gathered, while pupils will become familiar with names which will serve as nuclei around which to group the items of knowledge constantly evolving from their various studies.

To Chautauquans it will prove invaluable, since every week will bring some name to mind prominent in that universal study, which the Alphabetical Index here given will show. For instance, one hundred of the persons (including the author) referred to in "Hurst's Short History of the Modern Church," a Chautauqua book for 1888-89, are to be found in "Every-Day Biography," and this instance alone will prove its worth, not only to Chautauquans deprived of libraries and cyclopedias, but also to more favored students, going from their homes to the meetings of local circles, when compact information is desirable.

The prominent features of the book, therefore, are its arrangements as a birthday reference, wherein is found from one to eight eminent people for every day in the year ; and in addition to this, the biographical sketches aim to compass their worth as workers and thinkers, while for each day these are arranged in chronological order.

This work will be found a valuable addition to any library or collection of books. Agents wanted to introduce this, and take orders for it. Sent by mail, postpaid, on receipt of price, \$1.50. Address,

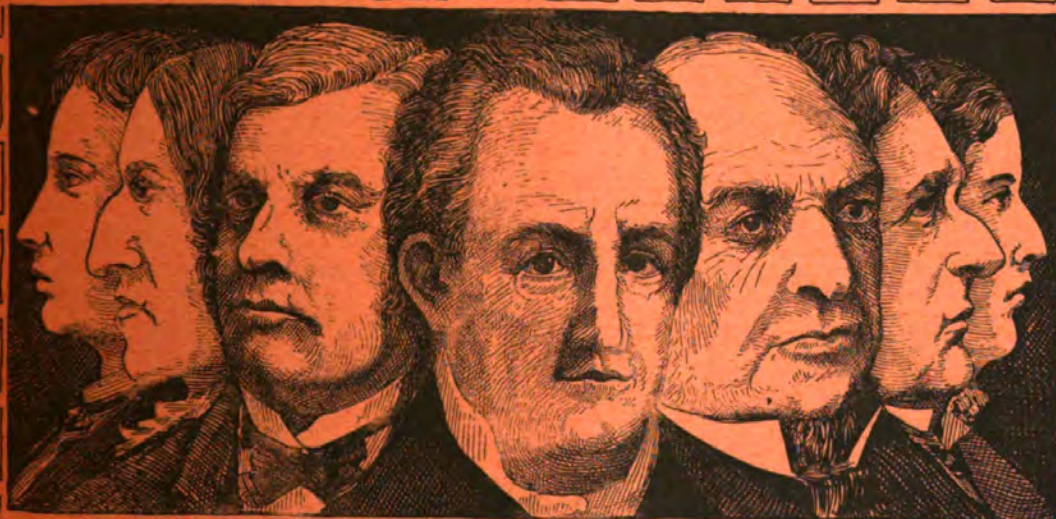
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Number 5.

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THE

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E. Daechle

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ANNOUNCEMENT FOR JUNE.

The papers on Mr. J. V. Williamson and Hereditary Statesmen, and the summary of Mr. Hollander's paper on Centers of Ideation, promised to appear in this number, will certainly appear in June. Besides, Mrs. L. M. Millard contributes for June a psychological sketch from life, entitled Genu's Skylight; from a Western writer we have some hints in A New Classification in the Order of Development. The third article in the American Indian series, by Miss A. E. Cole, is Civilization and Education of the Native Race. Prof. Colby will speak of Things Seen from a Distance; Eleanor Kirk of High Places. There will be also personal sketches and portraits.

The Phrenological Journal is published monthly at \$1.50 a year, or 15c. a number. To each new yearly subscriber is given either the Plaster Paris Phrenological BUST or New Lithography Phrenological CHART Premium, a new plate, 19x 24 in., with ring for hanging. When the Premium is wanted, 15c. extra must be received with the subscription to pay postage on the JOURNAL and the expense of boxing and packing the Bust, which will be sent by express, at expense of the subscriber; or No. 2, a smaller size, or the Chart Premium, will be sent by mail, postpaid.

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THE
PHRENOLOGICAL JOURNAL
AND
SCIENCE OF HEALTH.

NUMBER 5.]

MAY, 1889.

[WHOLE NO. 605.



BENJAMIN F. TRACY.
Secretary of the Navy

NOTABLE PEOPLE OF THE DAY.—No. 19.

Benjamin F. Tracy, Secretary of the Navy.

ALL the world knows by this time the names at least of the men who have been honored by appointment to places at the council board of President Harrison. Long before the inauguration there were many newspaper-made cabinets, and "slate" after "slate" was broken. By common consent Mr. James G. Blaine was set down for the most conspicuous place, that of Secretary of State, because his services in behalf of the party during the campaign *demand*-ed reward. Others who now hold portfolios were mentioned by journalists as among the likely candidates in Executive favor; for instance, Mr. Benjamin F. Tracy, Mr. William Windom, and Mr. John Wanamaker.

Of Mr. Blaine, we have had occasion to speak in former numbers of this magazine, and he is so well known to the American public that it would be difficult indeed to add anything to what has been said and published of him. Mr. Tracy, now at the head of the National Navy Department is an esteemed New York lawyer, and as the portrait indicates a gentleman of superior mental capabilities. He has that order of intellect that is distinguished for its critical judgment of facts. He is penetrating, definite and thorough, seeks to know all, and therefore is not easily satisfied, when the matter of inquiry is one that involves important interests, by second hand testimony. A man of will, and of much temperamental activity, he is led to make strenuous personal endeavors on occasion—"to go himself" and not send. We infer from the contours of the head as shown by the portrait that he has strong conscientiousness, and that his sense of responsibility inclines him to depend less than most other men upon the statements and services of others. One reason for this is his rather sensitive appreciation of personal credit.

Another is his strong reliance upon facts, and indisposition to accept mere opinions. Still another reason is found in his lack of assumption and pretension. Hisself-confidence has been evolved from experience, from gradually acquired knowledge and capability. He is not the man to trust to that which has not the warrant of certainty as shown by the accomplished fact. The question with him would be "what have you done?" rather than "what do you think you can do?" when he has work that another whose career is unknown to him, should offer to do.

Evidently the back head of the Secretary of the Navy is fully developed—or the portrait misleads us; and the inference is that he is a social man, kind to friends and deeply interested in all that belongs to home. Ambition and intellect may lead him to take part in affairs of a public nature, and give the most of his time to the world, but his feelings lean toward those tender and retired habits that flourish best at one's hearthstone.

The forehead is clearly marked for order, memory, definiteness, and close discrimination. He should be incisive and logical in statement, the speaker who aims to make his points clear rather than to exhibit verbal fullness.

General Tracy, of New York, was born at Oswego, Tioga County, N. Y., on April 26, 1830. His father, Benjamin Tracy was one of the pioneers of the Southern Tier, and a man of sterling character. Young Tracy early developed a love of study, and after completing the course of the public school, he entered the Oswego Academy, where he gained a good education. When eighteen years old he entered the law office of Nathaniel W. Davis, a prominent member of the Oswego bar, and he was admitted to the bar as soon as he was of age. His early practice gave him

reputation, and when only twenty-three years old he was nominated by the Whigs for District-Attorney of Tioga County. He was elected, although the Democrats were successful with the general ticket. In 1856 he was re-elected, defeating Gilbert C. Walker, afterward Governor of Virginia. Mr Walker and General Tracy became law partners after the latter declined a third term as District-Attorney. General Tracy identified himself with the Republican party when it was formed. In 1861 he was elected to the Assembly by the votes of the Republicans and War Democrats, and aided to make Henry J. Raymond Speaker of the Assembly in 1862. He served on important committees and gained a high reputation, both in the committees and on the floor of the Assembly. After the close of the Legislature, General Tracy was made a member of a committee appointed by Governor Morgan to organize general recruiting for the Army, and he did good work in Broome, Tioga, and Tompkins counties. Under a commission from Governor Morgan he also recruited the 109th and 137th New York regiments, and of the 109th he was made Colonel. His command was part of General Grant's advance force and took a prominent part in the battles of the Wilderness and Spottsylvania. In the Wilderness fight General Tracy led his men into the thickest of the contest. After Spottsylvania he was compelled to return to New York on account of impaired health. When his health improved he returned to the front, taking command of the 127th Regiment of colored troops. Later he was placed in command of the rendezvous and prison camp at Elmira, where 10 000 prisoners were under his charge. At the close of the war he was made a brevet Brigadier General of Volunteers.

After the war General Tracy became a member of the law firm of Benedict, Burr & Benedict, Brooklyn, from which he withdrew on his appointment (Octo-

ber 1, 1866) by President Johnson to succeed Benjamin D. Silliman as United States District Attorney for the Eastern District of New York. He was re-appointed by President Grant on January 23, 1871, and served until 1873. During his terms as District-Attorney he prosecuted many important cases against whiskey distillers, and broke up to a great extent the illicit whiskey business in Brooklyn. He drafted the bill passed by Congress in 1867, regulating the collection of taxes on distilled spirits, and in a year the revenue rose from \$13,000,000 to \$50,000,000. In February, 1873, General Tracy resumed the practice of law, and was retained in most of the important cases tried in Brooklyn. He was one of the counsel for Mr. Beecher in the Tilden-Beecher case. In 1881 Gen. Tracy was nominated for Mayor of Brooklyn. This nomination and the nomination of Ripley Ropes, by the Citizens' Committee, and the Young Republican Club gave the friends of good government a choice between excellent candidates, which would have resulted in the defeat of both. General Tracy resisted all temptations to remain in the field, and proposed to his rival their joint retirement from the canvass, and in this way opened the way for the nomination and election of Seth Low. By his action in that critical emergency General Tracy won the respect and hearty esteem of the party and general public. On December 8, 1881, he was appointed by Governor Cornell as Associate Judge of the Court of Appeals, to fill the vacancy caused by the appointment of Charles S. Andrews as Chief Judge *ad interim*, vice Chas. J. Folger, resigned. General Tracy held his position until Judge Andrews's temporary appointment was vacated by the election in November, 1882, of William C. Ruger as Chief Judge, and handed down several important opinions, including one which settled the question of compensation of property owners whose premises had been injured by the elevated roads.

General Tracy has not been inclined to seek prominence as a party man, notwithstanding his political relationships. His position and characteristics have in fact led him to avoid identifying himself with either side of the contests within his party. He has been generally regarded as a man of exceptional vigor, but has had little opportunity to dis-

gentleman we have just described. We see in it the practical, ready, shrewd and sanguine elements that contribute to success in commercial life. Good judgment, knowledge of human nature, humor, ability to plan well, these associated with physical robustness appear in the portrait. We can easily imagine the celerity with which Mr. Wanamaker



JOHN WANAMAKER.

play a capacity for organization and administration.

JOHN WANAMAKER.

Postmaster General.

IN Mr. Wanamaker the business men of America recognize an example of energy, enterprise, and progress, a capacity for large undertakings that may prove useful to the wide sphere to which such an office as that of Postmaster General introduces him. The head and face are certainly characteristic. Intellectually it contrasts with that of the

has been accustomed to act in the management of his affairs. His head is broad and strong in the base, impressing the student of mind off-hand with the idea of the Philadelphia merchant's executive energy. With such a brain and such a body he is a natural driver, able to do as much as two or three average men in a day and not feel any the worse for wear. One of the "secrets" of his success is the happy relation between his brain and body, that enables him to work long and severely with ease and to maintain a high degree of elasticity however much may be the pressure and variety of his engagements.

Mr. Wanamaker is a native of Philadelphia, having been born in that city July 11, 1838. He came of German stock and a hardy class. Nelson Wanamaker, his father, was a brick layer. The boy, John, had the advantages of the common schools for a short time, but when his father died, in 1851, he received his first rubs against the world by doing odd jobs about a brickyard. For a time he served in a clothing store, and later he became a salaried secretary of the Young Men's Christian Association. In 1861 he gave up his position and engaged in the ready-made clothing business with Mr. Nathan Brown. Between them they had \$3,500 in cash. In the meantime he had married a sister of Nathan Brown. The business prospered

from the beginning. In 1868 Mr. Brown died, and Mr. Wanamaker succeeded to the firm business. Since then he has added other branches of business to the original one, and he has now one of the largest retail stores in the United States. In 1887 Mr. Wanamaker adopted the system of co-operation in his store, and during the first year of its experiment over \$100,000 was paid to his employees in excess of salaries. He has also organized a savings bank for his employees, a building association, and an insurance association, classes for instruction, and a library, and has built the Hotel Walton for such of his feminine employees as have no homes in the city.

In 1858 Mr. Wanamaker began a Sun-

day School in Southwest Philadelphia, out of which has grown the Bethany Presbyterian Church. This church and its colleges have received over \$100,000 from him. He was one of the founders of the Christian Commission, and was president of the Young Men's Christian Association in 1870-'83. To this association he has given \$100,000, and it was under his presidency that its present building was erected. To Mrs. Wanamaker is due the building of the children's wing of the Presbyterian Hospital. Mr. Wanamaker's religious and philanthropic work is much spoken of and he conducts it so far as he can, with the methodical attention that he gives to his business affairs.

PORFIRIO DIAZ.

THE PRESIDENT OF MEXICO.

THE next-door neighbor of the United States at the South has necessarily commanded the earnest attention of our government and people. The fortunes of Mexico have varied and fluctuated during the past sixty years with all the abruptness and coloring of the kaleidoscope. Now a kingdom, now a republic, anon an empire, again a republic, and sometimes rent with factions that demanded each a separate government, making a mere show of divided independence more grotesque than real so that revolution seemed to be for the Mexican a condition in which he found free scope for his peculiar faculties. But repetitions cloy the appetite, however strong it may be for the delicacies that are repeated, and now we behold Mexico enjoying an interval of peace and a stage of prosperity unknown since the days of Toltec or Incan grandeur.

To the man who now occupies the chief place of authority, Gen. Diaz, much of the credit is due for the new era that appears to have set in for Mexico. A grand country, possessing resources of so varied and rich a character that a hundred millions of people could

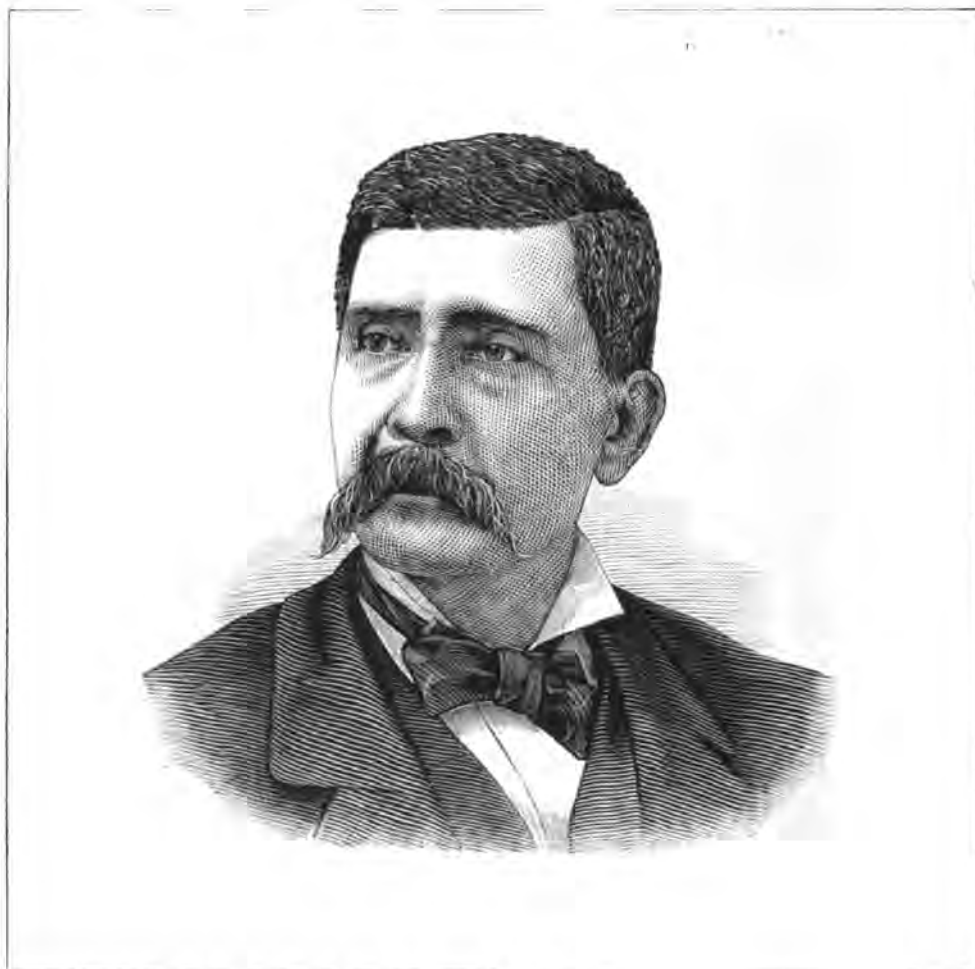
flourish there, it certainly is full time that its people settled down to an appreciation of their advantages and began in right earnest to make their nationality deservedly important in the world's affairs.

President Diaz exhibits the physiognomy of a modern Mexican. He has that bilio-motive constitution that is found in the descendant of the early Spanish colonists. The face is strong, not massive, but each feature has a certain positiveness that conveys the impression of tenacity and vigor. He should be a remarkably tough man—enduring with ease exposures, privations, and severities that would put ninety-nine out of a hundred ordinary men *hors de combat*. His intellect partakes of his physique—it is tenacious, positive, persistent, in its method of action. To be sure we must attribute something of its “grip” to the decision and self-reliance that are shown by the height of the crown. Few men have so much of what is called “the courage of their opinions,” which means we suppose the resolution and backbone to stand up and defend their convictions.

The President of Mexico, we feel sure, is the last man to skulk away from a position that he has once assumed. He is a cautious, shrewd man, a good tactician, but we think that his best successes have been obtained through direct, hard blows. He has large Caution that would incline him in

kind and should expect him, on the other hand, to manifest self-respect and dignity to a good degree whatever were his relations with others.

Porfirio Diaz is about fifty-nine years old, having been born in 1830, in the province of Oaxaca, where he received his early education, and later took a



PORFIRIO DIAZ.

most cases to be vigilant and care-taking, but when he acts he does not play the cat trick, in silently and cunningly springing upon his foe, but boldly assails him. We hear a good deal about the petty meanness and trickery of our neighbors over the Rio Grande; in Senor Diaz we don't see characteristics of this

course of lectures in law. At the breaking out of the war with the United States in 1847 he enlisted in the ranks of the Mexican army, and was gradually advanced to the grade of captain of artillery.

When Santa Ana made himself Dictator of the Republic, Diaz retired from

the army and continued the study of law. The revolution of 1854 brought him again into the military service, where he occupied the position of battalion commander, and after having beaten Santa Ana on the 9th of August, 1855, was immediately appointed political and military chief of the district of Ixtlan in Oaxaca.

In 1858 Benito Juarez assumed the executive power; Diaz united his fortune with that of the Liberal party against the Reactionary or Church party, which, under Miramon and Marquez, began the sanguinary three years' struggle called the "Reform War." Diaz's energy and valor helped greatly to repress the rebellion in the State of Oaxaca that grew out of this contest.

In 1861 he undertook a campaign under the orders of Gen. Gonzales Ortega, against the chief reactionist Marquez, and gained a victory which excited the admiration of his superiors, who solicited for him the grade of General. During the period of the Napoleonic experiment, Diaz was one of the first who most forcibly opposed the invaders; and with a small number of warriors of Oaxaca, aided Gen. Zaragoza in deciding the victory of Puebla, on the 5th of May, 1862. He was soon, after that event made Governor and military commander of Vera Cruz, and at his own request was transferred to the army in operation, under the command of Gen. Ortega, to take part in the defense of Puebla, which was besieged by the French from March until May, 1863. The government having to abandon the capital, Diaz was compelled to take command of the army after the arrival of Maximilian in 1864.

All through the troublous period of intervention and of the burlesque Empire, Diaz was one of the greatest supports of the Republican cause. By his uninterrupted and laborious service, with an effective force of only 5,000 men poorly fed and without effective means for their maintenance, he succeeded in

diverting the current of invasion into the states of the South where he had taken his position.

When the Imperial troops, after their success in other parts of the country, began in earnest to occupy the South, they invaded Oaxaca, and besieged Diaz at the capital, where he was obliged to capitulate in February, 1865, and for the second time was made prisoner and taken to Puebla, whence he escaped in September.

After the reconstruction of the Republic Diaz was proposed as a candidate for the presidency in 1867 against Juarez, who was elected. During the administration of Juarez, and of his successor Lerdo, Diaz opposed them and was several times obliged to leave Mexico and seek refuge in the United States. This opposition was most notable during the administration of Lerdo, when Diaz, having disguised himself, returned to Mexico from New Orleans, was recognized by the chiefs who were favoring his cause, and at the head of 7,000 men advanced toward Puebla. After several battles, he occupied the capital of the Republic, five days after the flight of Lerdo to the United States. By the flight of Lerdo, Iglesias, who was President of the Court of Justice, became the Constitutional President. Diaz had a conference with him which was without the result sought, whereupon the troops that had remained faithful to Iglesias, abandoned him, and for a time Mexico had four Presidents—Lerdo, Iglesias, Mendez, and Diaz.

The election for President, which soon afterward took place, resulted in favor of Diaz. His first term expired Nov. 30, 1880. By a law of Mexico he was not eligible to immediate re-election, but he was, however, re-elected in 1884. Under his administration the resources of the country were rapidly developed, manufactures were augmented, commerce increased, education advanced, railroads constructed, telegraph lines extended, taxes better applied to the

purposes for which they were collected, and roving bands that infested the country were to a large extent dispersed.

On the first of December, 1888 he was again inaugurated President for another four years.
EDITOR.

GNOSTICS AND AGNOSTICS.

IT is marvelous to behold how many people think they see just where they are blind; and where they are ignorant they profess to be wise above all that is written and verified as the truth. The old Gnostics were very knowing in their way; and modern Agnostics, professing to be know-nothings where they might know if they wanted, often, to the wonderment of spectators, assume to pronounce on the utterly unknowable.

There are the Gnostics of Science, often falsely so called. One of these died not long ago in New York whose creed was thus formulated, "Science is the sum of what we do know, and religion is the sum of what we do not know." To this belief in unbelief how many give the approval of their amen? In science all experience is physical, and there can be no realization but animal sensation. Declaring themselves proficient in chemical light, in discerning invisible molecules as the factors of universal being, they call their credence knowledge, and their credulity demonstration; just as if they had walked around the rim of the universe and were enabled to say, "*Ne plus ultra*." Just where others say "We see and know," their Gnostic lodge is made large enough to blind them to what is elsewhere joyous experience. We have all heard of the modesty of true science; but here it makes its ignorance the test of other people's knowledge. We may take another illustration where Gnosticism strangely transmutes itself into its pretentious Agnosticism. It can talk about design in nature, about the origin of species, in cause-producing effect, in the invariability of law and in the potency of unseen causation, until mounting round after round to where it

can see no further into the ladder of eternity, and beholding no visible creator over the creation, no lawgiver above law, it prostrates the idea of an independent designer; and inscribes *Atheism* upon its banner. Inasmuch as the highest round of order is lost in impenetrable mist it becomes an unbeliever that there is any. Such is like a walker in the streets of London in a November fog. Through the window lights of the surrounding gloom he finds his way to St. Paul's Church. He has light enough to read the name of Sir Christopher Wren on the walls, "Would you behold his monument, look around you." "Yes," he says, "every house is built by some man; reason teaches that." But being adventurous he ascends into the gilded ball towering above the edifice. There he can see no more; the deep fog hides all; moon, stars, and sun, are all hidden; so his gnosticism is dark as his visual outlook, and he assumes the Agnostic; and exclaims, "There is no visible proof of an invisible Architect, and I deny his existence!" Oh, profound skeptic, all you have to do is to come to what you can not explain and then deny!

These two opposites of pretentious wisdom often exhibit their peculiarities in another way. Prof. Huxley expresses his scientific consciousness, thus "Extinguished theologians lie about the cradle of science as the strangled snakes beside that of Hercules; and history records that wherever science and orthodoxy have been fairly opposed, the latter has been forced to retire from the lists, bleeding and annihilated, scorched if not slain." Our learned physicist will probably admit that a false science supposes a true; and so a false theology has for its counterpart one announced

by the Father of his creatures." The memory and conscience of this writer on materialism need a stirring. We have in reminiscence many confident scientists who have been laid bleeding around the altars of Orthodoxy. Pretentious Alchemy was slain by confident chemistry; Geology has been repeatedly upset and then re-examined; the Ptolemaic system of Astronomy was annihilated by that of Copernicus. How many warring theories about the nature of the sun? How many about the origin of earthquakes? What is the science of one age is the empiricism of the succeeding. But the foundation of religion, God, His law, human responsibility, the character and authority of Jesus, the great facts of immortality and destiny are the same now as when Jesus taught and Paul preached. The fact is that Agnosticism can change itself into a philosophic chameleon, asserting and denying according as circumstances change its color.

It is not long since the leading agnostic of the age was brought into undue prominence by a discussion in the *North American Review*. The gymnastics of the leading debater were remarkable, as showing how confirmed skepticism can assume at will the garb of knowledge of what is absolutely unknowable. Nature was declared to be monstrous and cruel, and so much so as to discredit a Creator. There could be no Maker of so contradictory a system. There Agnosticism was sole judge and then the opposite was assumed. "I fly for consolation to nature!"—this very system of things too abnormal to prove supreme benevolence. After repeated avowals of unbelief in a Great Designer, in the immortality of man, of human responsibility for belief and morals; then—presto—the infidel announces himself a confident believer where all evidence and facts were totally wanting; thus, "Religion never did, never will, and never can, comfort any human being." The credulity of skepti-

cism has been often the subject of curiosity. To make such a statement was the climax of ignorant self-assertion. It was Agnosticism resolved into impossible attainment. It was an agnostic assuming the role of knowing all the present, the past, and the future. It was as if he said, "I have been with the most afflicted of mankind in poverty, sickness, and want, I have sat by the bedside of all dying Christian believers. I was in the wave-tossed and burning vessels of all oceans—I was never absent from the Lollard's tower in London—I was in the catacombs of Roman tyranny where the early followers of the Crucified worshipped in gloom and silence—I was ever present in the coliseum where the martyrs of Jesus fought with wild beasts and more bestial men—I was with Stephen when he was stoned at the City's gate, and with Jesus and Paul when they bowed their necks to the executioner—I was with all the sufferers for righteousness' sake from righteous Abel down to the last covenant in the Grass Market; and I, a materialist know-nothing, assert my absolute knowledge, that religion never administered consolation to one of its votaries!" We may put this avowal among the curiosities of *agnostic science*!

Then there is the Gnosticism of Law-courts contrasted with Agnosticism of moral ethics. In the former we may hear the verbose outpourings of indignation on the culprits of theft, and social misrule or party antagonism. We shall hear a great deal of honor bright, manly rectitude, and well deserved punishment for guilt. There law and law-givers will be no myths but vengeful realities. Let now our materialist attorney leave the bar, judge, and jury for the lecturer's platform or the chair of the periodical *Review*, and Mr. Positive Law becomes Mr. Vapory Morality or Colonel Irresponsible, endeavoring to demonstrate the unaccountability of mortals for belief or unbelief; crime or criminality. But for all the blasphemies

of holy things, he, and mankind in general, are no more accountable than for the color of their hair, or the height of their bodies ! In common or political life wrong is wrong, but in skeptical dogmasticism any opinion is innocent but the assertion of religious connection. It is marvelous how such fraternities of so-called Positivism can transform

themselves into the incertitudes of circumstances for the sake of notoriety or the gains of irreligion. To say that such can be satisfied with themselves is like the averment that men can better chase moon-beams than trust solar light, or travel better in bogs than in the royal way of truth.

JOHN WAUGH.

BE TRUE.

IS it because people have so poor an opinion of themselves that they try to appear to be what they are not ? Some one has said that men show their weakness not by what they are, but by what they would like to be. It seems a hard matter always and ever to be true ; that "honesty is the best policy" did very well for a copy in the old fashioned copy book ; but truth seems to bind one as in a straight jacket, and it is easier to wriggle out and let life write the new copy "expediency is a better policy."

It takes a high degree of courage and native grit to never shirk, but to act in confidence that frankness is best not only as a matter of principle but also as a matter of policy. Nobody likes a painted face no matter how delicately tinted may be the pink and white ; the real flesh and blood skin, though speckled, brown and yellow it chance to be, commands more respect. Genuineness is the really desirable thing after all. A mask, however handsome, is never alive with the beauty of changeful expression. Masked words and actions have a false ring that betray their ugliness. Pretention has in it something dead and cold and heartless that is abhorrent to one who loves truth.

Human nature has an innate admiration for what is true, but often there is not strength enough to live up to what may be one's ideal ; then comes in the weak foolishness of trying to make others think we actually are what we would only like to be. If an angel from heaven were to come down and say to mortals,

I have power to give you intelligence of mind, an overcoming strength of character, a highly good and useful life, no human being in his inmost heart would so desire the wrong as to turn away and say, I do not want your gift, I prefer ignorance, vice and sin. Every heart has in it a big enough spark of good to kindle into the cry, "May I be strong-spirited and clean-hearted with the heavenly gift of a wise intelligence and a noble useful life to be mine !"

But gold nuggets and precious things of life don't fall like rain drops about us and not many shining excellencies may be expected without corresponding toil. The lazy tramp would like to fare sumptuously every day and exchange his rags for broadcloth. The indolent brain would exchange its sluggish inertness for clearness and vivacity, its ignorance for intelligence. The immoral man would like to exchange his sin for a clean conscience and easy strength to resist evil.

Yet the physical, moral, and intellectual tramps won't work for the good they want. If moral and mental gain were to be had for the begging, beggars would spring up everywhere. To be learned, wise, of a pure, strong character implies work that the mentally and morally lazy shrink from undergoing. Rather than put forth a long, close continued effort to accumulate heart and head wealth, the shiftless soul would rather have his moral nature clothed in dirty rags, and his brain fed on what cold scraps of knowledge he can pick up

here and there. Yet let him that is without sin among us cast the first stone at any of these tramps; and if they come with their down sort of a look as if guilt were implied in their mere asking a bit of charity; among all our gifts let there not be lacking the gift of charitable feeling, not a cold bit either, but a great, warm overflowing heart full that means, I will do the very best thing I can for you. There is much help and courage gained from sympathy that is genuine.

Let "fellow-feeling make us wondrous kind" to one another; being as lenient to the sins of others as we are to our own; joining hands in general happi-

ness to be strong and true. Inasmuch as lieth within us up to whatsoever we would like to be.

And one of the most helpful things in the world is the power of example; and what a person really is will shine through any outward trappings, and his true self is what will make lasting influence and effect.

He deserves the victor's crown who is wise enough and strong enough to be true at all costs to the best and highest things he knows.

"This above all, to thine own self be true. And it must follow as the night the day Thou canst not then be false to any man."

LISSE B.

IN MEMORIAM.—HERMAN F. A. DORNBRACH.

"Death takes us by surprise,
And stays our hurrying feet;
The great design unfinished lies;
Our lives are incomplete."

—Longfellow.

FELLOW-STUDENTS of the class of 1885: One of our number, in the bloom of manhood, has passed away from among the living. When our class assembled for the last time, who would have thought that the first one to depart would be our brother from across the sea? Then he was, apparently, in the best of health, and one would have supposed that he had before him a long and useful career. He possessed many qualities which contribute to a successful life. He was an accomplished scholar, a courteous gentleman, an agreeable class-mate. He had a well-formed brain. His intellect and moral sentiments were amply developed; he possessed a warm social nature, and he had plenty of energy and determination. No matter where he might have been placed, he would have been an ornament to the society in which he moved.

It has been truthfully said that no man liveth to himself, for others are affected

by that life; or dieth to himself, for others are interested in that death. Every man exerts an influence, for good or for evil, whether he is conscious of the fact or not. The life of a truly good man is a blessing to his fellow-creatures, no matter how limited the sphere in



HERMAN F. A. DORNBRACH.

which he acts. And the life of one who has yielded himself up to wickedness is an unmitigated curse to humanity.

As we look back upon the days when our departed friend was moving in the midst of us, the feeling is not one of unmixed pain. Our sorrow is lightened by the thought that his life was one of virtue and honor, and that his influence was exerted for good and not for evil. Had his life been spared, he was likely to have proved himself an honor to the institute from which he graduated, to the teachers from whose lips he listened to words of wisdom, and to the classmates who now mourn his early death.

Henceforth, against his name, as it appears upon the list of our Institute Alumni, must be set the fatal asterisk of death. We shall see him no more with mortal eyes. But on the other side the river, "in the land to which we are drifting," there is life for ever. Let us hope that on the other shore our class will be reunited, never again to disband.

May we so live that when we too

"Join the innumerable caravan which moves
To that mysterious realm,"

those whom we leave behind will hold us in loving remembrance, as we now do
Herman F. A. Dornbrach.

H. S. BARTHOLOMEW.

[Dr. Dornbrach was a scholarly young German who had traveled much before coming to the United States. After leaving the Institute he went to Valparaiso where he intended to practice. His prospects were excellent. Of a warm temperament, refined and courteous in demeanor, handsome in form and feature, ambitious in aim, and industrious, his sudden death in the full glow of early manhood is much lamented. What a classmate says of him in the well chosen language given above receives the hearty concurrence of the officers and faculty of the Institute. —EDITOR.]

DREAMS.

I BELIEVE that it is now almost universally conceded that dreams are caused by the activity of certain organs of the brain, while the remainder are in a state of repose, thus molding the thoughts of the sleeper; that the changes in our dreams are wrought by the awaking of organs which have been in repose, and the falling to sleep of those which have been active. For instance, Alimentiveness sets us at table, bountifully supplied with viands. These, Acquisitiveness turns into gold, which Secretiveness tries to hide. Constructiveness builds palaces, which Destructiveness levels to the ground. Inhabiteness makes us dream of home; Spirituality of heaven, and so on; the absurd changes being caused by the sudden awakening of an organ opposed to the ones which have been active. For instance the sudden falling into repose of Benevolence and the awaking of Acquisitiveness. I remember of once dreaming that a beggar held out his hand for an apple, which I was

about to eat. With some reluctance I handed it to him; but before he could secure it the apple changed into a piece of gold money which took legs and ran away. Both the beggar and myself gave chase, fighting desperately for the possession of it. The struggle ended in my killing him. The remainder of the dream was of my attempts to escape justice.

This solution of the dream mystery is very plausible, but it does not take into account the dreams of occurrences which have not yet come to pass at the time of the dreaming. It is only at wide intervals that such dreams occur, and they always leave a lasting impression on the mind and seem to be real to the dreamer. My husband had a case in the Supreme Court. After a waiting of many weeks it was thought that the decision would not be rendered until the ensuing term. On the morning of the day which the court was to adjourn, I said: "I dreamed that your case was decided." "How?" he asked. "Against

you," I replied. Returning from the city that evening, he informed me that the case had been decided and decided against him.

Some years ago, on one autumn night I took the cars at Austin, Minn., for Burlington, Ia. The train was many hours late, and we were informed that it would not reach Cedar Rapids (the place where the passengers should have had supper) until about four o'clock the following morning, which would be the only chance to secure a breakfast. As it was already midnight, the majority of the sleeping car passengers decided not to be called so early, myself among the others. I knew when the train stopped for breakfast, and also when the journey was resumed. Then I fell asleep, and my dream seated me on the top of the baggage car. Presently we came to a rushing river and a bridge. But—horrors! As I looked down, I saw on my right-hand side a broken stringer! I tried to call out to the engineer, but I could not; and in my despair I clasped my hands and gave up myself for lost; for the train was already upon the bridge. One glance at the broken timber, the rushing water, the overhanging trees, and the dim blue sky; and then a bang, a jerk, and I awoke to find that the engine had been reversed and that the train was moving backward.

We breakfasted at Cedar Rapids and spent the day there, for the bridge over the Cedar River had to be repaired before the train could pass over it. The engineer discovered a broken stringer, after the train had struck the bridge, and by suddenly reversing the engine saved a terrible disaster. That evening when we again reached the Cedar River, I stepped upon the platform and took a view of the surroundings. Nothing which the dream had supplied was missing. Bridge, river, trees, the place where the broken timber had been—all were exact. Yet to my knowledge I had never stood upon the spot before.

A still more remarkable dream has been handed down to us in Texas history. Sometime in 1834 a company of surveyors, under the direction of Joseph Wilbarger, were at work near where the city of Austin now is, when they were attacked by Indians. Wilbarger was tomahawked, scalped, and left for dead. The remainder of the surveying company made their escape, taking refuge at the house of a Mr. Hornsby, about five miles distant from the scene of the attack. The young men reported Wilbarger as being dead, they having left him not only apparently lifeless, but scalped. But that night, Mrs. Hornsby dreamed that she saw him alive, sitting under a tree by a stream. Thrice the dream came to her, so vividly that she was able to describe the locality. She awoke her husband and urged him to fly to the rescue of the wounded man. But he treated the appeal as a foolish whim until Mrs. Hornsby announced her intention of setting out for the spot unaided and alone; when he called the young men and with them repaired to the place of the late assault. The stream described by the lady was soon reached; and there, seated under a tree, they found young Wilbarger, faint and bleeding, but alive.

The experience of the wounded man was also remarkable. While, after reviving, he lay faint and weak from the loss of blood, and in a half stupid state, he, too, had a dream—one so real that he always believed it to have been a vision, and always spoke of it as such. He saw a lady coming toward him, whom he recognized, upon a nearer view, to be a sister that he had left in Ohio. His surprise and joy may well be imagined. "Do not despair," she said, "help is coming to you very soon. Crawl to the stream. It is not more than two hundred yards distant. The water will refresh you." He at once began the task of trying to move his body in the direction which she had in-

licated, and where he knew the stream to be, reaching it after a time. The water had the effect of restoring him fully to consciousness, when he began scanning the place for another glimpse of his sister. But she had disappeared. He afterward learned that she died the very day on which the vision came to him. Wilbarger lived for nearly nine years after he was scalped by the Indians, and his life saved by a dream. But he was never well thereafter and died from the effects of the wound.

Instances of this kind could be multiplied to fill a volume. I rarely receive letters from my friends—those most in *rapport* with myself—that I do not dream of them just before the receipt of the letters. I once loved to think that the soul or mind of a person could roam at will during sleep, seeking dear friends and beautiful scenes. But a scientist shook my belief in that theory, by proving from the dreams of the blind that we do not dream of things which we can not see. That is, the blind from birth are as much without sight in dreamland as when awake, only those who have once had their sight being able to enjoy in dreams the glories

of flower and tree, water and sunlight.

I would like to hear the explanation that Phrenology may give of dreams which come true, either in part or the whole. It is a very interesting subject—one which has commanded attention since the earliest ages of man's existence. The Bible repeatedly speaks of dreams which came true and of angels appearing in dreams with words of cheer and of warning.

More or less thought is given to them by every nation in the world. Many explanations have been made regarding them, yet a certain mystery seems to envelope them, which science does not tear away. I have heard some people express the belief that the majority of dreams are memories of a former existence. Indeed, who has not in his dreamland world places which he never saw when awake? I have in mine a haunted house which I have visited in dreams hundreds of times; yet never saw with my waking vision.

Will some one better skilled in the dream science than myself, explain the mysteries of dreamland?

BELLA FRENCH SWISHER.

BRAIN CENTERS AND HYPNOTISM.

BY the invitation of a well-known physician I assisted in the performance of some experiments with hypnotized subjects at a meeting of the West Side Medical Association of New York, January 17, last. One important object of the experiments was an attempt to ascertain whether phenomena of a trustworthy class could be obtained, bearing on the specialization of brain centers as factors in our psychical life.

It need scarcely be said that experiments of this kind are not new, as they were made fifty or sixty years ago by Drs. Elliotson, Braid, Hall, and others, of England, and most of those who have obtained prominence in America as practical phrenologists, for instance, the

Fowlers, Mr. Grimes, Prof. N. Sizer, and Dr. Capen. The apparently brilliant success of this method of proving the existence of mental centers leads the disinterested to wonder why the scientific world has not generally accepted the phrenological theory, whereas the fact of the matter is, while phreno-magnetism strengthened the faith of phrenologists, it appeared to strengthen the doubt or opposition of objectors. Two reasons may be cited for the attitude of the latter—(1) The opinion held by the majority of scientists until lately that mesmerism or animal magnetism was but a piece of cunningly devised trickery or knavish thaumaturgy, a revival of the magical performances of antiquity,

and therefore to be condemned as utterly worthless. (2) The claim that if the mesmeric trance were real, the entranced was so completely subject to the will of the operator that the mental manifestations were but reflections of what the operator had in mind.

The first reason is entirely without force now since mesmerism, or, as it is commonly styled, hypnotism, is accepted by every intelligent person who is conversant with its phenomena.

The second reason has a degree of validity on purely scientific grounds, and may be said to apply with more directness to-day because of our greater familiarity with the avenues and conditions that may admit of interferences with the production of absolute and independent results when experiments of a psychological nature are attempted. In most of the observations on hypnotized subjects, whether of the phrenological class or not, the influence of the operator being so direct, it is difficult to avoid an impression from him that will color the result, and render it in some degree unsuitable as evidence. The experiments, therefore, that a phrenologist may make with a magnetized subject, being himself operator and conductor, while they may be very interesting, are of no value as demonstrations of anything else than the fact that the subject is responsive to the mental control of the operator, and simply mirrors his thought.

In the experiments made before the West Side Association as much care was taken to avoid collusion or cross influence as possible. In the outset I endeavored to awaken the subjects or to obtain their attention, but entirely without result; there was no plan of operating agreed upon between the operator and myself, and he was quite ignorant of what I intended to do. He was carefully blindfolded by one of the physicians, and without remark or suggestion I took his hands in mine and placed the tips of his five fingers over corresponding parts of the right and left hemi-

spheres of the brain of one of the subjects, and awaited for such response as might come.

All the subjects were new to me, and one quite fresh to the operator—the others he had experimented with before and knew their susceptibility. Two were men and one a young woman, all three evidently in good health and of marked organizations. A dozen or more tests were made in the manner described and comparisons of effect instituted by stimulating, if stimulating it can be termed, in this apparently passive way, the same region of head in the three subjects successively.

For instance, the region of Cautiousness touched by the finger ends on No. 1, who was merely asked by the operator "what he saw?" produced the remark—"I see two boys fighting—they'll hurt themselves—oh, there comes some one: they're running away." No. 2, when touched, said promptly: "Take care! look out!" and rose up as if to get out of the way of something that threatened him.

No. 3, the young woman, after a minute or two, said: "Oh, take me away," and kept pushing her chair back farther and farther, her face wearing the expression of great fear, as if some horrid spectacle were seen.

Touched in the region ascribed for Combativeness, No. 1 immediately assumed the attitude and expression of strong resentment, his hands being clinched as if to strike an imaginary assailant. No. 2, a much younger man than No. 1, and to the average observer possessed of a more pacific temper naturally, responded by the exclamation: "Look out! don't do that again!" spoken with much emphasis, while his head was raised and thrown back in the attitude of defiance. No. 3 exclaimed: "Oh, what a shame! what a shame! You boys will get it. You had better stop. If you don't I'll come and make you. I'll give you what you deserve. Don't let me get at you." The latter

part of this remark was made with the rising key, her hands clinched and drawn back in angry emphasis. Tone and manner suggested the school teacher of an old type speaking to a group of noisy, quarrelsome boys who regarded her authority lightly.

This line of investigation may be open to the objection that the operator, although blindfolded, after the trial of one subject, gets the clue to the nature of the manifestation required and so may affect the integrity of the result. But in this particular instance I did not intimate my purpose to the operator, nor did I explain the meaning of the phenomena until after all three subjects had been tried. I do not think the operator could tell with any degree of accuracy the part of the head that his fingers were touching, and as a fact he is but slightly acquainted with the phrenological system, and much more likely to make a mistake in attempting to indicate the location of a designated organ than to find it.

The differential expression following transfer of influence as exerted through the fingers was well shown. Having placed the operator's fingers on a part of the sincipital region, No. 1 said: "Why, I see some men; they are acting in a theatre." "Imitation," said a gentleman in the audience, and Imitation it was, as shown by the mapping of a bust that I had at hand. "What do they say," asked the operator. "They say"—then the subject, a man of little education, began to recite a piece from Shakespeare in a voice and manner that intimated little elocutionary culture but much affectation of the tragic actor. Interrupting this a minute later, I transferred the passive fingers to the region of Tune. After a moment's silence the subject said in a tone of surprise: "Why, I made a mistake. No, it's an opera; they're singing."

Transferring the operator's fingers to the head of the lady, who it is proper to say appeared to be less sensitive to im-

pressions than the others, perhaps because of a deeper state of trance, I remarked in an undertone "Benevolence." If this afforded any warrant for an influence or impression, consciously or unconsciously exercised by the operator upon the subject, it certainly did not appear in the result. In this case as in two other attempts I myself failed to place the fingers on the region I had in view, that of Imitation, for the subject remarked: "Oh, I'm in church and there's a man preaching." On examination I discovered that the fingers were considerably higher up toward the center of the head than the place of Imitation, as designated on the model bust. Here my own purpose had miscarried with a result that must bear its own evidence of the truth of the phrenological centers, for if there were any *rapport* subsisting between Dr. Gunn, the operator, and myself, it failed entirely to control his relation to the mental expression of the subject.

A similar differentiation of result occurred in a double way later. Wishing to give a sharper expression to Tune I placed the fingers of Dr. Gunn upon that organ, as I supposed, but the subject commenced talking about seeing men at work and wanted to know what they were doing. Some one present suggested "Constructiveness," and it was found that the fingers were too far back or that they were more upon that organ than upon the neighboring organ of Tune. Noting that the temples of the young woman or No. 3, were wide and full, I placed the operator's fingers as near as I could estimate in the off-hand fashion that rapidity of change required over the seat of Constructiveness, but the assembly was amused by the subject who smacked her lips and said, "Oh, how nice." "What is nice?" inquired Dr. Gunn. "Don't you see" she replied, "that table? It is loaded with good things. Cakes and wines, and every thing. And nobody there to eat. Oh,

I wish I had some." The fingers were placed too low and were over Alimenterness.

The closing experiment of the series was made upon the new subject, No 2, whose head was comparatively well developed in the coronal region. Taking the operator's fingers, he was still closely blindfolded, I carefully placed the tips over the center of the forehead. After a minute of silence the young man commenced to relate an incident concerning an old friend, and for two minutes appeared to be in conversation with him. Memory was at work and the exhibition of detail in recital was excellent. Transferring the fingers to the region of Benevolence he went into a kind, philanthropical strain about treating "him well. I wouldn't do that, I'd do the best I could for him." Pushing the fingers directly backward about an inch he continued in a different tone, "You're doing what God requires, we ought to do what the ministers say; even Henry Ward Beecher—." Switching the fingers farther backward upon the prominence of Firmness, he raised his hand and brought it down with energy saying, "Yes I will say that it is the way to do, stand on your own ground and see to it that you are not made the tool of others. I believe in every man's sticking to what he thinks best." Here I had pushed the fingers outward over the region ascribed to Conscientiousness, he went on, "When a man has made up his mind that he is in the right why should he not keep on? Is there any thing better? Let others say what they please, if the thing is right, it's your business to——" Again I pushed the fingers an inch or so further downward and backward, when he continued, "but we must take it into consideration that other people may not see it in the same light, and try and please them as far as we can. We don't own the earth, and I guess that most other people are as good as we are." Again the fingers were pushed backward until they covered the

central part of the occiput. The young man's face became tender and tears started in his eyes and he spoke of friends, and what he owed his mother, and now much he loved the relations of home.

The chain of phenomena seemed a demonstration, as several observers remarked. There were a few present who were more or less familiar with the phrenological organology and to them the changes in the language and manner of the subject as I passed from one point to another proved of great interest because of the novelty of the experiment. One feature of the experiment, to which my attention was called by one of the company was the abrupt termination of the mental expression in every case where the fingers were taken off. It was also noted that when I had placed the operator's fingers at another point there was a brief interval during which the subject's face was more or less agitated, at times indicating an experience of pain, and suggesting changes of cerebral circulation and cellular activity of so abrupt a nature that the nerve center described was subjected to extraordinary strain and consequent suffering until equilibrium had been restored.

H. S. D.

MARY.

THE evening breeze is on the sea,
The dew gems on the wold,
The heavy hind hath left the lea,
The shepherd's penn'd his fold.

The blackbird's lilting in the wuds,
The lintie on the thorn;
The laverock's piping 'mong the cluds,
The craik among the corn.

Then Mary, dearest, in thy plaid,
Come up the burnie stealing,
And ower the haugh and thro' the glade,
Beside the shepherd's sheelin'.

And in that sweet sequester'd nook,
We'll talk of comin' pleasure,
When thou wilt link thy lot to mine,
My bosom's only treasure.

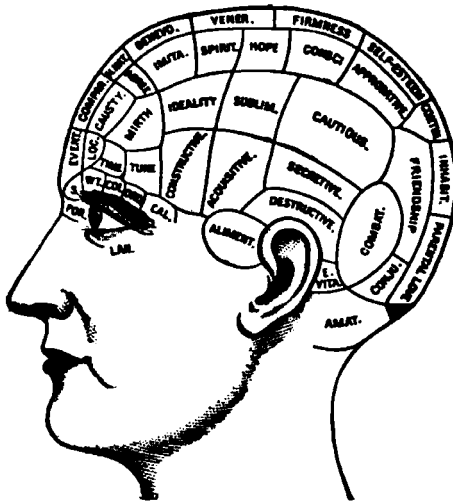
And all our thoughts and words shall be
Pure as the stream before us,
And tender as the melody
The blackbird's singing o'er us.

WILLIAM WILSON.

PRACTICAL PHRENOLOGY.

[CONDUCTED BY PROF. NELSON SIZER.]

PHRENOLOGICAL HEAD.



TRAINING AND EDUCATION.

THE difference between training and education is wide. Knowledge by theory is one thing; practice and experience quite another. A boy may watch a cooper as he makes a barrel, but his awkward and untrained hands can not yet do what he knows how others have done. One may know every military motion and be awkward in the doing of them until training has made his nerves and muscles familiar with the actual work.

People sometimes teach correctly by precept, but spoil it all by example. Some punish a child for lying, yet indirectly train it to deceive. Anger on the part of parent or teacher warps the letter and the spirit of instruction and training.

A correspondent inquires: "What would be the effect upon the moral susceptibilities of a child who is compelled,

while under the control of his parents, to do that which is repugnant to his moral feelings?"

Much of the training of children is precisely of the character indicated in the question. Parents out of patience, or angry, command their children to do that which they in a calmer moment, and also their children, know to be wrong. This can only tend to blunt if it do not uproot a child's moral sense. Such treatment arouses the child's anger, stirs up the baser passions of his nature, and thus increases the tendencies of character toward evil. It must also blunt his filial affection, disturb his social and moral feelings, and depress his sense of honor, and thus make him cringing and spiritless.

If the child had enough of moral stamina to prevent him from being utterly ruined until he arrived at the age of maturity, he would incline to ignore everything he had been thus taught and perhaps also repudiate much that was valuable, true, and right in his early instruction. For example, it is frequently said that the sons of ministers, and of other inflexibly strict people, are apt to become more wild and reckless than others. The reason why so many instances have existed to give color to such an idea is, that persons who are rigid in their religious and moral ideas, especially if they have a little bigotry mingled with their ideas and feelings, are apt to be over strict in the management of their children, who, when they get an opportunity to break away from restraint, exhibit all the wild enthusiasm of a caged animal when he gets his freedom. Thus they revel in their new

liberty of action, make up for lost time, and go beyond proper bounds; whereas if such children were not made to feel that they were unjustly and arbitrarily restricted to such an extent that their moral feelings revolted at the rigidity of the training, they would not feel such a half insane inclination to transgress as soon as they obtain their liberty.

An apple woman boasted to a gentleman that she had sat at her stand at the end of London Bridge twenty-eight years and had not once crossed it in that time. He handed her half a crown if she would never cross it. She thought she had made a good bargain. Two months later, as he passed her stand she grabbed his coat and thrust the crown piece into his hand, and begged him to release her from the contract; and then straightway crossed the bridge and was too happy in her liberty to care for the loss of her fruit, to which a crowd of boys had subjected her. She wanted to partake of the restricted pleasure—she wanted to “eat of the tree in the midst of the garden.”

Children should have all the liberty in their training which they can take without abusing it. It awakens in them a spirit of self-reliance and power to govern themselves. They require such restraint as is necessary to keep them on the proper track and make them feel personally responsible and accountable for their conduct. If they are acted upon as mere machines, and bidden to do this and refrain from doing that, their whole course being marked out and fenced in, they become the unthinking slaves of the will of another, and never independent actors on their own account; or, if they have spirit that can not bear such treatment, they revolt and cast off restraint. Children are but men in miniature; and they are affected by training as their seniors are by the treatment they receive from their fellows; and who does not know that passion and arbitrary injustice in rulers produce either revolution or a slavish depression

among the people? When parents and rulers shall learn to instruct and lead, they will find government by just and kindly methods to be the easy and successful way of reaching the much desired and needed results.

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PLASTER CASTS—HOW TO TAKE THEM.

PEOPLE often write to us for a description of the process of taking plaster casts. It is not an easy task to take a good cast of a human head, and a beginner generally makes a failure and never tries it again. One of the troubles for a beginner is in handling or treating the plaster. Before trying to take a head, dead or alive, one should practice on the hand, or on an egg or a potato or apple, and he will learn how to make the mold so it will be removable from the object; the divide of the mold should be at such a place that the model will come out of the mold without binding at any point. For casting an egg, fill a teacup two thirds full of wetted plaster and press the egg sidewise into the plaster just half its bigness and let the plaster get set. Then oil the surface of the plaster which surrounds the egg to keep the second half of the mold from adhering. Then with a spoon pour wetted plaster upon the exposed part of the egg, letting it flow down and meet the oiled edge of the other half of the mold. Let the plaster be put on so as to be half an inch thick, and after a little time it will become solid and may be lifted off, and the egg taken out. Then cut a hole or notch like the pouring hole of a bullet mold, oil the mold thoroughly and fill it with liquid plaster, and roll it around so the liquid plaster will cover all parts of the mold; and when it has become hard, take off the mold and you have the cast of the egg. When many casts are to be made, if the subject is a human head, a temporary mold is made, and on the first completed cast a piece mold is

made in many parts so as to come off from the irregular form of the hard cast.

Casts are always made of calcined plaster. Such as is used as a fertilizer on land is not calcined and will not answer the purpose as it will not set and become hard.

The hair of the subject's head, the eyebrows and the beard, are filled with paste or semi-liquid clay, and the hair thus made compact so that it will not adhere to the plaster. The whole is then oiled, as well as the face and neck, the ears may be filled with cotton, and the ear well oiled. The nostrils will have soft paper tubes three inches long inserted for the subject to breathe through.

The neck and shoulders will be stripped, the patient laid on his back, and his head raised to a natural position—being sustained upon a raised board or platform two feet long, and then the head resting on a block an inch square and of equal thickness so that the plaster can flow under the head and make a mold an inch thick.

Then build up a dam around the head with towels or twisted sheets so as to form a kind of cup around the head in which the plaster can be poured to form the back-head half of the mold, which will cover the back-head up to the ears, and the dividing line should be at the rim of the ears. Then level off the edge of the plaster mold while it is still soft, and bore in its edge five or six V shaped shallow holes to constitute dowel knobs when the upper half of the mold shall be made. Then oil the edge of the first half of the mold and over the edge—say two inches, so that the plaster, which if spilled beyond the dividing joint, shall not stick to the first part of the mold. Then insert the breathing tubes, nicely oil the whole face and the closed eyes, and wet up a half pint or a pint of plaster and with a spoon dip the plaster upon the face as batter is put on a griddle, and let it flow down and come in contact with the edge of the first half of the

mold, but not run over. Do not mix too much plaster at once as it will get set and bother you. Mix batch after batch in the bowl and put it on carefully with a spoon until the mold is of a pretty uniform thickness of about an inch. Be careful not to disturb the quills or paper tubes in the nostrils in putting plaster around the upper lip and nose.

In a few minutes after the plaster is put on it begins to warm up and then the front half of the mold may be loosened by working a table knife into the seam and gently prying it up in different places, when it will generally lift off unless it should stick to the hair. When the front part of the mold is lifted off, the patient may sit up and the back half of the mold be carefully removed.

Then finish the mold by filling up any blubber holes or imperfections; oil the inside of the mold with lard oil, or lubricate it well with soap to prepare for taking the cast. Then put the parts of the mold together and tie it strongly with a plenty of cord or stout twine. Mix some plaster, in a clean bowl, about as thick as cream and put in some coloring matter to give it a reddish tinge; pour it all in and roll the mold around and around, holding it in your hands and between the knees so that the liquid plaster shall flow over every part of the inside of the mold. When it stops flowing, mix another batch and pour in and roll it about as before, and so on until your cast shall be an inch in thickness. Set it aside and let it stand an hour, to allow the cast to harden. Then take a chisel half an inch wide and with a light hammer chip off the mold, beginning at the seam, being careful not to drive the chisel into the cast. The parts of the mold will cleave off from the cast as the oil or soap will promote cleavage. Thus carefully get rid of the mold and the cast will stand before you complete. If you have properly handled the plaster, there will be few imperfections in the cast. The coloring matter, which shall be in the first pouring of plaster, will

aid in chipping off the mold, as the surface of the cast will be of a different color from the mold.

When you have made the cast smooth, you can make a piece mold upon it, having oiled it so that the plaster will not adhere, and this piece mold must be made so that the parts will draw or come off and not bind. Molds are sometimes made in a dozen parts. One part must go behind the ear and move backward to come off. Under the arch of the eye there might be a downward projection in the form which in a solid mold of one piece would prevent it coming off. One part is made after another and V shaped holes made in the edges so that when put together the parts will remain in place. Finish the inside of the mold smoothly, before or after it becomes dry, paint or brush it with linseed oil several times, and let it dry for days, and when used, oil the inside of the mold with sweet oil or with lard oil, or with soap, and make the cast as before and the pieces of the mold will come off one after another by careful handling, and may be wiped clean and oiled for another cast.

The slight seams shown on the cast can be carefully removed by the use of a knife. When the cast is dry, fine sand-paper may be carefully used to smooth the surface, but we prefer to see the flesh marks on the cast. One who is used to handling or working plaster makes but little task of the matter, but beginners are apt to feel tired before they get through. We advise no one to attempt a cast of a human head until the working of the plaster in taking casts of simple things has been mastered.

When the eyes are to be represented and the hair and beard is to be shown as in nature, the eyes on the first cast must be carved open, the eye lids, brows, and hair built or modeled up with clay before the piece-mold is made—then the cast will represent life.

Unless one intends to take many casts, he would better get some one who un-

derstands it to do it, or go and learn to do it practically under instruction.

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MY EXPERIENCE IN PHRENOLOGY.

AS the close of a very busy season draws near, I take pleasure in reviewing the work performed since entering the field as a practical phrenologist.

As it may possibly be of interest to those of my own sex who think of doing the same, I will give a brief account of my short career. On my return to my home in Newark, N. J., a graduate from the American Institute of Phrenology in 1885, I gave a course of free lectures on Phrenology, explaining its principles and the benefits derived from phrenological examinations. I then stated that I intended to make phrenological Parlor Gatherings a specialty.

I explained to my audience that I would visit them at their own parlors and make examinations of character at reduced rates, but that it would be necessary to have at least twelve, or more of their friends present so as to insure me competent reward for my services.

The experiment was a success, and in less than three months I had met thirty-eight Parlor gatherings, besides private examinations made at my office. At the close of the season I had the extreme pleasure of knowing that seventeen of my patrons had entered the professions which I had assigned to them by the principles of Phrenology, while many others had added to their accomplishments by the cultivation of their most prominent faculties.

My method of conducting these "Gatherings" is to arrange my patrons so that it will be easy for all to see and hear all that takes place during the evening. Then I distribute printed circulars containing questions of importance to all on their phrenological developments, and other notes of interest. This is followed by a brief descrip-

tion of phrenological principles. Then choosing two of the party I proceed to give verbal delineations of their character, their adaptation to special pursuits, and their most striking peculiarities. After securing the strict attention of all present I then ask them to testify as to the accuracy of my readings.

Upon making a "hit" the clapping of hands and roars of laughter that followed, served to encourage me, and also to entertain my patrons.

A full column might be devoted to an amusing account of some of these "hits" but a few examples will suffice:

1. To a lady possessing large Order, Ideality, Calculation, Comparison, Inhabitiveness, and very small Continuity, I said you would be difficult to please in home decorations, such as wall-paper, etc. She seemed to think that I was in league with her husband, who sat convulsed in laughter on the opposite side of the room.

He had brought home five hundred samples of wall-paper for their new house and had waited two months for her to make a selection therefrom which she found it difficult to do in that time.

2. To a gentleman possessing a very healthy buoyant organization and a speculative turn of mind, I said, You would like routine, you would like enterprise, and would be energetic in giving a "boom" to anything from which you could make money fast—for instance, a patent medicine. He had just "boomed" a patent medicine invented by his father, and made a financial success of that which his father could invent, but out of which he could make no money.

3. To a young lady with an artistic temperament and all the faculties largely developed for a painter, but who was sadly deficient in Self-Esteem, and activity, I said--You are modest and retiring and physically indolent, but possess remarkable talent for painting. As she was uneducated, poor, and not fond of work, her friends did not seem

to believe me. Her mother left the room and shortly returned with a number of landscapes which she had painted which surprised her friends as they had never seen them or known she was fond of painting.

This season now closing, has been more successful and "Parlor Gatherings" are an established institution in this and the neighboring cities, and will yield me an income whenever I am ready to respond to invitations. Class teaching is also a prominent feature of my work and I find it beneficial to teacher as well as pupil.

A lecture given on Jan. 30th, 1889, was attended by an audience of about 300 persons, tickets selling at 25 and 50 cts. H. Drayton, M. D., Editor of the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH kindly delivered the address of the evening, and Prof. J. B. Sullivan, of the class of 1885, presided as Chairman. The "elite" and intelligence of Newark were well represented, and showed their appreciation of Dr. Drayton's address by the closest attention, and seemed as proud to have him, as I was fortunate to obtain him to speak to my patrons.

Newark has another woman in the field of Phrenology, Mrs. Mary T. Hayward, a graduate of the class of '87, who is now engaged in active work by the side of a former teacher and sister in Phrenology.

This profession is especially adapted to woman, and requires only the same amount of natural ability and training as do the other professions. There is a large amount of usefulness, a good work to be done, and an opportunity to win fame and success. Also an opportunity to travel and make a living at the same time. It has the advantage of not being overcrowded and of requiring less capital than the other professions.

Were I possessed of wealth and leisure I would still be a practical phrenologist, so much do I feel the need of woman in this work, where she can fit herself more perfectly for any other sphere in life by understanding first herself and then her neighbor, by this simple yet matchless system of mental philosophy.

M. LORETTA MORAN.

CHILD CULTURE.

HOW TO MAKE A YOUNG TURK.

BY THE AUTHOR OF "AN AUNTIE'S NOTIONS ABOUT CHILDREN."

TAKE a strong and healthy male infant—though for all practical purposes a female will do almost as well—and commence the process described below at as early an age as you conveniently can, say eight or ten months, for, if long delayed, the course of training will lose somewhat of its advantage and force.

In the first place, never thwart the child in any of his desires, or persist in any conduct which you find is distasteful to him. Nothing can be more cruel than, under any circumstances, to bring a tear to the cheek of infancy; better submit to the danger of having him scald himself by pulling over the hot coffee, or let him catch cold by taking his morning outing *minus* a hat if he prefers to dispense with that article of apparel, than run the risk of making him cry. If it amuses him to poke his fingers in your eyes, or nip small pieces out of your arms with his sharp little nails—well, he knows no better, and it would be a pity to interrupt his enjoyment and probably cause him to cry. This is, in fact, one of the most important rules for making a "young Turk"—at all times and at any cost *avoid* "*a cry*." If he should happen to want the moon, or anything else which you can not possibly obtain for him, offer him instead your watch to play with, or ask him (if old enough to understand) what he would like to have: you will doubtless find that a globe off the chandelier or the most valuable ornament from the mantelpiece, may please him almost as well.

Take care to induce the people to

observe this rule as well as yourself. A nurse who will not allow him to pull to pieces the flower in her best bonnet, if that would keep him satisfied for a few minutes, is unworthy the honor of her post, and the so-called friend of the family, who betrays a disinclination to give him her bracelets to play with, when, by tugging at them and fretting, he plainly shows her what he wants, should be informed by your air of cold displeasure that you consider her no true lover of children.

Endeavor, as the boy advances in age, to impress upon him that he is about the most important person in the world. If he has a seat at table, he should invariably be served first, and with whatever he may fancy; it is barbarous to let a child see delicacies of which he is not permitted to partake. Also note carefully the earliest of his articulated utterances; these will certainly evince great acuteness and precocity of intelligence, and be well worth quoting to all your acquaintances. If you can by any means induce the child to repeat them in the presence of company it will help to foster in his mind a desirable consciousness of his own cleverness, and, should the audience be persons of appreciative disposition, this display of juvenile wit will prove more entertaining to them than conversation upon any other topic.

Never force him to retire to rest until he himself expresses a wish to do so; few things are a source of more frequent grief to childhood than a rigid habit of "early to bed." It is as well, however, to remind him at intervals for the last hour or two of the day that "it is time

we said good-night," for this will prove to him the immense force of the responsive refusal which gains him indefinite respite. When he is tired out he will probably fall asleep of his own accord, in his chair or on the floor : in which case a supply of confectionery should always be at hand to soothe his natural irritability when he awakes. Indeed, no managing mother should ever, at home or abroad, allow herself to be without a packet of sweetmeats ready where-with to allay displeasure, induce amenability to unavoidable requests, and smooth the way of life generally.

Obedience should never be expected without the promise of a substantial reward ; why should your little boy do as you tell him unless he knows he will get something by it ? The idea is preposterous ! Even should he in the end fail, thus stimulated, to comply with your wishes, it will be as well to give the reward all the same, otherwise disappointment may probably result in an outburst of indignation which will cause much inconvenience and be difficult to pacify.

If he should be inclined for mischief, as he very likely will (I have read somewhere that the child who is not mischievous is "a little monstrosity") the tendency may be greatly encouraged by describing his feats before his face, and with an air of undisguised amusement ; and if he has shown the smartness to conceal any resultant damage by a clever trick, or to artfully shift the blame to some one else's shoulders, this also should receive its meed of praise, for such smartness will stand him in good stead in after life. Should any severe disciplinarian be present during the recital, in regard for whose old-fashioned prejudices you feel compelled to

affect disapproval of your darling's funny ways, the possibly detrimental effect upon the child may be easily counteracted by giving him at the same time a side-glance of affectionate pride, which he will not be slow to catch and rightly understand.

As to punishment, I need scarcely say that so harsh a word should never be mentioned. The boy's self-confidence must not be checked by even a mild reproof. Should friends or neighbors ill-humoredly take umbrage at any of his playful pranks, never mind. Your child's gratification is more to you than the whims of all the neighbors in town, and you are not going to have him put down to please anybody. Similarly, if his companions complain that he is tyrannical or rude, you will pay no attention to such tales ; his splendid spirit must naturally assert itself, and if he administers an occasional cuff or kick to anyone who offends him, it will just show the other youngsters that he is not to be imposed upon by them.

If the above regimen be duly carried out and you are moreover zealous on every opportunity to teach the child that his parents and other attendants exist solely to minister to his comfort and gratify his desires ; that he is expected to display a noble firmness in maintaining his own will and a passionate ebullition of anger should the same be in any way crossed or opposed, also that the latter manifestation is regarded with dread by every member of the household, you will find in the course of six or eight years—in some cases even earlier—that your charge has developed into a most satisfactory (?) specimen of a perfect "*young Turk*."

JENNIE CHAPPEL.

OUR LITTLE ONES AT HOME.

"I SHALL send my boy to school as soon as warm weather comes," said a young mother in our presence not long since.

"But your child is not yet five years old !" said another mother.

"No ; but he is into all kinds of mischief, and I send him to get rid of him."

We fell to thinking of the thoughtlessness of many mothers; not having faithfully and patiently taught their little ones self-control, which perhaps the parents never had themselves, they tire of the restless little fingers, and the ceaseless prattle. In order to have unbroken leisure, they confine the little bodies which should be allowed to expand and develop in pure air and sunshine, within the impure atmosphere of a crowded school-room, or a close sitting room. It could not reasonably be expected that a teacher, oftentimes young and inexperienced, having to care for many could do it as judiciously as a loving, wise mother. Surely the mother is the proper person to mold the plastic mind, and character of her child; and she should be very careful about delegating this God-given right to another.

Our cities and towns are awakening on this important subject, as we can readily see by the increase of kindergarten schools. But it is for the doing away in some measure, of the murder of the innocents within the scattered population of this vast country that we have made this plea. Country homes, we believe, form the spinal column of our nation's strength, and these small people who will soon be America's men, and women, should first of all have built up in them fine physical conditions in order to give the correct mental balance.

A child, properly trained, is something good to have about us. His quaint questioning draws nearer to the source

of true goodness; we know that we gain some of our best impressions from the innocent prattle of children. The first rudiments of a child's education can be formed by a mother's teaching, if that mother so desires, without occupying much of her time; indeed, we consider the help the little one can render the mother, in the saving of steps, and amusing the "baby," if there be one, more than compensates for all of her additional trouble.

A child's education does not begin so much with the characters of a book, as with some object lesson, which the mother can rivet upon the mind of her child by imparting in a happy manner a little from her own knowledge. By way of illustration we will tell you how we taught one boy geography. He could not bear the confinement of the school-room, so we went on with his education in all the common branches. Geography was a favorite study, because we illustrated it by stories of the peculiarities of climate, or historic events of the different localities. Years afterward, whenever these places were mentioned, he knew all about them through mother's stories.

Country mothers of America, to you is the plea made. Consider the best interests of your children, and also those of the nation, by giving us strong pure, well balanced men and women in the years to come, that our nation may become a power for good among the nations of the earth.

MRS. S. ROSALIE SILL.

A BOY'S APARTMENT.

A BOY usually passes through several stages, during which collecting is one hobby on which he rides delightedly. From postage-stamps, the collection of which teaches him geography, history, and political economy, every stamp being one token of some advance in civilization, and a sign of fraternal union of the race, the transi-

tion is easy to birds' eggs, pebbles, butterflies, moths, and rare plants which evince the taste for natural history, of all tastes the safest and most wholesome for a boy. Let him have cabinets in his den where he may label and preserve his specimens, and see that no careless hand wielding a reckless broom or duster ever displaces or mars these. A

boy has a right to expect that his possessions shall not be ruthlessly invaded in the interests of house-cleaning or curiosity.

What shall I say of the honesty of a mother who, generous with the goods of another, despoiled her son's cabinet of its curios and treasures whenever the whim seizes her, saying, airily, "Oh, Leo can easily procure others; take this dear, if you like it," to some marauder who had gazed longingly on Leo's collection?

This brings me to the suggestion which I am thankful few mothers need, that the law of ownership should be rigidly respected as regards our children's wealth. Nobody has a right to give away what does not belong to her without asking and gaining its owner's consent. The owner's relationship to herself gives her no claim on his goods, and by no means excuses either petty larceny or highway robbery.

A boy has sometimes the taste of the bibliograph, and likes to gather books about him in dainty dress, perhaps in rare editions. To encourage him in this he should have shelves whereon to arrange his books, and, pursuing the line of thought just indicated, neither sister nor cousin should borrow his volumes without his leave, while to borrow or lend them to any one else should be a criminal offence.

In the home we should respect the rights of one another. Only in the home where there is due regard for the rights of everybody can there be constant opportunity for the exchange of gracious amenities and aimable courtesies. Privilege and right are quite different terms.

The boy who has a mechanical turn and is handy with tools, if he can not have a regular tool shop somewhere on the premises, should be allowed to keep and use his tools in his room. Of course he will not abuse the permission, and saw and plane will never break in on his mother's afternoon nap, nor rasp the

nerves of a convalescent in the next chamber,

I am not sure that anybody is such an acquisition to a house as a man who is deft and skillful, mending a hinge, replacing a window-cord, setting a pane, hanging a picture, repairing a broken chair, upholstering a cushion or a couch. The boy who has a turn for carpentry or mechanics will by-and-by be that sort of man, saving dollars in the yearly income, holding the plumbers at bay, and giving no end of agreeable surprises to his wife in the way of handy helpfulness.

As a rule, a boy does not care to accumulate bric-a-brac, and his den will have few articles to dust and arrange daily. But a real good print or two upon the walls, a few well chosen photographs, a picture cut from a favorite illustrated paper and neatly mounted and framed, will add grace to his apartment and relieve the monotony of the bare walls. His violin or banjo, his base ball and bat, tennis racket, chess board and men, all belong in his own room. They are part of his resources, and all help to bind him to his home which is dearer to him than the corner on which homeless boys congregate, or the street where they take lessons in evil.

Homeless boys! There are too many of them with good clothes on their backs, good shoes on their feet. With enough to eat and wear, they are practically as bad off as the boys who live in the narrow crowded tenements to whom home is a mere name. For the latter the boys' club or lodging house opens wide a door to something of interest, some entertaining game or attractive study. The homeless boys who spring from the family table and fly to the street, who think of home as only a shelter, if not as half a prison, move my profoundest sympathy. What will they come to when a half dozen years have deepened the lines around the boyish mouth and bronzed the beardless cheek? — *Harper's Young People*.

A LISTENING CHILD.

I LIKE those grand old anthems that they sang
 When I, a child, with reverence heard; my head
 Held high—for voices solemn from the dead
 All through the grim, old oaken rafters rang—
 And men and women with a harmless twang
 Piped eager onward where the pitch-pipe led;
 And the gray pastor his warm fervor fed
 With Bible texts and many a Bible bang.
 On, all the Martyrs, Saints, and Prophets then,
 From burning stake and cave and desert wild,
 Filled the dim space—and Luther's mighty voice:
 "Be Thou, O God! exalted high"—Amen!—
 From all the nations rang—and I, a child,
 Felt all my little life uplifted to rejoice.

ELIZABETH OAKES SMITH.

Hollywood, N. C.

DETERMINED TO MASTER IT.—I know of a boy who was preparing to enter the New York University. He was studying Trigonometry, and I gave him three examples for his next lesson. The following day he came into my room to demonstrate his problems. Two of them he understood; but the third, a very difficult one, he had not performed. I said to him:

"Shall I help you?"

"No, sir! I can and will do it, if you give me time."

I said, "I will give you all the time you wish."

The next day he came into my room to recite another lesson in the same study.

"Well, Simon, have you worked out that example?"

"No, sir," he answered; "but I can and will do it, if you will give me a little more time."

"Certainly, you shall have all the time you desire."

I always like these boys who are determined to do their own work; for they make our best scholars, and men too.

The third morning, you should have seen Simon enter my room. I knew he

had it, for his whole face told the story of his success. Yes, he had it, notwithstanding it had cost him many hours of the severest mental labor. Not only had he solved the problem, but, what was of infinitely greater importance to him, he had begun to develop mathematical powers, which, under the inspiration of "I can and I will," he has continued to cultivate, until to-day he is professor of mathematics in one of our largest colleges, and one of the ablest mathematicians of his years in our country.

My young friends, let your motto ever be, "If I can, I will."—*Ex.*

WILL YOU TELL ME, LITTLE BIRDIE?

It is quickening our pulses,
 It is stirring every vein,
 As it moves upon the mountains,
 And across the frozen plain.

CHO.—Will you tell me, little birdie,
 Will you tell me what you sing?
 Are you joyful as your mistress,
 At the coming of the spring?

Though the stormy winds are blowing,
 While the snows are drifting high,
 I can feel the southern breezes,
 As they through the myrtles sigh!

CHO.—Dost thou scent the orange blossoms,
 Or the sweet acacia's bloom?
 For thy notes, the sweetest, purest,
 Now with music flood my room!

Oh, I fancy, as I listen,
 That I hear the cuckoo's note;
 And the varied sounds of summer
 Through the air around me float!

CHO.—Will you tell me, little birdie,
 Whence your pretty tones have come?
 Oh, I know a song so tender,
 It must be a dream of home!

* * * * *
 On the branches bare and homely,
 As our hopeful song we sing,
 Swiftly spreads a leafy mantle!
 Ah! the birds and flowers—'tis spring!

CHO.—Freshest herbs for you, my birdie;
 Unto what do you aspire?
 From your little lowly cage,
 Still your notes are rising higher!

GRACE H. HOKR.



HEALTH PAPERS.—No. 10.

AESCULAPIUS is honored as the father of medicine. If all that is said of him is true his skill greatly surpassed that of the wisest member of the profession in our day. Chiron was his teacher; but his skill and reputation were eclipsed by those of his distinguished pupil, who not only healed the sick, but even restored life to the dead. Pluto was offended, and fearing that his realm would not be sufficiently peopled, he made complaint to Jove, who slew Æsculapius by a flash of lightning. After this he was, by the gratitude of mankind, raised, at Epidaurus, to the rank of the gods.

A temple and a grove were there dedicated to him. He was succeeded by his sons Machaon and Podalirios who as physicians attended the Greek army. From them the race of the Asclepiades descended. They inherited and kept the secrets of the healing art. They are regarded as a priestly caste who preserved the mysteries and doctrines of medicine. The members of the caste or medical order, were bound by an oath—the Hippocratic *jusjurandum*—not to divulge the secrets of their profession.

Such is a brief outline of the origin and early history of the medical profession. But whether the deified Æsculapius was contemporary with King Solomon, of the prophet Elisha, or of the good King Amaziah, or whether he ever

had an existence elsewhere than in the fertile imagination of the great Greek poet is no easy question to settle. Nor would it be easier to decide whether his estimate of the skill and success of the ancient physicians rests upon a better foundation. It is safe to say that there was then, as there is now, no natural relation existing between drug medicines and the disease which they are supposed to cure. The progress of medical knowledge is slow and uncertain. Who can truly say that it is not about as much backward as forward? Is it not at best a system of guessing and of doubtful theorizing? What indicates the demand for any drug? Is it the teaching of experience? How is experience gained? By ignoring all the demands of nature and by testing all sorts of acrid, nauseous and repulsive things from the mineral, the vegetable, and the animal kingdom. If recovery follows, the value of the drug is established. An opposite result indicates that the disease was of a very grave type, but proves nothing as to the medical value of the prescription! Such a system is empiricism, first, last, and forever. It may, involve great learning. It may after a fashion, be intensely scientific. It may compass land and sea from the tropics to the poles to expand and enrich its resources but so long as nature's laws and nature's indications are overlooked

it must continue to be what it is, and ever has been, a stupendous failure.

But are we not advancing? Is not the average age of the generation on the increase? Are not epidemic diseases less fatal than formerly? Is not the death rate now lower than in times past? Admitted. Then what further argument is needed? Simply this: Human life and health are not wholly or chiefly dependent upon medication for this maintenance. The most healthy people are not those who use drugs more frequently and freely than others do. Ask any centenarian if his longevity was purchased of his physician or if it was passed over the counter at a corner drug store. Will he give you an affirmative answer? He may have been a user of alcoholic stimulants. His quid or his pipe may have been in daily requisition. But, injurious as these things are, the simplicity and regularity of his habits, aided by a good endowment of vitality has enabled him to survive two or three generations of drug takers. Sanitary science points out the relations of nature's resources to life and health. It finds expression in our instincts—our natural, unreasoning impulses. These monitors, unperverted by vicious or depraved habits may be relied upon as an unerring guide to correct living.

They are the voice of God speaking to

us in language that none need to misunderstand. Common sense tells us that only such things as commend themselves to our natural instincts are fit for our use. Things that offend the sense of sight, of taste, or of smell, or things that uniformly produce morbid or unpleasant sensations when taken should never find lodgement in the human stomach, or any other stomach. If this is not so, what possible reason can be given for those senses finding so important a place in all animate beings and in mankind quite as much as in any others.

This being settled, what disposition of the question of drug taking naturally follows? What drug, relied upon as curative can commend itself to these tests?

Do not the reputed remedies most relied upon by physicians, as a rule, provoke the most decided revolt of these faithful sentiments? To sum up the whole matter in brief: 1. God has endowed us with natural instincts for a purpose.

2. The materia medica with its long list of drugs is of man's devising.

3. Natural instincts revolt at almost every drug described in the Pharmacopoeias, and, usually, most strongly at those most relied upon as curatives.

4. If God is right what must we say of drug taking? J. S. GALLOWAY.

RESPIRATION AND HEALTH.

TO breathe is to live; every living animal breathes in some fashion, as nature has designed the respiratory process as a means for the introduction of that essential element of vegetative change and tissue growth, oxygen, into the blood, and also for the excretion of waste substance from the blood as it flows through the lungs. Man is admirably constituted for breathing, and should exemplify the manner of it in perfection, but in spite of his intellectual wisdom he is guilty of many faults in the use of the apparatus of respiration,

and made himself a consequent sufferer in diverse ways. Consumption, that grim monster that annually carries to the grave hundreds of thousands of "civilized" people, catarrh, that is no respecter of persons, numbers millions among its devotees, and as for colds and coughs their subjects are as the sands on the sea-shore, for multitudes. (During the last week in March, this year, 280 persons died in New York City of throat and lung diseases.) Related to all these and other common maladies as a cause is improper breathing, by which

we would include in this discussion of the subject the manner of using the lungs, and the kind of air that is admitted to the pulmonary cells.

Not to occupy time by a description of the lungs and their mechanical action, for our child readers have a knowledge of pulmonary physiology, we would first consider *what we breathe*. Pure air is a mixture of two gases, oxygen and nitrogen, in the proportion of about one to four. If pure air is breathed in sufficient quantity the animal gets all the oxygen needed for its healthful maintenance. But if there are substances in the air that reduce its quantity and render it impure the blood is according to the degree of the impurity impaired in quality and sustaining power. A person, full grown, takes in about twenty-five cubic inches of air at each respiration, and if he is confined to a small room to which fresh air is not often admitted he soon renders the atmosphere unfit for use, because at each expiration or out breath he throws into the room waste and poisonous substance from his lungs. The chief thing excreted in this way is carbonic acid, one of the most dangerous of carbon compounds. When there are more than five parts of this in ten thousand parts of air the air is not fit to be breathed. Yet it is a common thing for people to huddle together in close rooms, and stay until there are upward of twenty-five or thirty parts of it. We have been unfortunate enough to be present at social gatherings where by midnight the air had become so infiltrated with carbonic acid that it seemed as if human nature could not endure it, and yet the people would tamely submit, under the delusion that they were having "a fine time," and with the prospect consciously or unconsciously in view of awaking the next morning with a "bad cold."

We require certain space for healthful breathing; one person should have 1,000 cubic feet—say a room ten feet square and ten feet high. Moreover,

3,000 cubic feet of fresh air per hour should pass through that room for healthy breathing for the reason that in an hour's breathing three times the amount of healthful air the room will hold is consumed. The average adult consumes 10,000 grains of oxygen in 24 hours. He produces 12,000 grains of carbonic acid in that time, and of water, nearly nine ounces. 1,000 persons congregated in a church or hall for two hours would exhale by the skin and lungs together in that time fully eight gallons of water; and the amount of carbonic acid gas from their lungs would contain as much carbon as could be extracted from fifty-five pounds of coal.

This brief illustration shows the necessity for ventilation and explains many seeming mysteries of sickness following confinement in close places. People who live in apartments that have little or no sunshine, and are irregularly ventilated seem to get accustomed to the vitiated air, but they suffer nevertheless, and become a prey to fevers like typhoid, and to pneumonia and diphtheria. M. Bernard showed by an experiment how one can become accustomed gradually to unsanitary conditions by his experiment with sparrows. He placed one bird under an airtight glass vessel, and left it there for two hours, then introduced another bird which died almost immediately of asphyxia, while the first survived and could have lived another hour in the glass.

When we have a fire in the room where we are at work or sitting, it should be remembered that another agency for the consumption of the oxygen of the air is at work. So too a lamp or candle when lighted renders the atmosphere as rapidly impure as the breathing of one person. A gasburner however is much more rapid in its action, and is estimated to throw out four times as much carbonic acid as the lungs of a man.

How should we breathe? In reply to this question it may be said simply

enough through those chambers that are provided for that purpose, the nostrils. The mouth is the instrument for eating, not for respiration, and its substitution for the nose as a breathing channel is attended with injury of some kind to both organs. An examination of the nostrils shows their adaptation to the service of introducing air to the lung cells, and it is necessary that the healthful activity of the delicate membrane that lines the nostrils that the air should flow in and out through them, while the effect of the constant passage of air currents through the mouth affects the mucous coat of tongue and palate in a double way; matter held in suspension by the air is deposited upon the membrane and follicles, and an excessive evaporation or excretion of fluids is induced that must be compensated by an increased secretion of saliva and mucus or *dryness* and feverishness will become a permanent condition. Fur accumulates on the tongue and deposits on the teeth, especially if the utmost care is not taken to keep the mouth clean by repeated cleansing, and much parasitic life develops which may be a source of that most disagreeable accompaniment of speech, a foul breath.

Catarrh is thus set up or if there is a predisposition to such disorder it is developed and becomes a troublesome and obstinate disorder.

As a general thing it will be found that mouth breathers are much more subject to affections of the throat and jaws than nose breathers. Their chronic feverishness of the mucous membrane is observed in the deep color of the lips and tongue and often cracks that are painful insist on appearing. They are more prone to inflamed or enlarged tonsils, and also to teeth decay. If the air breathed through the mouth is generally of an impure character, it is far more likely to set up disease in the bronchi and lungs because it goes directly to the trachea *per* the mouth without change, whereas if drawn

through the nostrils the apparatus nature has organized for filtering the air prevents much of the impure matter that may be in suspension from reaching the lungs.

The long irregular nasal passages also serve another purpose which is important, that of tempering the air. Both very warm and very cold air are unfit for immediate admission to the lungs, and when taken into the nostrils, the elaborate surface of the membrane exerts a marked effect upon it reducing its heat if very warm, and warming it if very cold. A nose breather can endure heat or cold better than a mouth breather.

Mr. George Catlin, the explorer, who spent many years in the study of the habits of the American Indians, was so impressed by their habit of breathing through the nose, a habit early fostered by the Indian mothers, and the freedom of the Indian from lung and throat ailments that he wrote a book on the subject entitled, "The Breath of Life." A predisposition to consumption, and a habit of snoring that he carried into the wilderness were corrected in a great part, by adopting the practice of his Indian friends of keeping his mouth shut.

He writes, "From the whole amount of observations I have made among the two classes of society, added to my own experience as explained in the foregoing pages, I am compelled to believe, and feel authorized to assert that a great portion of the diseases prematurely fatal to human life, as well as mental and physical deformities and destruction of the teeth, are caused by the abuse of the lungs in the mal-respiration of sleep, and also that the pernicious habit although contracted in infancy and childhood, or manhood, may generally be corrected by a steady and determined perseverance, based upon a conviction of its baneful and fatal results."

H. S. D.

WHY WE SICKEN AND DIE.

AFTER having officiated at over six hundred funeral services the question, "Why do we sicken and die?" is much easier to answer than years ago when we knew little regarding the circumstances of sickness and death, and were inclined to dismiss the subject by saying "it is one of the mysteries." To-day note-book and memory hold in store enough to make a good sized volume, and "mysteries" no longer exist.

It is generally thought to be the business of the clergyman to teach "religion and moralities," and to stand over the dead to deliver eulogies and comfort the living. And certainly this is an important, even, we may say, a divine service, and blessed is that man who makes right use of his opportunities to heal the broken hearted and make men's souls glad in the faith that knows no fear; but every minister who truly feels the woes of his fellows, as did the Master who healed the sick and opened the eyes of the blind, must have felt, especially if he learns the history of the diseases of the persons whose funerals he attends, that not more than one in eight or ten should have gone when and as they did. It is not alone the broken rail, the neglected switch, or the hidden rock, that hurries men into eternity, but it is poisonous air and water that might have been pure, a chill that might have been avoided, or an injury that should not have been neglected. An overworked railroad employee forgets some apparently small duty, or an operator working over-hours mistakes a single sound, and an accident seems to us a tragedy. The widows and orphans have the sympathies and prayers of thousands they will never see; but widows and orphans are made around us every day by causes that are just as clearly avoidable, and often less excusable. Who will measure the vast sum of sorrow and poverty that comes into the world because of the death of loved ones? And how great is the anxiety

and the suffering that is known in our families and communities as a result of sickness that does not terminate fatally, there being perhaps about twenty-five cases to every death.

Who can think of the avoidable sicknesses, sorrows and deaths among mankind without a deep felt desire and resolve to point out dangers and utter warnings that may make bed side prayers and funeral eulogies less necessary? It comes to us a little late in our professional lives that if we had preached our isms and ologies less and the laws of God more, we might have saved the lives of scores, even hundreds and thousands, but when a revelation of duty is made to us it comes with astonishing clearness and often seems a severe and merited rebuke.

To the question, Why do we sicken and die? we might make an answer, Because man was born to die, God having created man a mortal being, and decreed death as the fate of every living being. By no art of life, and no skill of medicine, can men, at present, prolong their lives to much above ninety, while the average is only a little above a third of a century among the more civilized communities of the world.

But while it is true that men can not prolong their lives through the centuries it is an unquestioned fact that the vast majority of our race die much earlier than they should. Of the six hundred persons whose funerals the writer attended, only sixty-five should have died when and as they did; and of this sixty-five it might be said, indeed, the greater number would have lived longer, with greater comfort to themselves and others if they had received better care and had been surrounded by more favorable circumstances. We write the last words with a more particular reference to such persons as passed away in old age. Of the sixty-five we will make a few notes that we may see that after all many died before they should. Two were small,

feeble children, whose father was a nervous physical wreck, and could not impart vitality enough to keep his miserable off-spring long in life. Other clergymen attended the funerals of three children in the same family, the children all dying under six years of age. Two men were killed by what were demonstrated as "unavoidable accidents," but as I think of the cases I remember that one was remotely the result of accident, and the other was clearly attributable to neglect of a wound. Twenty odd of the sixty-five "died of old age," but of these several had been dissipated; some had over-worked; some were poorly clad, fed and housed by their children, many of whom had been placed amid comfortable circumstances by the sacrifices of their aged parents; and finally, we might say of all, they died before they ought, each sentenced to lose from ten to seventy years of life for the transgressions of nature's life and joy-giving laws.

Now let us see some of the causes why we die, and see in these causes why a minister of the people is called to preach not a mere fragment but the whole gospel of God.

1. *Our brothers and sisters die because of weak constitutions, or the diseases, or the follies of the parents who gave them existence.*

We sometimes say "the doctor did not have a fair chance, we should have sent for him in time." In time! Then he should have been called a hundred or two hundred years ago, and while he was going to administer a cholagogue for the liver the moralist should have gone with a few doses of Christ, or even Confucius, Seneca, or Mencius. It is a shame and a scandal that human beings are born with an inheritance of weakness and disease instead of strength and health, and so many millions of our fellows are compelled to drug themselves through months and years of suffering to a pitiful, painful and untimely death. And it is another great shame that we

clergymen are called upon to stand in the midst of mourning friends to talk about "the inscrutable and mysterious providences of the more mysterious God," when the fact is there is no mysterious God, and no inscrutable and mysterious government, for God stands forth to Reason's eye, and the light of Revelation, more clearly than any character in human history, and His laws are plainer to the eye, and more just to the reason, than the statutes of states, and the constitutions of nations. It is time we ceased to slander the Deity with one breath, and think to atone for our sins by praising Him with the next. God's laws are plain, just, beneficent. Inheritance of health or disease is no mystery. "Whatever a man sows that shall he also reap," and, often, his children after him must reap and eat the bread of tears. Whatsoever this generation sows in the physical and moral constitution of the next generation will spring forth a harvest of good or ill, of health or sickness, of life or death. The vegetation and harvest of next year are not more likely to be a repetition of this than the joys and sorrows, health and disease, of the rising generation are to be the result of what has been sown in the soil of life by the hand of the present generation. And it will be no "mystery" if the weeds bring forth weeds.

2. *Our brothers and sisters die because they transgress the laws of nature.*

Here are a few examples from among six hundred deaths: A strong, healthy young lady at the end of a hard day's work in a warm room sat in a cold room till midnight making decorations for her church at Christmas time. She caught cold and died of consumption in one year, having been exposed to the germs of this disease while in a susceptible condition. This was the first case of this disease in her family, but as she returned to her home for treatment and care, the disease was communicated to three other members, no pains having

been taken to destroy the germs contained in the sputa, and all died. Another young lady became much exhausted in a waltzing match, fancied herself whirling even when sitting, congestion of the brain followed, and thinking she was still on the dancing floor unable to stop waltzing, she continually cried out, "Hold me! Hold me!" ceasing the cry only a few moments before death. Sixteen young ladies and five young men exposed themselves on the occasion of country balls, the last of the twenty-one dying in the thirty-second month after exposure. One farmer worked all day on his farm in a cold rain, caught cold, rheumatism set in, and on the third day he died of neuralgia of the heart. A shoemaker rode into the city with his case of shoes, on a cold rainy day, and soon after died of pneumonia. A young man rode ten miles without an overcoat the last of November, and he also came down with pneumonia and died. Three got up from measles, caught cold from exposure, had relapses, one dying in a few days, and two took consumption and died. A wagon maker had a shop near a mill pond, the water was drawn off, vegetable matter decayed, the wagon maker came down with typhoid fever, and died in two weeks. The excreta of the patient were not properly disinfected, three members of the family caught the disease, also two neighbors who assisted in the care of the first case, and of the five three died. A large number of the six hundred caught diphtheria from cellars, house drains, and privy vaults, also directly or indirectly from diphtheria patients, in each case the principles of sanitary science being disregarded or violated.

And thus we might go on giving the causes of death, but these are fair samples of the cases seen around us every day, and experience and observation teach us that he who violates the laws of nature finds no court of pardons. There is no remission of penalty, and even

ignorance is no excuse in nature's jurisprudence.

In reviewing the history of these six hundred cases of death, many affecting scenes are brought to mind, and each deserves a page or a chapter. I behold a scene in the center of which is a beautiful young lady in the delirium of an infectious fever. A father, mother, three sisters, two brothers, and a particular friend, are weeping about the bedside of one who sought to save her lover from typhoid fever, not knowing her own danger and how she could have watched in the sick room without the least risk of getting the disease. A little knowledge here would have saved a valuable life and prevented much sorrow. How sad that such a scene as this should ever present itself to our eyes! And yet, as I write I recall with painful vividness, many, many scenes as pathetic as this one, and tears come once more into my eyes as the past comes up into the present and I see how many scenes of sorrow and death never should have been witnessed among my people and friends. When the minister of the Great Physician, who cured men's bodies as well as their souls, beholds the causes of the suffering and sorrow he seeks to comfort, he must see that it is his duty to teach the gospel of health and righteousness so that sickness and death may be averted and men's souls may be shielded from unnecessary sorrow. The physician is called only when people are sick, but we who are called to preach God and His laws, with Christ and his love, stand before the well with their health and happiness in our hands, and should, yea, must, preach that gospel which saves both soul and body.

REV. H. C. MUNSON.

COCAINE AND LANOLIN FOR BURNS.—Dr. Wende, of Paris, recommends a preparation made of these substances. It excludes the air and quiets the pain. The cocaine should be pure and the mixture freshly prepared.

THE JAK TREE.

THIS product of Southeastern Asia, and the Pacific islands, and later through introduction, of the West Indies and tropical South America, is one of the most interesting and valuable fea-

There are two species of the jak, the bread fruit, properly so called, with its deeply fissured or divided leaves, and which grows chiefly in the island countries, and the jack fruit or jak tree



JAK OR BREAD FRUIT TREE.

tures of the world's vegetation. The tree itself reminds us of the poplar, once a striking and common object in the villages of our Middle Atlantic States, but which is rapidly disappearing.

which grows chiefly in the main land of Asia, and is not so valuable as the other as a food producer.

Rising to a height of forty feet with its thickly clustering foliage, the tree is

symmetrical and handsome. Fully grown, its trunk is from a foot to fifteen inches in diameter, the bark is ashen in color, finely chinked or fissured and covered by small knobs. The inner bark is fibrous and used in the manufacture of a sort of cloth, and the wood is smooth, soft, and of a yellow color: the branches come out in a horizontal manner, the lowest ones about ten or twelve feet from the ground and they become shorter and shorter as they near the top. The leaves are divided into seven or nine lobes about eighteen inches to two feet long and are of a reddish green. When full grown the fruit is about nine inches long, heartshaped, of a greenish color, and marked with hexagonal warts, formed into facets. The pulp is white, partly farinaceous and partly fibrous; but when quite ripe it becomes yellow and juicy. The whole tree when in a green state abounds with a viscid, milky juice, of so tenacious a nature as to be drawn out in threads.

The bread fruit tree continues productive for about eight months in the year. Such is its abundance that two or three trees will suffice for a man's yearly

supply, a store being made into a sour paste called *mahe* in the islands, which is eaten during the unproductive season.

When the fruit is roasted until the outside is charred the pulp has a consistency not unlike wheat bread, and the taste is intermediate between that of bread and roasted chestnuts. It is said to be very nourishing, and is prepared in various ways. The jak, or jack, grows to the same or even to a larger size than the bread fruit of the Society Islands, but it is neither so palatable nor so nutritious. The fruit often weighs more than thirty pounds, and contains two or three hundred seeds, each of them four times as large as an almond. December is the time when the fruit ripens; then it is eaten, and the seeds or nuts also are eaten, after being roasted. There are many varieties of the jak tree, some of which can hardly be distinguished from the seedling variety of the true bread fruit. The fruit, and also the part of the tree which is produced, vary with the age. When the tree is young, the fruit grows from the twigs; in middle age it grows from the trunk.

SOCIAL CAUSES OF DEFORMITY.

WHILE it is true that lateral curvatures of the spine depend upon causes both central and peripheral, yet in no small number the deformity is attributable to influences of a social nature. The young column, by reason of the non-union of the epiphyses and diaphyses and the supple character of its ligaments, is extremely flexible. Whatever, therefore, destroys the muscular equipoise, however inconsiderable the force, if persistently repeated, changes the center of gravity and develops primary and compensating curves. For six months in the year, any fine morning, groups of young children may be seen plodding along our streets with a miniature library of books suspended from one shoulder. To the

already preponderating scale of the balance add the additional factor, a probably badly arranged light compelling these little *savants* to assume a lateral inclination of the body in order to obtain the necessary illumination of the subjects of the study, and you have all of the conditions necessary for perpetuating the lateral deformity. "Just as the twig is bent, the tree's inclined." As in the case of round shoulders, so here, in order to prop up the falling column, instrumental contrivances are immediately called into requisition. The body is encased in a formidable coat of mail, to be followed by muscular atrophy and permanent distortion of one of the otherwise most beautiful pieces of mechanism in the human frame. It is

true that, in most educational institutions for the young, provisions are made for physical culture, and these are in some measure antidotal to the evils complained of; but in my judgment they do not at all compensate for that free unstudied romp in the open air, untrammelled by the hard and fast rules of calisthenics, so fascinating to the young child. Nor does the evil end here. While the forcing process, which is to stimulate the mental powers far beyond the real capacity of the immature and growing brain to receive, is in progress, another is inaugurated, which is to qualify, especially the female child, to acquit herself with distinction when the time arrives for entering the great world of society, or, as Thomas Browne would style it, "for the frivolous work of polished idleness." The gait and carriage must be reduced to prescribed rules, the voice toned down to a drawl or trained to move like a mountain torrent. The

muscular apparatus of the face must be taught to express, not the spontaneous and natural outflow of feeling which wells up unbidden from the magic chamber of the heart, but rather to produce an effect; and so this work of transformation goes on until it culminates in the full-blown society girl. Is it any wonder that under such a scheme of education, conducted throughout by a studied disregard of both the physical and mental constitution, and exercising as it does such tremendous drafts on the nervous system, the world is becoming filled with a class of flat-breasted, spindle-limbed young women, unfitted for the various and responsible functions of womanhood—qualifications, too, which under a different regimen and directed into proper channels, would exert a most potential influence on all the great social and moral problems of the age?

D. H. AGNEW, M. D.

THE TEN HEALTH COMMANDMENTS.

1. Thou shalt have no other food than at meal time.

2. Thou shalt not make unto thee any pies, or put into pastry the likeness of anything that is in the heavens above, or in the earth beneath, or in the waters under the earth. Thou shalt not fall to eating it, or trying to digest it. For the dyspepsia will be visited upon the children to the third and fourth generation of them that eat pie; and long life and vigor upon those that live prudently and keep the laws of health.

3. Remember thy bread to bake it well; for he will not be kept sound that eateth his bread as dough.

4. Thou shalt not indulge sorrow or borrow anxiety in vain.

5. Six days shalt thou wash and keep thyself clean; and the seventh thou shalt take a great bath, thou, and thy son, and thy daughter, and thy man-servant, and thy maid-servant, and the

stranger that is within thy gates. For in six days man sweats and gathers filth and bacteria enough for disease; wherefore the Lord hath blessed the bath-tub and hallowed it.

6. Remember thy sitting-room and bed-chamber to keep them ventilated, that thy days may be long in the land which the Lord thy God giveth thee.

7. Thou shalt not eat hot biscuit.

8. Thou shalt not eat thy meat *fried*.

9. Thou shalt not swallow thy food unchewed, or highly spiced, or just before hard work, or just after it.

10. Thou shalt not keep late hours in thy neighbor's house, nor with thy neighbor's wife, nor his man-servant, nor his maid-servant, nor his cards, nor his glass, nor with anything that is thy neighbor's.

AUSTIN BIERBOWER.

NOTES IN SCIENCE AND INDUSTRY.

How to thaw Frozen Gas Pipes.

—Mr. F. H. Sheldon says: I took off from over the pipe some four or five inches, just a crust of earth, and then put a couple of bushels of lime in the space, poured water over it, and slacked it, and then put canvas over that and rocks on the canvas, so as to keep the wind from getting underneath. Next morning, on returning there, I found that the frost had been drawn out from the ground for nearly three feet. You can appreciate what an advantage that was, for picking through frozen ground, with the thermometer below zero, is no joke. Since then we have tried it several times. It is an excellent plan if you have time enough to let the lime work. In the day time you can not afford to waste the time, but if you have a spare night in which to work, it is worth while to try it.—*Sc. Am.*

An American Antiquity.—One of the mysterious ruined cities of southern North America is that of Grande Guivera, near the western point of Texas. This was known to the early Spanish explorers, but being at present forty miles from water, it has seldom been visited. A late surveying party found the ruins to be of gigantic and substantial stone buildings one of which was four acres in extent. The indications point to the former existence of a dense population. To the southward is a stream of lava from one to ten miles wide and forty miles long, and the surrounding country is most arid and desolate. No inscription, no legend tells the tale of the great city or of its fate.

Weighting Thoughts.—Starting with the idea that the hand varies sensibly in size with the amount of blood in at any moment, Prof. Mosso, an Italian physiologist, has made some interesting investigations. In his first experiment the hand was placed in a closed vessel of water, when the change in the circulation produced by the slightest action of the body or the brain, the slightest thought or movements, was shown by the rise and fall of the liquids in the narrow neck of the vessel. With a large balance on which the human body may

be poised, he has found that one's thoughts may be literally weighed, and that even dreams, or the effects of a slight sound during slumber, turn the blood to the brain sufficiently to sink the balance of the head. The changing pulse even told him when a professional friend was reading Italian and when Greek, the greater effort for the latter duly affecting the blood flow.

The Best Peach.—One of the things in the way of fruit that has been wanted for a long time is a large, handsome, reliable yellow peach ripening late in the season, after Crawford's late and other reliable varieties of similar character have disappeared. In the Chair's Choice, which made its appearance a few years ago, it was thought that the long-looked-for boon had been found; but experience proves that, while it is a handsome peach, excellent in quality, and generally productive, it ripens very shortly after Crawford's Late and not with or after the old Smock as claimed. In Beer's Smock, the old Smock Free and Salway, we have varieties that are prolific and reliable in tree, but all lack in a great degree the desired size and beauty. It therefore has remained for New Jersey, the home of the peach, where such varieties originated as Crawford's Early, Crawford's Late, Oldmixon Free, Stump the World, Mt. Rose, Beer's Smock, now the most popular of all the varieties of peaches to produce also the Wonderful, which it would seem possesses every point desired united in one variety.

In season it is among the latest (ripening quite as late as the Smock) of large size, excellent quality, a regular and most prolific bearer and in beauty excelled by no other peach, the Crawfords themselves not excepted; being rich golden yellow with carmine cheek. The fruit is of good form, of regular shape, and, unlike other yellow peaches, it is not exceedingly fuzzy. The flesh is exceedingly firm, deep yellow and bright red at the stone, rendering it especially valuable for canning and evaporating.

The Warner Observatory.—Many of the readers of the PHRENOLOGICAL

JOURNAL have probably heard of the Warner Observatory at Rochester, N. Y., and doubtless a description of its establishment, aim, and equipment would be of interest. The observatory was built in 1882 at the expense of Mr. H. H. Warner, and is the finest private one in the world. Though intended to popularize astronomical science it is distinctively a private institution founded for the purpose of original discovery rather than the usual work of most other observatories.

The tower, constructed of white sandstone, is circular in form with a diameter of thirty-one feet outside measurement. In the construction of its dome, which corresponds with the diameter of the tower, several novel features were introduced that greatly lessened the weight, which is estimated at three tons, while the weight of the Howard Observatory dome (same size) is fourteen tons. The telescope made by Alvan Clark & Sons, of Cambridgeport, Mass., rests on a pier of stone, which extends through the dome-room to the solid rock beneath. The object glass having an aperture of 16 inches cost \$8,000; the entire telescope costing \$11,000 was presented to Dr. Swift, the director of the observatory, by the citizens of Rochester. The observatory was also presented by the late Hiram Sibely with a spectroscope, an instrument used in determining the composition of the heavenly bodies. Besides these instruments Dr. Swift has in use several ingenious devices of his own invention, among them an instrument controlling the movements of the telescope.

From the observatory a fine outlook over the surrounding country can be had; far in the distance the blue expanse of Lake Ontario glitters in the sunlight, while nearer the tortuous windings of the Genesee can be traced, and the broad city itself with its population of 180,000 is plainly seen. Since his connection with the observatory, Dr. Swift has discovered nearly eight hundred nebulae, taking several prizes offered by Mr. Warner for scientific discovery. When the building and maintenance of an observatory are considered, it must be generally conceded that the latter has been a liberal patron of science.

RALPH B. HICKS.

Rochester, N. Y.

Observation of the Barometer.

—In order to get as much information as possible out of the movements of an isolated barometer, its movements should be watched in conjunction with the readings of a thermometer in the shade, and very careful attention should also be given to the direction of the wind and its changes. There is a couplet which conveys an important rule with respect to the change of wind-directions, and the truth of which is well known to every sailor. "When the wind shifts against the sun, Trust it not, for back it will run." The wind in the northern hemisphere usually shifts with watch-hands, and a change in this direction is called *veering*. A change in the opposite way is called *backing*, and indicates that a storm is approaching. A rapid change in the barometer is usually a pretty sure sign of a gale, whilst a steady barometer is generally an indication of fine weather. A sudden rise of the barometer after it has been steady for some time is very nearly as bad a sign as a sudden fall because it shows that the atmosphere is in a disturbed state, while in an ordinary gale the wind often blows hardest when the barometer is just beginning to rise directly after having been very low. In this connection may be added a word on *weather compensation*. It does not always require that a man should be a prophet to make a shrewd guess as to what the weather will be some months in advance. There are probabilities, we will not say certainties, regarding times and seasons that are obvious to everyone who knows the difference between storm and calm, heat and cold. We know, for instance, that one extreme is likely to follow another. If one winter is extremely cold it is probable it will be followed by another correspondingly moderate. An unusually cold wave, so called, will generally be succeeded by a spell of weather of great mildness for the season. To a very dry season, or a succession of dry seasons, there is sure to succeed a period of weather to make up the deficiency of rainfall. If any particular spring is cold and wet and late, we may generally expect that the succeeding autumn will be warm and pleasant, and that winter will be slow in coming. If the entire year should be bad on account of the excessive cold or unseasonable storms, the compensation may not come until the next

year, but that it will come in time is as sure as that the sun will continue to rise and set. It is one of the first laws of nature that rain shall alternate with sunshine, storm with calm, and heat with cold, and it is by studying these movements of the elements more closely than the rest of mankind that some pretended weather-prophets have occasionally succeeded in coming somewhere near the truth in their predictions.

To Note the Speed of a Train.—Inquiry is frequently made as to how the speed a train may be estimated. The traveler, especially, is curious about the

speed of his train is making and we give two methods by which the speed may be guessed with remarkable accuracy, as follows: 1. Watch for the passage of the train by the large, white mile posts with black figures upon them, and divide 3,600 by the time in seconds between posts. The result is the speed in miles per hour. 2. Listen attentively until the ear distinguishes the click, click, click of the wheel as it passes a rail joint. The number of clicks upon one side of the car in twenty seconds is the speed in miles per hour, where the rails are thirty feet in length, and this is the case generally.—*Railway Review.*



NEW YORK May, 1889.

THE "DOWN GRADE."

WHEN a train of cars gets on a piece of track that is off the level and inclines in the direction of the train's motion and there are several miles of run, the engineer usually shuts off steam and lets the train roll on by its own gravity. He is watchful, however, of the brakes and does not permit the headway to become too great. There is always danger on the "down grade," and the experienced train man knows that if the steam is off and the locomotive no longer exerting its powerful traction, the weight of the train would be sufficient to hurl it to destruction were there no guiding hand ready to apply the brakes and grasp the throttle lever.

Take a line of railway on which there

is a section of rather sharp grading, fifteen feet or more of ascent to the thousand, what would be the popular judgment should the company supply engineers and conductors for it who were habitually given to drinking intoxicants? We can not wonder that an engineer needs to be "laid off" occasionally to recover his mental equilibrium, for the strain of daily operating a locomotive is great and the most robust constitution must weaken under it in time. It is the sharp grades and curves that try these guardians of human lives.

But there are ways of getting on the "down grade" in our everyday life that have a more destructive outcome than railway train running. Social habits are the rails on which young and old launch the car of life, often regardless of the sharp descent. It is easy to "float with the tide"—to do as others do—because that means running on the down grade.

We meet with people who are on this down grade and with full knowledge of its dangers. They like the company on the train and voluntarily seek it, but seem to think that they can put on the brakes when they like and control the

downward movement What a mistake ! Thousands make it, and after a time there comes a terrible awakening to the reality.

We have known the "awakening" to come in the morgue, the hospital, the asylum.

One awakening a gentleman had which was of a very strange nature, but by no means an isolated case, as Dr. Crothers tells us. This gentleman took his glass daily in a social way or at dinner—never to excess, and no one dreamed that he was on the down grade, but one day it was announced that Mr. — had "disappeared." Family, friends, business associates were shocked and confounded, and several days passed without a solution of the human enigma.

At length a despatch was received by his family, dated at a city some hundred miles from his home, informing them that he was there and would return shortly. After reaching home his only answer to their earnest inquiries was "Yesterday I awoke and found myself in Philadelphia—how I came there I am unable to say, and what I had been doing I can not say." He had become an *inebriate* from his moderate drinking and in a stage of unconscious cerebration, in an inebriate trance, he had left home and friends to wander far away, following some impulse that he could not recall any more than one who has been hypnotized can in the waking state recall his conduct while entranced.

Fortunately such cases are rare, but their occurrence is an emphatic warning to all who indulge the appetite abnormally by even an occasional glass of intoxicating liquor. It is the highly

organized brain that exhibits this strange phase of involuntary action, and, once manifested it indicates an important change in the nervous constitution of the man, a deterioration that may persist for the remainder of life.

Other habits bring one upon the "down grade." Take tobacco. In some cases it does not appear to injure the health, but in the vast majority of cases it does, even to the degree of paralysis, cancer, and heart failure. In nearly all cases its persistent use shows a moral running down of the man. He loses in delicacy and refinement. He forgets, because cigar and pipe absorb attention, to show that common courtesy, that kindness and sense of propriety that true gentility demands. His manliness deteriorates.

In a public place we saw a man whose dress and language betokened good birth and education. He was smoking. There were ladies present, and some one remarked that it was scarcely the thing to smoke there. This man spoke out, "If they don't like it let them go out ; this is a public room I believe," and calmly puffed away. He certainly was on the down grade. So we have known tobacco chewers to forget where they were and to disgust people by their filthy expectorations.

No argument or illustrations are needed to show that they who yield to temptations of the moment and pilfer little things, or who use opium or chloral habitually, are on the down grade, but when we point at habits that are conventional, and have the sanction by practice of people who hold place in the best circles of society, it is not easy to speak convincingly.

APPLYING THE "TEMPERAMENTS."

A SERIES of articles entitled "Temperament in Education," by Jerome Allen, has lately appeared in the *New York School Journal*. The discussion of this subject in such a channel indicates an advance in pedagogic methods that has more significance than may appear on the surface. Professor Allen deals with his topic in the manner of one who has looked carefully into the practical relations of temperament, and what he says, therefore, has an objective meaning that every earnest teacher can understand. An experienced teacher himself, Prof. Allen has found in the study of temperament the resolution of many important problems affecting mental development, and his aim is to impart a knowledge of the truths of organization, which appears to him, as it does to all who recognize the facts of temperament, an essential condition of successful education.

Prof. Allen has employed the terms and interpretation of the older writers in his scheme of temperamental classification, not perceiving that most modern physiologists, who give to temperament more than a passing notice, and those especially who discern its fundamental relations to physical and mental development, regard the mediaeval category of nervous, sanguine, lymphatic and bilious as indicative of abnormal or morbid states rather than normal. The American writers on temperament were probably the first to note this inconsistency of classification, and introduce the better terms of *vital, mental, motive* which, however free from any morbid significance, are scarcely complete, as scientific expressions of peculiar consti-

tutions, to which they are severally applied. Yet in default of any better designations we accord them full respect.

Prof. Grainger Stewart recognizes the fact that the old temperamental designations have an application that is pathognomic, as in his lectures he says, "Many persons show in their general appearance that they have a constitution which is liable to certain forms of disease," and he goes on to speak of the sanguine temperament indicating liability to arthritic affections, diseases of the heart, etc., the nervous constitution indicating tendency to nervous diseases, etc.

A temperament proper indicates a typical constitutional state, peculiar to the person, and differentiating him from others; it is not a morbid or pathological state of the body *per se*, but may pass into such state through perversion. The mental temperament indicates a natural predominance of the cerebro-spinal system in the organization, a state that does not imply unbalance or feebleness in any respect, but improper training and false habits may develop the "nervous" state, and an excessive irritability with its tendency to exhaustion. So with the vital temperament, a pernicious course of living may develop the sanguine or lymphatic phase of physical degeneration, and convert a good inheritance into a burden of sorrow.

It would be well for writers on physiognomy to remember that the old physiologists related their temperaments to disease, while the modern classification relates them to health. We can for convenience employ the two, but should keep them in their proper categories of pathological and physiological.

THE WASHINGTON CENTENNIAL.

NEW YORK CITY has never known a time when so much activity and interest were taken in a public celebration as in that of the Centennial of Washington's inauguration for the first term of his presidency. The affair is one in which not only New York but the country at large shows an earnest concern. The devoting of three days to the exercises is in itself a singular expression of patriotic feeling, and shows that in spite of the commercial spirit that has been supposed to control everything else in and about the metropolis, there is an undercurrent of national sentiment that needs only a great occasion, or the memorial of a great occasion, for its development into overwhelming activity.

No more fitting occasion, indeed, could be thought of than this hundredth-year anniversary of the complete organization of our National Government for an outflow of popular feeling. The past and its most prominent figure, George Washington, have no parallel in the history of other nations. The man, by his deeds and his character, gave a singular glory to the event, and in celebrating his first inauguration we can not avoid offering enthusiastic tribute to his nobleness. It is not brilliancy of intellect or marvellous capacity for governing that the people of the United States so warmly recognize in Washington; it is the plain, square honesty and fairness of his management while the official head of the nation, and the goodness of his heart—the simple humanity of his character. These are qualities that we all may speak of eloquently and enthusiastically, and rejoice

in. Well said Lowell in his poem, "Under the Old Elm":

"Mother of States and undiminished men,
Thou gavest us a country—giving him."

GOOD AS FAR AS IT GOES.--A bill was introduced into the New York Senate last week which commends itself strongly to the good sense of the community, on behalf of the welfare of the rising generation. It provides that no person under of fifteen years of age shall smoke a cigarette or a cigar in any street or other public place in this State under a penalty of ten dollars for each offense. Such a bill ought to be rapidly expedited in its progress, and be very vigorously enforced when it becomes a law, as we hope it will become. —*Exchange*.

This seems a wise provision, and if enforced would doubtless be beneficial as far as the young are concerned. But it is not a consistent piece of legislation to stop the occasional boy from smoking his cheap cigarette, and to permit the thousands of old and young men to pollute the atmosphere of the streets at all times and places with the fumes of their cigars. We doubt very much that such a law will find support enough at Albany to pass it. The men who represent the large cities at the seat of government are there for the most part to protect the interests of the liquor and tobacco trade, and it is quite likely they will see the *want of fairness* in such a bill. To legislate against the children and in behalf of the fathers on a matter that has qualities of injury to both can scarcely be expected of such a body of "statesmen." We expect consistency on their part and a triumphant negation of the whole business. Surely the boys have a right to smoke if the men have!

How else is the rising generation to learn, and how else are the future interests of the tobacco trade to be sustained?



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.

ALWAYS write your full name and address plainly. If you use a pseudonym or initials, write your full name and address also.

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. Personal and private matters addressed to the Editor in the professional capacity of a physician will also receive his early attention.

THE NATURE OF WILL.—S. F.—This problem of philosophy is the subject of a number of the "Human Nature" series which will be issued shortly. We beg leave to refer you to that, as it would be impossible to answer your question in the space allotted to a topic here. The free-will side that especially concerns you comes in for a share of the writer's attention, and it is looked at from the point of view of sound rationalism and of Phrenology.

COMPETITIVE EXAMINATIONS.—H. P.—No, we do not consider these a test of capability by any means. We have known a young man of little solid acquirement but self-assured, cool and pretentious, to capture the laurels that others would have worn far more creditably. A retentive memory helps one to recite like a parrot what has been crammed into the mind, but later, we find the young fellow disappointing the expectations of teacher and friends who were so proud of the honors he snatched from his modest and plodding school fellows. Look at the organization of a student, and let

that guide in your early estimate of him, and then let the record of performance from day to day be the ground of his standing rather than the term examination. We know from personal experience that good common sense students often make a very poor show before the examining committee. The real tests of scholarship are the duties and responsibilities of practical life, not a series of technical and abstract questions drawn up in a professor's study.

THE AFFINITY OF THE RACES.—I. B.—The study of archæology and language reveals facts that are most interesting with reference to the relations subsisting between the different nations of the earth. Perhaps in the languages of peoples we find the best evidence of descent and connections. For instance if we study the speech of the Hindus, the Persians, and of all civilized Europe we can trace their origin to one source. In the ancient Vedic poems, many words exist that are much the same as many of the common English words. An examination of any etymological dictionary will show this. Compare such words as mean, is, made, right and note how direct is their transmission down the ages. Max Muller may be an enthusiast in his specialty but we think that he does not overstate the fact in saying, "we are bound together with all the greatest nations of the world by bonds more close, more firm and fast than flesh or bone or blood could ever furnish. With the light which the study of antiquity of language has shed on the past the whole world has changed."

PHYSIOGNOMY UNCERTAIN.—L. H. A. says that an eminent professor of chemistry has made some investigations and come to the conclusion that he can not trust to physiognomy as indicating character." We have but to say that the chemist should speak for himself and if a wise scientist probably does, and without the disposition to preju-

dice others, because there are so many of the most eminent in science who believe firmly in the evidences of physiognomy. A man may be very profoundly versed in certain things that involve study and thought and be very lacking in other things. Your indoor student who pores over ponderous tomes, or daily manipulates for hours his alembics and bottles may be very deficient in knowledge of human nature. He usually is. We know a distinguished professor of chemistry who has made some ludicrous mistakes in judging people, and is quite willing to acknowledge that he is no expert at that sort of business. No it is just as necessary to study expression in the face as it is in act if one would become at all skillful in making up an opinion. Like or dislike may be intuitive, but intelligent understanding of character may be obtained only through study and comparative observation.



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

Woman's Interest.—MR. EDITOR: Of late I have been the recipient of letters from women who are wide awake on topics connected with the humanitarian improvement, and am happy to know there is a general stirring up all along the line.

To me it seems that if women who think and whose spirit is imbued with a desire to bless others, will act and speak and write what is in their heart they will truly grow in goodness and grace and increase their ability to do more and better.

Scattered up and down in our lands are many women whose influence for good has been suppressed or repressed, which, had it been expressed might have borne fruit one hundred fold. Perhaps some have misunderstood the words of Saint Paul, therefore have not uttered the words of wisdom which have been given to them to pass along to such as need them. Let them take courage and at the same time show the wisdom of the serpent and the gentleness of one who is pure in spirit.

Notwithstanding the many men who are making noble strides for the best results it

is not right that women fold her hands instead of doing what she sees the need of being done and can do better than man can. Redemption must come through woman if at all. Let her not fail in her duty.

From a letter lying before me, dated East Otto, Cattaraugus Co., N. Y., I extract:

"My whole heart is in the noble work you are pursuing and the great truths you are bringing before the people; but the advocates of the philosophy of the brain and mind seem many of them—so ill adapted to the work, and the hourly increasing need of the practical application of phrenological principles seems so overwhelmingly great, that my soul cries out to all the heroes of the civilized world: arise! work for these great truths in the open fields of life, and give Phrenology the credit for the good it is doing to-day, and the power for good it has been in the past.

"Oh, men and women of America! A nation's peace, a nation's hope, a nation's welfare, depend upon the inculcation of these living principles into the souls of human beings all about you. Too long have you scoffed at or neglected the honorable men who first discovered and applied Phrenology's basic truths! Too long have you been taking these lessons home and reaping personal glories regardless of the duty you owe to the world and your lesser brothers in the intellectual fields of life! The time has come when men, true men, and earnest women must step to the front; and with the voice of truth, the principles of justice, the love of humanity pushing them on, work with might and main for the salvation of suffering ignorant fellow creatures."

C. F. W.

Faith and Providence.—A CRITICISM.—I have been wishing that somebody who is well equipped for it would show up the fallacies in that article on "Faith and Providence," in the March JOURNAL. I am not able to do that as completely as should be, but would like to say something about it.

This writer says: "Spirituality is a strong faculty and needs a strong curb, for, being blind it should not enslave reason and mislead the understanding."

What proof can he give that spirituality is more blind than reason, or stronger in proportion to its proper place in the council

of the faculties? We continually see men equally gifted in reasoning powers come to very different conclusions, and sometimes entirely opposite ones, on exactly the same subjects and apparently with the same data. There are "Prohibition," "Protection," etc., in fact almost every subject one can think of. This seems to *prove conclusively* that the process depends much on side influences and that it is very far from producing results of mathematical accuracy. Trained reason works in its own order, but who can prove that it is any more trustworthy than unaided spirituality?

Further on he says: "The operations of the physical world always proceed in accordance with law." I believe that fully, and would add *all mental and moral operations* as well; but I also believe that the Creator has a multitude of laws of whose scope we have no conception, and it is impossible for us to see them in their full bearings, as we can never equal Him in Comprehensiveness; yet we shall have new things unfolded to us as fast as we are able to receive them if we will *open our spiritual eyes* and search under his guidance.

In the last paragraph he says: "If reason demonstrate the belief in 'providence' it is degrading to the Christian profession to believe it." Aye, even so, but that "If" is a mighty one. Would it not be well for reason to pluck the beam out of its eye before seeking the mote in its brother's eye?

M. F. B.

We talk of immortality, but we even do not know yet what time is.

"How to get money without earning it." Leave that problem for some one else to solve.

ELDERLY Spinster (rushing into drug store) — "Say, mister, I want some paint." Obliging Clerk — "Yes'm. Face or fence?"

"Do you believe that Dr. Holmes was right when he said 'poverty is a cure for dyspepsia?'" "It may be; I'd rather have the dyspepsia."

"BOBBY," cautioned his mother (they were guests at dinner), "is it possible you are eating with your knife?" "Yes, ma," responded Bobby, with a look of intense chagrin; "but I forgot I was visitin'."



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 the Editor with recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

MEDICAL DIAGNOSIS, A Manual of Clinical Methods, by J. Graham Brown, M.D., Fellow of the Royal College of Physicians, Edinburgh, etc. Second edition, illustrated, 8vo, cloth. New York: E. B. Treat, publisher.

A comprehensive volume, well arranged and very suitable for the physician's desk. Dr. Brown is concise in his discussion of symptoms and physical conditions, but as a rule he aims to be thorough and so supply what a physician needs, even in a case that is obscure and embarrassing. The rational treatment of diseases, or treatment that is at all scientific, depends upon a full understanding of the conditions of the sick. With this in view, Dr. Brown describes the fundamental symptoms, as found in facial expression, temperament, attitude, digestion, breathing, circulation, etc., etc., setting them forth with that accuracy of detail that modern therapeutics recognizes.

Probably in no department of medicine has such advancement been made of late years as in diagnosis. Physicians are now enabled to differentiate diseases as they never could before. They in most cases learn what the trouble is, if unable to select a remedy from the pharmacopeia. Diagnosis is in advance of therapeutics, and this is acknowledged by all eminent practitioners, but here it is that hygienic methods show their strength, for if to an intelligent diagnosis is added good knowledge of hygiene, in the great majority of cases this properly administered will do all that can be done toward relief or cure. We consider this as one of the most valuable books of the series published by Mr. Treat.

ELECTRICITY IN DISEASES OF WOMEN, With Special Reference to the Application of Strong Currents; by G. Betton Massey, M.D., Physician to the Nervous Department of Howard Hospital, etc., etc. 12mo. F. A. Davis, publisher, Philadelphia and London.

It must be admitted that in the department of diseases affecting women, electricity has won many successes. In serious phases of such maladies those that heretofore have been deemed corrigible only by the surgeon's knife, a galvanic battery has been found to obtain the most happy results. The experience of such authorities as Apostoli, Engelmann, and Laphthorn Smith is also on the side of applying galvanism to cases that have resisted other treatment. Whatever will give relief to women who may suffer by reason of their special organization, is to be cordially received. On our part, we have for the past twenty years been earnest advocates of electricity in medicine, and the gradual development of its uses has fully met our expectation, indeed has exceeded it. To be sure, the scientific physician rightly demands proofs; theories are very well in their way, but he would have positive results before taking up any new system. Dr. Massey has assembled in this volume the facts of galvanic treatment. He is not a theorist, does not recommend the use of one agent or procedure to the prejudice of other rational methods, whether surgical or medical, hence what he says may be received with confidence. The book contains a brief exposition of the principles embodied in electrical apparatus, and in the discussion of its therapeutical application he wisely avoids technical phrases as much as possible, to make his language intelligible to the rank and file of the profession.

THE CAPTAIN'S BARGAIN, by Julia McNair Wright, author of "The Story of Rasmus, or The Making of a Man," etc.

Under the auspices of the National Temperance Society of New York, Mrs. Wright has been enabled to give the world a rather long list of volumes bearing upon topics of reform. She writes in a pleasant style; always has something to say; and though a temperance writer especially, she is not repititious. To be sure, one must ring the changes in such writings, but she has shown

ingenuity if not positive power in her management of the bells. She knows life well, and people never tire of reading of life, and perhaps in no path of every day humanity is there so much of kaleidoscopic variety as may be found in the walks of vice related to the use of the intoxicating cup. Further we should say that Mrs. Wright always has in view the moral instruction of the young, and her books are very pleasant reading for young people.

DOWN ON THE GREAT RIVER; Embracing an Account of the True Source of the Mississippi. By Captain Willard Glazier, author of the "Soldiers of the Saddle," etc. Illustrated; pp. 443—LIII. Philadelphia: Hubbard Brothers.

The author of this book may be known as the claimant of the palm of discovery regarding the source of the Father of Waters. In 1881 with a small party he traversed the lake country of Minnesota, and with the encouragement of the Indians who assured him that no white man had yet seen the head of the Mississippi, prosecuted his tour of search. This involved many difficulties and not a little of severe trial, for the country into which he penetrated was an unbroken wilderness and the weather was warm. Aided by the Chippewa chief Chenowagesie, Glazier sculled over Itasca, the hitherto esteemed headwater of the great river, and then pushed forward in a small stream much overgrown with reeds and bushes until a small and beautiful lake opened before him, lying it appeared a few feet above the level of Itasca. This lake, known in the Indian tongue as Pokegama, was named Glazier by the exploring party.

Having accomplished so much, Captain Glazier now entered upon the carrying out of the remainder of his design, to follow the course of the river to its mouth at the Gulf. The book is for the most part, therefore, a record of the scenes and incidents of the canoe voyage down the river. The Indians of the upper waters are described in an interesting manner, and the character of the white settlers furnishes much amusing by-play. The book abounds with historical data and descriptions of the more important towns and cities that were founded on the river banks and depend in great measure upon it for their commercial enterprises.

The announcement of Captain Glazier's expedition and its results has occasioned much discussion concerning the merits of his discovery, and a party of exploration recently sent into the Mississippi is expected to set the matter at rest.

PUBLICATIONS RECEIVED.

HARK! HARK! HARK! MY SOUL! By Frederick W. Faber. Religious hymn; illustrated. Silk covers, small 4to. Price 50 cents.

FROM SNOW TO SUNSHINE. By Alice Wellington Rollins, with fac-similes of water-color Drawings of Butterflies. By Susie Barstow Skelding. Decorated covers. Price, \$1.50.

HEAVEN AND EARTH; an Antiphon. By Edith M. Thomas. Illustrated. Fancy covers. Price, \$1.50.

These publications are fresh from the press of Frederick A. Stokes & Brother and add three more to their list of beautiful books of unique design. The sweet and comforting hymn that is the subject matter of the first mentioned is illustrated appropriately from designs by Mr. St. John Harper.

"From Snow to Sunshine" symbolizes the entrance of the genial spring-tide with its accompaniments of daisy and clover and the vanguard of butterflies yellow, golden, and brown. Miss Skelding's dainty art pictures the wild things of nature with that skill which has become familiar to us in other choice productions of the house of Stokes & Brother.

"Heaven and Earth" strikes a sympathetic chord in the cultured heart at this Easter season. The lilies' bloom, fragrant of immortality, furnishes the poet's theme, and sweetly she sings of "life in death." The designs of Mr. Harper are tender and soft like the poem, drawing the heart upward and imparting cheer that is very grateful to the soul that can escape for a moment from its environment of worldly cares and tedious duty.

THE LOST CHEQUE, by Mrs. Eliza Cheal, a story of London life in which the real figures conspicuously. It is a temperance story indeed, in which we follow step by step the development of character on the "downward grade" and its contrasts with character noble and pure. It is not a story in which the scenes are of that strong flavor which is usually present in most bar-room and garret recitals, but the intemperate side exhibits itself incidentally in the language,

attitude, and morals. The author says that the events recorded have actually occurred, and she has woven them into a pattern that is pleasant to contemplate, while the lesson of the book can be clearly read. Published by the National Temperance Society, in neat cloth.

AN OBJECT IN LIFE AND HOW TO ATTAIN IT.

By F. Leopold Schmidt, Jr. Published for the author by Fowler & Wells Co., New York.

This essay of forty-seven pages is the honest declaration of a young writer who recognizes the listlessness and indecision that characterize so many people old and young, and would trace it to its source. He aims to implant true and noble sentiments in the mind of the reader and "fill him with a burning desire to pursue some worthy object" earnestly. For young people especially the book has much valuable instruction in regard to reading, study, occupation, morals, social life, etc., and to them it may be warmly commended.

AMERICAN INTERNATIONAL CONGRESS OF MEDICAL JURISPRUDENCE.

A circular received from the committee of the New York Medico-Legal Society announces an International Congress to meet June 4th next, in New York, and continue four days. Papers by many eminent authorities in Medicine and Law are to be read and discussed. Considerable interest is manifested in the Congress, which will prove a large and important gathering.

THE MISSING HUSBAND, and Other Tales.

By George R. Sims.

Among the other tales are *Seraphim Soap*, *The Lost Bride*, *The Prison Baby*. The nature of the volume therefore is easily inferred from these titles. Of course the stories are each of absorbing interest. J. S. Ogilvie, New York.

EDITORIALS AND OTHER WAIFS.

This is the title of a little book which contains selections from the editorial work of a lady whose name as it appears on the title page is L. Fidelia Woolley Gillette. This lady was some years ago one of the publishers and editors of a Detroit weekly, and had therefore an opportunity to express herself with that freedom which an earnest, buoyant spirit craves. She has selected from her writings these bits of editorial, etc., and given them the more permanent form of a volume. Doubtless her friends will read the book with interest. The paragraphs for the most part are short and here and there we find scraps of verse; the lines are usually smooth and the sentiment truthful and sweet. Fowler & Wells Co., Publishers, New York.

Pears' Soap

The late HENRY WARD BEECHER wrote:



Henry Ward Beecher

"If **CLEANLINESS** is next to **GODLINESS**, soap must be considered as a means of **GRACE**, and a clergymen who recommends **MORAL** things should be willing to recommend soap. I am told that my commendation of **PEARS' Soap** has opened for it a large sale in the **UNITED STATES**. I am willing to stand by every word in favor of it I ever uttered. A man must be fastidious indeed who is not satisfied with it."

PEARS' is the best, most elegant, and the most economical of all soaps for general **TOILET PURPOSES**. It is not only the most attractive, but the purest and cleanest. It is used and recommended by thousands of intelligent mothers throughout the civilized world, because while serving as a detergent and cleanser, its emollient properties prevent the chafing and discomforts to which infants are so liable. It has been established in London 100 years as

A COMPLEXION SOAP,

has obtained **15** International Awards, and is now sold in every city in the world. It can be had of nearly all Druggists in the United States, *but be sure that you get the genuine*, as there are worthless imitations.

DR. SHEFFIELD'S PERFECT CROWNING SYSTEM.

ALL OPERATIONS IN GENERAL DENTISTRY

Dr. Sheffield's Tooth Crowns

Artificial Teeth Without Plates.

EXTRACTION AVOIDED.

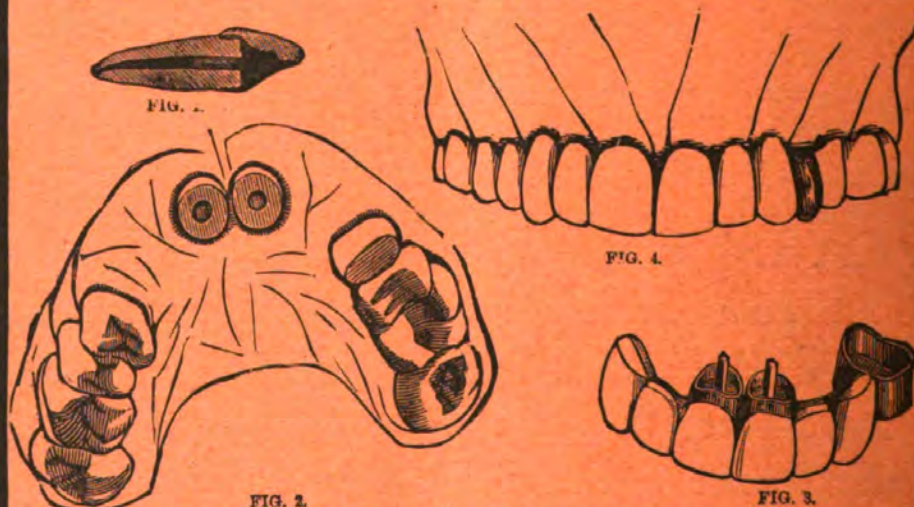


FIG. 1 REPRESENTS A SINGLE CROWN AND ROOT IN LONGITUDINAL SECTION, SHOWING THE RELATION OF THE CROWN TO ROOT. THE ACCURATE FITTING BAND INCASING THE ROOT PREVENTS DECAY OR FRACTURE. FIG. 2 REPRESENTS THE TWO FRONT ROOTS AND ONE SIDE TOOTH PREPARED FOR THE CROWNS AND BRIDGE, WHICH IS SHOWN IN FIG. 3. FIG. 4 REPRESENTS THE JAW WITH THE TEETH STRONGLY AND PERMANENTLY CEMENTED IN POSITION.

DONE IN THE BEST MANNER POSSIBLE.

No Pain, Beautiful, Firm, Comfortable, Durable.

By this system roots of teeth can be restored to perfect usefulness, restoring the power of mastication as with the natural teeth.

If but three firm roots or teeth still remain in either jaw in proper position, an entire set of teeth can be attached to them, being in every manner a perfect imitation of the natural teeth. Send for illustrated pamphlet giving references.

If your dentist has learned to do this work, have him perform the operation for you; but be sure he has been properly instructed, and ask to see his license issued by the International Tooth Crown Co. authorizing him to make Tooth Crowns and Bridge Work, as, if a dentist perform these operations without such authority, the patient as well as the dentist is liable for damages. All operations in dentistry, plates, filling, the treatment of the teeth, etc., carefully and promptly done.

List of Letters Patent of the United States belonging to the International Tooth Crown Co.

NO.	DATED.	NO.	DATED.	NO.	DATED.	NO.	DATED.
144,182,	Nov. 4, 1873	277,937,	May 22, 1883	277,943,	May 22, 1883	330,431,	Nov. 17, 1885
238,940,	March 15, 1881	277,938,	" " "	277,963,	" " "	352,784,	" " 16, 1886
245,782,	Aug. 16, 1881	277,939,	" " "	282,119,	July 31, 1883	352,785,	" " "
224,355,	Feb. 10, 1880	277,940,	" " "	318,581,	May 26, 1885	354,356,	Dec. 14, 1886
277,934,	May 22, 1883	277,941,	" " "	318,579,	" " "	354,357,	" " "
277,935,	" " "	277,942,	" " "	318,580,	" " "	357,044,	Feb. 1, 1887
277,936,	" " "						

These inventions have been patented in England, France, Belgium, Spain, Italy, and Austria.

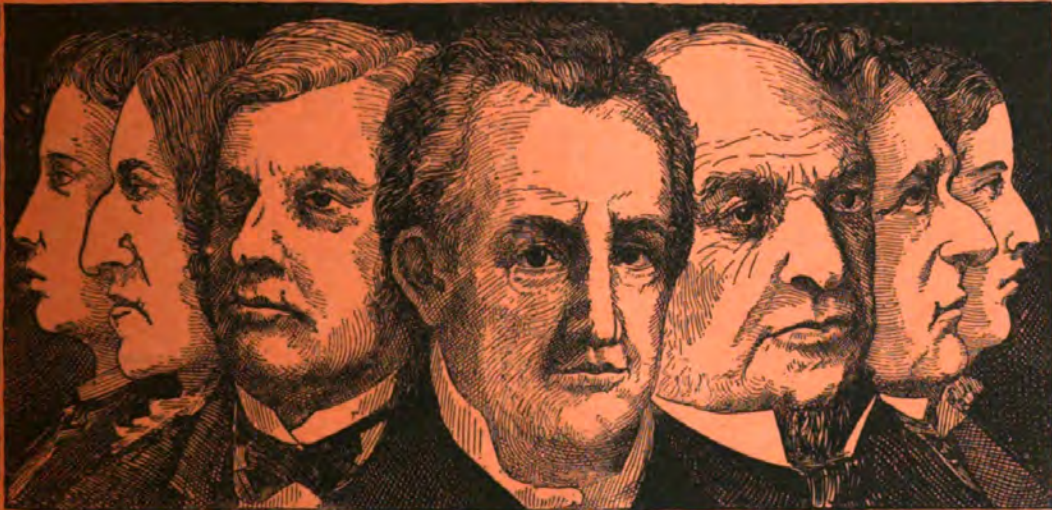
LUCIUS T. SHEFFIELD, D. M. D., 26 W. 32d St., N. Y. W. W. SHEFFIELD, D. D. S., New London, Ct.
INVENTORS. PROJECTORS.

Number 6.

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THE

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ANNOUNCEMENT FOR JULY.

High Places, and a New Classification, spoken of in the May number, will have places in the July edition. A man known very widely in Civilization will also be presented to the July reader. We mean John Stephenson, the horse-car builder. Appropriate to the time is the appearance of "Gen. Abraham Dally," a survivor of the war of 1812. An earnest observer will furnish some Notes on Hypnotism. Miss Chappell will illustrate "The Goodest Lady in the World." Another interpretation of "Faith and Providence" may be expected, and more of the editor's sketches of "Notable People." Besides, a charming extract from Edward Arnold's poem, "With Sa'di in the Garden," commented upon by an Oriental scholar.

The Phrenological Journal is published monthly at \$1.50 a year, or 15c. a number. To each new yearly subscriber is given either the Plaster Paris Phrenological Bust or New Lithography Phrenological CHART Premium, a new plate, 19 x 24 in., with ring for hanging. When the Premium is wanted, 15c. extra must be received with the subscription to pay postage on the JOURNAL and the expense of boxing and packing the Bust, which will be sent by express, at expense of the subscriber; or No. 2, a smaller size, or the Chart Premium, will be sent by mail, postpaid.

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THE
PHRENOLOGICAL JOURNAL
AND
SCIENCE OF HEALTH.

NUMBER 6.]

JUNE, 1889.

[WHOLE NO. 606.



MR. E. T. CRAIG,
Veteran Writer and Lecturer.

NOTABLE PEOPLE OF THE DAY.—No. 20.

MR. E. T. CRAIG.

Veteran Writer and Lecturer.

WE have had occasion within the past year to note the death of two veteran supporters of phrenological science, men whose position before the world was a commanding one, Professor O. S. Fowler and Dr. Nathan Allen. A few years ago Mr. Frederick Bridges died in Liverpool, England, at a very advanced age. He was one of the best known men in that large city, and highly esteemed in all circles. For upward of forty years he had been active as a writer and professional examiner, contributing valuable *data* to the practical features of mental science. John Bright, whose recent departure is lamented by the whole British nation, was a strong friend of Phrenology, and it is not presumption to say that he owed much of his success as a public man and as a private citizen to his knowledge of its teachings.

The old pillars of the "faith" delivered by Gall and Spurzheim appear to be falling rapidly, yet there are many veterans still surviving. It should be expected that a knowledge of the principles governing mental action would promote long life and such is really the fact.

Some of the most usefully active as well as aged men and women we know to-day are warm advocates of Phrenology. One of these is Mr. E. T. Craig, of London, England, who was born August 4, 1804, and is therefore in his eighty-fifth year. Few men can look back over a long career with as much satisfaction as Mr. Craig. From youth onward his life has been a very busy one—busy in several fields, and, for the most part, busy in philanthropic endeavor. He became interested while a young man of 20 in a movement that proved the origin of co-operative associations in Manchester, and the branches that were organized in Rochdale, Stock-

port, Oldham, etc. He was the first editor of the *Lancashire Co-operator*, and lectured and wrote much in behalf of the social and intellectual improvement of English working men. About the year 1840 he turned his attention expressly to public teaching, and for fifteen years he traveled through the country, his topics being co-operation, phrenology, psychology. Compelled to give up this, to him favorite pursuit, by ill health, he became in 1858 connected with the press again, first as editor of the *Leamington Advertiser*. Later he established the *Brighton Times*, and also started the *County Express* for the proprietor. Afterward he was appointed editor of the *Oxford University Herald*.

Amid all his occupations, however, he never lost sight of his first love, co-operation. Of late years he has directed his attention to the question of organization and co-operation in America, and has published numerous papers in the *American Socialist* and other transatlantic publications. He also organized a plan for the federation and co-operative self-employment of the members of the building trades, which was successful so far as the organization was concerned; but time and capital were required for its full development.

"It is a striking fact," says the *West London Advertiser*, "that in the Government Land Bill for Ireland there was not a single clause, paragraph, or sentence which had reference to the condition and interest of the Irish laborers; and it is to Mr. Craig that belongs the credit of first directing public attention to this fact in the columns of the *Co-Operative News*, with the result that when the bill was in committee clauses were inserted, giving the laborers, as Mr. Craig suggested, the privilege and protection of the Land Court, and enacting that for every twenty-five acres oc-

cupied by a farmer a cottage suitable for a laborer should be built, with half an acre for garden culture, at a charge of eighteen pence a week."

Mr. Craig is the author of several books on Phrenology and kindred subjects, and the vigor of his mind at so advanced an age is well shown by a paper that was read at the May meeting of the British Phrenological Association on "The Importance of Educating Public Opinion on Phrenology." The newspaper quoted above published a review of a recent book by Mr. Craig on "Longevity," in which this paragraph occurs.

"Mr. Craig is a clear and original thinker. In a few lines, he often gives hints of very great importance. He is a grave moralist, a great philanthropist, and his many schemes for ameliorating the material and social conditions of his fellow-men are worthy of great praise. He can look back upon an energetic, honorable, and useful career, and his appearance at the age of 85 proves that what men may call his theories have vitality and reality in them, and deserve most careful consideration. We have read this little work with pleasure and profit, and shall often consult its pages. In a few sentences there is a fund of common sense and sound wisdom, and we could quote many more equally pertinent and practical."

The following phrenological notes are from a sketch by the *Phrenological Magazine*, to which publication Mr. Craig has been an occasional contributor.

"He is versatile in talent, ingenious in contrivance, and has ample power to embellish, off-set, and enlarge upon his ideas, as shown by the width of the temples and above. His large perceptive faculties, with eventuality and comparison, give him great power to collect facts, acquire knowledge, and present what he knows in an agreeable, lucid, and instructive manner. He has a favorable organization to teach, lecture, or write. He is about equally developed in the

qualities to acquire, retain, and communicate knowledge, and in the power to invent, originate, and deal in abstract thought. He is also very sagacious, intuitive, and of a penetrative cast of mind. Such an organization can not help engaging in practical and useful works, especially as connected with the wants and conditions of mankind.

"His natural refinement, taste, and imagination, with large language, qualify him to express himself in a free, easy, graceful style, enabling him to present many unpleasant truths in a pleasing and acceptable manner. The moral brain, especially benevolence, is largely represented, which disposes him to take an interest in the welfare of mankind at large, but especially in that of the more dependent class. He has great firmness and tenacity of purpose, and is quite decided in purpose, tenacious in his plans, systematic in his arrangements, and methodical in his life and habits."

ISAIAH V. WILLIAMSON.

The Eccentric Philanthropist.

AN organization of mixed qualities in seeming contradiction, yet by inheritance the spirit of the man is elevated, refined, and aspirational. That is a good frontal development in the main, with perhaps, scarcely enough of the perceptive organization to make the character broadly observant, to take in all the factors and so supply all the data for balanced and unprejudiced reflection. His judgment is prompt, of that intuitional order that tends to jump at conclusions, and let the reason afterward strive to confirm it by the related circumstances. With such an intellect, and so strong a moral development, he would be known for marked independence of opinion and its rigid maintenance. He would be severe in his condemnation of wrong doing, but indicate it by manner rather than by language, for in speech he is reserved, and brief perhaps to tartness. He is pre-eminently one of those men

who believe in minding their own business, and few things disturb him more than the uninvited attention of others. The head is massed, we think, in the crown, where the qualities of steadfastness and conscientiousness lie, and their activity is expressed most conspicuously in his conduct. He has kindness and

and simple attention, where the conventional address of social gentility would disgust him. To the world he is a disappointing man, and we do not doubt that he finds genuine enjoyment in doing unexpected things, and baffling people who are profoundly sanguine as to his motives and intentions.



ISAIAH V. WILLIAMSON.

sympathy, much of human nature, but one must know him well to understand the gentler side of his character, because it is so veiled by the practical and severe mannerisms that he shows in his every day conduct. He is a man of whom it may be said, he is hard to suit, yet a child could please him by its unaffected

It must be admitted that Isaiah V. Williamson is a singular man and although an old resident of Philadelphia, and for many years one of its interesting features, his life history is by no means known. In fact there is little to be had besides a stock of current anecdotes that illustrate his penuriousness and singular-

ity. In spite of his vast wealth, and the liberal use he has so often made of it in the support of public charities, he limits his personal expenditures to the barest necessities. He has never married and has no fixed abode. He has no home address in the city directory. He lives generally at hotels or boarding houses, and frequently changes these temporary quarters. He permits himself few of the comforts of life, and scarcely the necessities. Anything like luxury he renounced long ago, for gossip credits him with a rather luxurious and self-indulgent youth, but if such ever were his manner of life, it was put utterly aside. For fifty years his career has been that of one devoted to the accumulation of wealth, even to the sacrifice of the ordinary ties and amenities of life. But at the same time, he has frequently contributed liberally to such charitable objects as enlisted his sympathies. One of his intimate friends has said that, to his knowledge, Mr. Williamson had applied a million and a half dollars to such charities at different times.

Not long ago he did a most notable act of philanthropy, viz : the giving by deed of trust property valued at \$5,000,000. The conditions of the trust call for the establishment of a comprehensive system of trade schools in which boys are to have free instruction, under the most competent teachers, in any trade they prefer. A tract of ground near Philadelphia, not larger than three hundred acres in extent and not to exceed in price four hundred dollars an acre, is to be acquired, and on this land the requisite number of substantial buildings are to be put up, designed both for class room and dormitory purposes. Dwellings are to be built for the instructors, and funds set apart for their support. If the five millions of the original gift prove to be inadequate for these various objects, Mr. Williamson has let it be understood that he is ready to increase the endowment to ten or twelve million dollars. Hence, in its larger possibilities,

the gift is one of the most stupendous in all history. Possibly no benefaction on record is greater, except the foundation of Leland Stanford Junior University by Senator Stanford.

The carrying out of this public benefaction the donor has intrusted to a board composed of well known business men, and one lawyer only.

In some respects Mr. Williamson's scheme overlaps that of Girard. But it is broader in its scope and is even more superb in its proportions than that magnificent charity. The first benefits in both cases go to boys born and raised in the city of Philadelphia, and then, in well-defined zones, to youth everywhere. Then, too, in both cases, the boys acquire knowledge of some useful trade. But under the Girard bequest these privileges are restricted to orphans, or, as the courts have construed the legacy, to half-orphans, and to orphans, and the mechanical features of the institution are incidental merely. By Mr. Williamson's gift the benefits are open to all, as the case is with Mr. Cooper's princely gift to New York City, and the instruction is to be wholly practical, except so far as some lessons in the ordinary school branches may be found essential to progress in mechanical skill.

MARTHA EVARTS HOLDEN, OR "AMBER."

THE expression of this face is not that of a character run in the mold of commonplace or conventional life. There is too much independence, spirit, and "selfness" about it. We do not at all wonder that she was called queer as a girl because her whole nature must have rebelled against the formal rut-going life that "good manners" prescribes for the one whom destiny has marked with the feminine physiology. Not that she would have been a boy, but she wanted freedom to think and act as circumstances prescribed or as her intelligence defined in the light of common sense. Note the impressibility of that organization, its high tone of quality, its ambi-

tion, perception of moral fitness, and earnestness. Such a character lives in an atmosphere of moral light, may be led to extremes of spiritual fancy, may dream wonderful dreams and see remarkable visions, but the motive entertained is high, the purpose far from vain or vague.

There are elements of strength and tenacity in the outlines of that face; cheek, nose, and jaw belong to a line of descent that possesses physical fortitude, but will is the stronger expression, and

if she does not always follow the guidance of her own judgment. The secretive and conservative elements were never strong enough in her nature, and she has doubtless lost much from too much frankness, directness, and openness of spirit. Such spontaneous natures, however, are the freshness of modern life; they give us views of human nature that are a great relief from the weary monotone of conduct to which we are accustomed in the conventional walks of society, and they limn, if but in outline, higher and brighter phases of human soul life.

In a very cordial sketch published not long ago, in the *Union Signal*, Frances E. Willard tells us:

—Martha Everts Holden, better known in Western literature as "Amber," was born in Hartford, New York, near the Vermont boundary line. Her father was a very remarkable man, and although he died young, he had already made his mark as one of the most eloquent and talented ministers of the Baptist denomination. He has been termed by those who have heard both speakers, "another Beecher." Her childhood was signalized by a very imaginative turn of mind which led her to be regarded as "queer" and unlike other children. She used to love to be by herself in the woods, and made play-mates easily of wild birds and the smaller animals.

Owing to her peculiar eyes, which were of a bright golden hazel, and hair which matched them in color, she was called "Amber" as a pet name at home, and she afterward adopted this as her *nom de plume*. Up to eighteen years of age she led a very secluded life and saw nothing of the world. Gov. Shuman, of Chicago, for many years editor of the *Evening Journal*, met her at that age, and asked her to contribute an article to that old standard daily. She did so, and flashed at once into success as a journalist. Her letters became very popular and she was sent to Cali-



MARTHA E. HOLDEN.

we should expect such a woman, despite her unusual sensitiveness, to exhibit far greater capacity than most of her sisters to meet trials and difficulties that demand true grit. She has sympathies that come out freely and heartily. Reserve with her is out of place in time of need, when a heart pleads for comfort and help from a fellow heart. She reads character promptly; penetrates the disguises of cunning and hypocrisy with an intuitive glance, and *knows* where confidence may be safely placed,

fornia as a special correspondent. Letters then written were widely copied and embodied in various literary compilations anonymously. She married at the age of twenty-one, and for awhile thereafter laid aside her pen. But the marriage proved unhappy, and, finally, when her three children were all under ten, she became their only bread winner and protector. No shadow of blame ever attached to her in all the sorrowful years. Left with absolutely nothing, not even a bed to sleep on, or a table to eat from, she walked twenty-three miles to town and applied for work in a telegraph office. This she obtained, and throughout a long winter rose every morning at five o'clock, got the breakfast for her family, took the 6:20 train to town, walking a half mile by starlight and often through deep snow drifts to catch the train. She now remembered her old talent of declaiming and gave elocutionary entertainments to help eke out support for five, her three children, invalid mother, and self. Finally, when the wounds in her shattered life were a little healed, she resumed her pen, and her success was greater than ever.

Recently she has been forced to lay

aside part of her literary work on account of failing strength.

Miss Willard in speaking of her character from personal observation, says :

"Amber" is a woman of strong individuality, peculiarly tender heart, passionate impulses, strong in prejudices, and fervent in her likes and dislikes. She has the keenest sense of justice, and yet is of a most forgiving nature, and without sullenness or desire for revenge, even under the deepest wrongs. She is a brilliant conversationalist when at her ease, but is very sensitive and easily rebuffed. She does not care to make many friends, but links her heart strongly to a few. She has but little financial ability, and is laughably unbusiness like ; is trustful and rather prodigal of money when she has it, but has not a particle of "policy," and not enough suavity with people for whom she does not care, hence can hardly avoid making some enemies. Further, she is endowed with glorious physical endurance, and is a monomaniac on questions of hygiene, both of body and home.

The agreement of this pen-portrait with that of the engraver is something remarkable.

EDITOR.

THE IMPORTANCE OF HISTORICAL STUDIES.

THE true historian studies past events together with their causes and effects. History is really philosophy teaching by example. It gives an experience which no other study gives. Much more attention should be given to its study in this country than is generally given. It is interesting to both the young and the old, it combines the improvement of the best faculties in man with amusement of the deepest interest, and the acquisition of the most important species of knowledge.

As a power of amusement, history has a great advantage over novels and romances ; for they frequently debilitate the mind by inflaming the imagination,

and also corrupt the heart by infusing into it a moral poison ; but history rests on the basis of facts, and, at the same time, affords sufficient variety and novelty to interest the imagination. The love of novelty and excitement is natural to man, and if the mind does not receive wholesome food in that direction, it is about certain to appropriate that which is poisonous to it. If families and Sunday schools would have better historical libraries there would not be such a tendency on the part of the young to read trashy literature.

History subserves the highest purpose of improving the understanding and strengthening the judgment. I have

said that it is "philosophy teaching by example;" but I will go a step further and say, that it is moral philosophy exemplified in the lives and actions of men. It adds to our experience the experience of others, and thus enables us to enter upon the duties of life with great advantage. By it we become acquainted with human nature, and are enabled to know how men will act under given circumstances. We can trace the connection between cause and effect in human affairs. Many narrow and prejudiced persons would be much benefited by the study of history; it would teach them to admire what is praiseworthy in others, and compare on enlarged principles other ages and countries with our own.

History may be considered the school of sociology and political philosophy. From it we learn what has been hurtful to society in the past, and are taught to avoid it. A careful study of the history of alcohol should cause every lover of humanity to do his part in banishing the whisky traffic from the country. History teaches the dangers peculiar to a country, and enables the statesman to understand what is necessary to the welfare of the state. The history of France during the reign of terror is sufficient to show that a country can not prosper while materialism and atheism triumph.

History teaches that man is a being of progress; that the world will not stand still; and that even revolution is better than stagnation. War is a great evil, but in some cases it has been a necessity in order to take impediments out of the way of an advancing civilization. We hope, however, that the time will soon come when the gospel will completely triumph over force.

True history has a tendency to strengthen the sentiments and principles of virtue. Vice appears odious, and virtue desirable in its faithful delineations. The reader of history learns to connect true glory, not with wealth, or

power, but with the disinterested employment of great talents in the promotion of the welfare of mankind.

History teaches us the instability of human affairs, and the importance of relying upon divine providence. It teaches that high positions are not exempt from severe trials, and that even a king or president may be assassinated. It teaches that riches and power do not afford permanent happiness, and that the greatest monarchs have frequently been more miserable than their meanest subjects. The study of history has a tendency to check restlessness, and make men better contented with their lot; for it clearly teaches the transitory nature and sad discontinuity of human affairs.

J. W. LOWBER, LL.D.

IN THE COUNTRY.

THE sweet briar and the arum blush,
The blossoms purple, gold, and red,
Are flames with voices in the bush,
And holy seems the ground I tread.
The golden bees
Mock Memnon's softest melodies.

In shadows of the wood I lie,
And dream, unawaked by noisy marts,
Where smoke and dust veil not the sky,
Nor hammers beat on human hearts,
Nor shuttles fleet
Weave life into a winding sheet.

The summer leisure of the birds
Is mine, and brings refreshing rest;
The flowers are many colored words
That happy nature writes, and blest
Is he who spells
Aright the sylvan syllables.

Here I can rest my weary brain;
And win for health and life a lease,
And gather strength to fight again
The war that wins the spoils of peace;
This rural calm
Soothes the tired heart like healing balm.

When the pale axe-man strikes the stroke,
And stills the quick life in my bosom,
Plant near my grave a sapling oak,
And violets of azure blossom.
The oaken staff
My shaft!—the flowers my epitaph!

GEORGE W. BUNGAY.

**EXTRACT.—A DEMONSTRATION OF CENTERS OF IDEATION FROM
OBSERVATIONS AND EXPERIMENTS.**

THE object of this paper is to furnish the basis of a scientific Phrenology.

I take it for granted :

1. That all mind manifestation is dependent on brain matter.

2. That the various elements of the mind have distinct seats in the mind—which, however, have not been as yet determined.

3. That the recent researches by physiological experimenters and pathological investigators—which have resulted in defining distinct regions for motion and sensation—established the physiological correlative of physiological action.

By applying galvanic currents to definite portions of the brain, or by destroying certain areas, physiological experimenters caused movements of certain limbs and muscles. In itself the distribution of motor areas in the brain would be of little value to the psychologist, except that it proves to him the plurality of the functions of the brain. When we, however, observe that the movements caused by excitation form the physical parallel of mental action, we may arrive at the psychological function of a certain portion of brain, by reducing the various faculties of the mind to their elements and watching their physical expression.

To arrive at the demonstration of centers of ideation.

1. We must observe the physical expressions of our thoughts and feelings.

2. We must take the limbs and muscles, which are affected by definite emotions, and see on what occasions they were made to move by central excitation.

Thus we find that on a definite part of the frontal convolution (Ferrier's center 7) the galvanic currents have the effect of elevating the cheeks and angles of the mouth with closure of the eyes.

(Paper read at the Anthropological Institute, Feb. 12th, of Great Britain and Ireland.)

On no other region could the same be effected.

Darwin points out (Expression of the Emotions, p. 202) that under the emotion of joy, the mouth is acted on exclusively by the great zygomatic muscles, which serve to draw the corners backward and upward. The upper and lower orbicular muscles are at the same time more or less contracted. Duchenne and Sir Charles Bell are of the same opinion, and Sir Critchton Browne, speaking of the general paralysis of the insane, says: "in this malady there is invariably optimism, delusions as to wealth, rank, etc., and insane joyousness, while its earliest physical symptom is trembling at the corners of the mouth.

The effect produced by the galvanic current on Ferrier's center No. 7 is thus shown to be the physical expression of the emotion of joy. Combe located there his "organ of cheerfulness," which he afterward called "Hope," and there is no doubt some relation between the effect of Ferrier's experiment and the result of Combe's observation.

Prof. Sigmund Exner says the centers for the facial movements extend from the gyrus centralis anterior to the latter halves of the lower frontal convolutions, an area which corresponds with Gall's "center for mimicry" (afterward named "imitation").

Most marked, however, is the harmony between the results of modern experiments and the observations made by the early phrenologists, when we arrive at the demonstration of the "gustatory center." Ferrer's experiments on the lower extremity of the temporo-sphenoidal convolution caused movements of the lips, tongue, and cheeks, indications of gustatory sensation. Looking up the *Edinburgh Phrenological Journal* (Vol. 10, p. 249) we find that many men claimed the discovery (in 1824) of

the organ of gustatory sensation, as afterward called "Gustativeness" or "Alimentiveness," and that they located this center in exactly the same region. As this organ is difficult to be observed on account of the zygomatic arch and the temporal muscles, phrenology was much abused at the time.

Prof. Ferrier's experiments on his center No. 11 on the lower extremity of the ascending parietal convolution, resulted in the retraction of the angle of the mouth.

The action is that of the platysma myoides muscle, which, as Sir Chas. Bell (*Anatomy of expression* p. 168) states, is strongly contracted under the influence of fear, and which he calls the muscle of fright. Phrenologists (Gall and Spurzheim) located in this region their organ of "Cautiousness," which

they found largely developed in persons known for their timidity.

Prof. Ferrier's center No. 7, is said to cause, "raising of the shoulders with extension of the arms," a movement which Darwin and Mantegazza refer to the expression of patience, submission, and the absence of any intention to resist. Gall's organ of "veneration," which corresponds with this center, is said to produce an instinctive feeling of respect and when defective in children, Combe says, it has the effect of making them regardless of authority, prone to rebellion, and little attentive to command.

Though the work, as described, is far from complete, it may have the effect of causing Gall's theories to be re-examined and the effect of pointing out a sure method for the demonstration of centers of ideation. BERNARD HOLLANDER

CIVILIZATION AND EDUCATION OF THE NATIVE RACE.

FORTY-THREE years after the landing at Plymouth, or in 1663, the first successful efforts for general schools were made in the colony, "to the end that learning be not buried in the graves of our fathers," the old records quaintly assert. Schools were unthought of when the struggle was for life, and more than a generation had passed by before any public effort was made for teaching even the white children. It was during this period that the white man's influence over the Indians was the greatest; for, if savages, they were keen observers and acute reasoners, and the chiefs deplored the demoralizing influence of intoxicating liquor among their people, when, as yet, none of the blessings of civilization had reached them.

John Eliot, who came to this country in 1632, was the first, and almost the only active missionary worker among the Indians for a long time. A building on the Harvard grounds early bore the name of "Indian College." It was intended to afford an academic course for

twenty Indian students, and many of the surrounding chiefs sent their sons there for instruction. A brother of King Philip, of Mount Hope, who was later a noted warrior and slain in Philip's war, was a Harvard student. The college president bears witness to the ability and application of these Indian youths. In 1659 he says: "The Indians in Mr. Corlet's 'scoole' were examined openly by myself at the public commencement concerning their growth in a knowledge of the Latin tongue, and gave great satisfaction to myself, and also to the reverend overseers." Besides being diligent in their studies, these Indian students were orderly, and civil in their manners. By following the "Acts of the Commissioners of the Colonies," the sad end of this fair beginning is soon reached. Those records reveal the fact that President Chauncy soon desired the use of the Indian building for English students; the request was granted, and the Indians were crowded out; and the impartial records state that when—only two days later—John Eliot,

the Indian apostle, asked these same officials to grant him needed aid in his missionary work among the Indians, his request was referred to other powers, and the commissioners themselves adopted plans to provide mastiff dogs to hunt the natives. The animals were called into service, and the Harvard Indian School was closed by the same august body. Many years after these events, when John Eliot was carrying his Indian Bible through the press, Mowaus, one of the former students at Harvard, was the only man known to Eliot who could intelligently aid him in the work. This Indian had, after leaving Harvard, added the printer's art to his classical lore, and, according to the olden records, made "commendable progress" therein. He composed sheets and corrected proof with understanding.

The overthrow and expatriation of the aboriginal race are the darkest pages of our national history, for the few early efforts made in their behalf amply proved that the Indians were then mentally and morally capable of being civilized and educated. These blessings were accorded so charily that the great mass of the race which survived the exterminating wars of the centuries are still in a state of savagery. The best present outlook is from Indian Territory, where the mass of Indian civilization is now to be found.* This allotted home of the tribes, when the Indians east of the Mississippi were driven out into the unknown Western wilds, in the earlier part of the present century, now numbers a population of one hundred thousand souls, sixty-five thousand of whom are civilized aborigines, and the remainder Anglo-Saxon and negroes. The wild tribes are farther west, and many of them are on reservations outside of Indian Territory. The civilized Indians live in tribes holding lands in common and making their own laws,

* This article was written before the late creditable transactions in Oklahoma.—Editor.

under tribal constitutions; they have a common school system, and also seminaries for higher education. These schools, though taught in the English language, are conducted by native teachers. A section of the Cherokee Constitution explains the prosperity of the tribe. Article VI., Section 9: "Morality and knowledge being necessary to good government, the preservation of liberty, and the happiness of mankind, schools and the means of education shall be forever encouraged in the Cherokee Nation." As a result of this policy, official reports declare that "there is not in the Cherokee Nation an Indian man, woman, boy or girl of sound mind, fifteen years old or over, who cannot read and write." They also send students to Princeton and Yale. These civilized tribes support their schools without aid from the United States Government. Here are the Cherokees, Creeks, Choctaws, Chickasaws, and Seminoles, and their own efforts prove that the race is capable of becoming an enlightened and important factor in our great republic.

The wild tribes retain their savage customs and native language. The history of their race, with which they are acquainted, renders them slow to believe the white man is ever their friend; but whenever justly treated, they prove friendly and faithful. It is now only about seven years since any organized effort has been made to teach the wild tribes, and within a period of five years *twelve hundred* of their children were gathered into the schools and are receiving instruction. These tribes are reaching out for civilization, and the National Government is very neglectful of its duties to these people. It is useless to establish schools without supplementing them with other means of advancement. Knowledge will not help a boy unless he has means for the exercise of that knowledge. It is cruel to teach a girl to read and sew, and to otherwise awaken in her mind tastes for

a higher life, if her whole future must be spent amid the degradations of savagery. Among these wild tribes is a broad and open field, requiring more than missionary labors. The National Government owes a duty to these Indians, as well as large sums of money for lands taken from them. They have received in full measure the evils of civilization, and are now asking for its blessings; they ask for schools, and the nation with more treasure in its vaults than it knows how to care for, withholds the necessary appropriations, and, too, withholds the Indians' rightful dues. The wild Sioux, when just from the war-path a dozen years ago, made a treaty with the United States to the effect that school houses and teachers should be furnished for their children; but the schools were not established according to the promise. Throughout the distant reservation, among the wild tribes, the angel of civilization is troubling the stagnant pool of savagery. The Navajos are struggling into civilization under adverse circumstances. The United States owe this tribe for education, under treaty stipulations, nearly three quarters of a million dollars; yet with this sum due the tribe, the Government provided *one school* for a people numbering 17,000 souls. The Moque, peculiarly tenacious of tribal usages, call to us from the mesa tops and ask the blessings the white man enjoys. The bloodthirsty Comanches ask schools for their children, in this manner expressing their readiness to accept civilization.

The Government schools already established—inadequate as they are—are not supported by Government alone. Charitable individuals and religious organizations aid materially. The five Government boarding schools supported by special appropriation—grudgingly and sparingly given—are also aided by charity. Of these, the Carlisle School, located in Pennsylvania, has a very interesting history, gathered up in its ten

years' existence. This school is the result of the labors of Capt. A. H. Pratt, who, while in charge of a band of hostiles banished to Florida, so pitied their forlorn friendlessness that he enlisted the sympathies of certain summer resident ladies. They taught the children, while he himself endeavored to train them industrially. This effort proved so successful that he proposed to the department in charge to give over to his use, for an Indian training school, the "Old Barracks" at Carlisle, Pa., to which the authorities consented. These barracks were originally a prison for the Hessians captured during the Revolutionary war. In the Indian wars that followed they were in use as a place to train soldiers to hunt the natives. They were burned during the late war, but rebuilt and used as a training school for cavalry, until finally, in 1879, they were converted into an Indian school. One hundred and sixty-seven dollars per year Government allows for each pupil. Here in this school of four or five hundred Indian children and youths are found representatives of forty tribes, removed from their wild life to civilized teachings and influences. (Report of year ending June, 1886.) That this school has proved a success is shown by the fact that when appropriations for needed improvements were refused by the Government, the Indian students themselves contributed, from their scanty means, obtained by outside labor among the farmers, the sum of nearly two thousand dollars, to commence a new dormitory. They also gathered lumber and burned bricks. Yet these Indians who gave of their earnings and labor will not own the building when finished, but it will be the property of the United States, and can be again transformed into a school to hunt Indians, as it was in days of old. This nation can give nothing to the red men, for the land was once their own. Nearly three times as much money is, according to recent national reports, annually spent in sub-

jugating the Indians as is expended for their civilization and education. Take, for instance, the Report of Indian Commissioners for 1886. During that year \$17,643,468 were expended in Indian *war service*, while only \$3,325,500 were devoted to their maintenance, civilization, and education, and two-thirds of even this latter sum is for other purposes than civilization. It is no marvel that the aboriginal race is still in a state of savagery, a hunted people, with exter-

minating wars following them through the centuries. The duty of the United States is too prominent to be unknown, and too great to be ignored. The Indians justly claim recognition and protection. They are products of a native soil, and cling thereto with despairing tenacity. To solve the problem the race must be gathered into a common brotherhood, upon the broad basis of a Christian civilization, education, and citizenship.

ANNIE E. COLE.

FROM A DISTANCE.

THE trite old saying that "Distance lends enchantment to the view," is as true to-day as it ever was, and truer it may be. We have all realized its potent justice, for things will look differently at a distance from what they when close at hand, and as a rule objects are not improved by nearness. Certain details are perhaps lovelier the more narrowly we examine them; but for the most part things get a rich and mellowed grace by distance, and imagination may expatiate at its pleasure; and are not imagination and distance the twin enchanters of the world? It is the old story of the prince who gazing from a mountain top saw a glorious landscape stretching away before him, beautiful as a picture of fairy land it seemed, with green forests and verdant valley, bisected by noble streams flashing mirror-like in the sunlight. Delighted with the prospect, the prince asked the county of his father, the king, as his kingdom, but when he had received it and rode into the new land he found only a howling waste; the land was sterile, the forests were moss grown and weird and unsightly, and the flashing water was nothing but still and stagnant pools that diffused a noxious and pestilential vapor.

Most of us have experienced this magic which distance works on scenery. Have you not seen in the summer sunshine a soot-grimed, weather-beaten hovel

look like a palace, many a time? With a ripening field of corn for its golden back ground, an orchard on one side, on the other a small stream and in front sheep and kine feeding in the green meadow, it might have been the palace of a fairy queen come out for a summer's shepherding, and you think of Armida's island palace where the brave crusading knight lay in thrall, and of little Trianon and Marie Antoinette feeding her ducks and hens and cows, with the great lords of France attending her dressed like cow-herds. How the sun flashes on the broken, cobwebbed window panes! Are you sure those are not burning, flashing precious gems that shine so gloriously? Artists perhaps come to transfer the beautiful landscape to their canvas, and to copy its marvellous flow of line and picturesque arrangement of natural accessories. Yet you know very well that it is no palace, only a tumble down, sordid, ancient ruin, and close at hand all its rich coloring would vanish; distance having been that, emphatically, which had lent enchantment to the view.

"Melrose by moonlight," is a very different structure from the real Melrose seen close at hand under the clear, penetrating light of day. Standing at a few rods distance in the light of a summer moon the ruined old abbey becomes transformed into a perfect building such as one might dream of, but never hope to

see. Its central tower and sculptured roof and noble gable of the south transept, and the grand eastern window with its "slender shafts of shapely stone," look like the work of fabled genii so marvellous and perfect do they seem. There is not a hint, nor a suggestion of ruin to be seen, no moss, no creeping ivy, no broken stonework anywhere. Approach your enchanted abbey, and what do you find? A building half in ruins, a mass of ivy and gray colored stone, a wreck of the middle ages, weird, uncanny, hoary, where birds build their nests and rats revel at their will.

As with scenery so it is with regard to a nation's life and human character. The famous Golden Age, pictured by the poets, when beneficent Saturn reigned over the fresh and vigorous earth, and the ground produced subsistence for man without culture, when violence was unknown, and Astrea the goddess of Justice ruled over the actions of men, was but the distorted vision of the Greeks in looking back at the past. Every people have had their Golden Age. It is always in the past—a great golden haze stretching along the horizon, a gorgeous blaze of color that never fades by time, and whose memory haunts one like the intoxicating perfumes of an Italian garden in the ethereal white moonlight of midnight, when with the silver beams and white blossoms and the pale marbles and murmuring fountains its charms are those of rest, silence, leisure, dreams, and passion. The past is always glorious, always lovelier than the present. The men were more heroic then, of larger mold and more god-like mien; the women were chaster, more beautiful, so we think. Love was then a thing of heaven, and men had the faith of children, and the force of the fabled gods. But has not distance modified our judgment, blurred distinctive qualities, concealed deficiencies, softened down excrescences, and so transformed the meaning and the manner of the fact that we scarcely know wheth-

er what we see is hero or demon, the brilliant palace of Armida in the meadow or the half-ruined cottage draped with moss and creepers and tenanted by rats; whether we ought to admire or whether it is that which all our training teaches us to condemn?

There never were any heroes like those of Homer. Agamemnon, Hector, Achilles, Anchises, were the idolized men of the past. Everything is exaggerated by the poet, because he is looking at things from a distance. The virtues of his heroes stand out full and strong and without relief, and so do also their vices and crimes. Nor is the historian a more discriminating critic than the poet. He introduces us to certain characters and gives us their names, but are they real personages after all? Would their own generation recognize them? I opine not. They are as much mythical characters as any of Homer's heroes, or he "who sailed o'er dangerous seas to found a second Troy in Latium." Take the vaunted Alfred, or St. Louis of France, were they such saints as their panegyrists would have us believe? They were shining lights, no doubt, but they had their faults like other men. And do these human weaknesses which we discover at a closer inspection make them less dear to us? Our dilapidated hut is none the less a glorious feature in the landscape, in the sunshine and at a distance; and the window panes which sparkle like a dozen kohinoors, may be foul, and fractured and cobwebbed, but the flash is there all the same and none but the blind can fail to see it.

And what of poor Mary Stuart, that *crux* of the historian, that shuttle cock of the partisan, after all the controversies that have raged about her name, and the hundred of volumes that have been published of her life and time, what do we know of her? Was she both chaste and fair, was she a noble, heroic queen, a loving, devoted, slandered woman, or was she the foul ogress, the adulteress,

the murderess, the she-wolf that her enemies represent her? Who can tell? Who is able to judge at the distance from which we stand? She presents the shifting colors of the chameleon as we see her, now black as ink, now of a scarlet hue, and anon as white as wool. But what was the woman in the reality of her life? Perhaps no worse than her contemporaries, perhaps sinning and sinned against; guilty, yet not half as bad as her sentence. Who knows? And there is Cataline, too—well I have always thought I would like to read his marginal notes to Cicero's orations, or Sallust's partisan history. We might then have a different opinion of the man.

Whatever thing or person we look at the lines of perspective vary, according to the standpoints we occupy, the angle at which it is placed, and whether it is subjected to any transforming influence of color. Should we not then be most cautious and lenient in our judgment of others, closing our eyes and ears to the worst, ever believing in the best? We can not stand near enough to any man to judge of his actions entirely according to his feeling and on the ground plan of his motives; for we can never get so really within the heart of our nearest friend as to read through and

through the complex inter-lining which goes through the letters of the simplest duty. In truth, is there such a thing as simple duty out of childhood and beyond obedience? Duties as well as facts, change in their significance according to their relative distance from ourselves; and as the poet says "Things are not what they seem."

When youth starts out for the goal of life how brilliant does the future seem, how easy manhood can clutch the golden prize, how happy will he be when success is won! That is from a distance. He reaches manhood, grasps and holds all the triumphs of life, grows old, and what is his youth looked back on from a distance? Is it not a fairy kingdom crowded with delights, happy days, murmured songs, ravishing dreams and blessed anticipations? It is a Golden Time that he wishes would return once more. And such is human life! We are always gazing from a distance. Our brightest dream is only a tumble-down vine wreathed cottage with the sunlight falling on it—a palace at a distance. Can we not look forward with hopeful hearts to that eternal life beyond the grave when we shall see not as through a glass darkly, but then face to face?

FRED MYRON COLBY.

GENA'S SKYLIGHT.

I HAVE no scientifically sought experience of supernatural knowledge to detail in the following. Everything that is remarkable at all in it has come to me unexpectedly and unsought. I have sometimes found that these ideas called strange or occult, cherished by societies or advanced in scientific circles are sometimes found growing in vivid strength in some solitary heart who has never read or heard of them. I know of one poor woman from whose simple account of her own history I have learned much of the beauties and mysteries of life. She knows no language

but her own, and a critic might often see grave faults in her uncultured style. But she has watched the birds, the butterflies, and flowers; all animals seem to love her and do as she wished to have them. One might learn much of natural history by hearing her talk an hour of her canaries and parrots, her dog and her cats, of the birds that come at her window for crumbs and the butterflies that visit her flowers, and flowers seem to grow wonderfully well for her. Her touch is gentle and helpful and her face is always bright. Wherever she has found sorrow, she has soothed it and all

those she has helped have seemed irresistibly to unfold to her the hidden pages of their hearts. Nature and the heart have been her teachers, and like a child gathering wild flowers she has found unsought many a blue-eyed truth that a scientist or psychologist may have been long hunting after.

I have heard of those who have for years petted some exotic plant until it might have grown to a foot in height, a fair and fragrant dwarf and carried it with them to a southern home and found there the same flower growing out in the open air—in gorgeous beauty, a magnificent stately plant, and they have thrown their little, long cultivated pets away, the new wild beauties had so fascinated them. So I find some newly asserted fact that I have puzzled over, half believed and half doubted as proclaimed by some great thinker, blooming full grown in Gena's solitary soul, and she is sure of it, her voice thrills as she talks of it and her eyes glow. In her early life she had great sorrow and desolate hours when every door and window of hope seemed closed, then she says, as down through a heavenly skylight came comfort or help. The skylight is always there, even in a thunderstorm. She thinks there's a skylight in every soul if it were only brightened up. She has guided herself through most unfavorable surroundings, safely and serenely. In my dreams, she says I have often seen myself looking down in great pity on my own troubles, as if I were out of myself pitying myself, saying over and over, "poor heart, how I pity thee."

I read to her these two verses from the the Swedish, and she says, "that's the way I feel often, as if I would rock my own heart to sleep."

"O heart, weary heart, could I have thee before me,

In my arms could I fold thee, and rock thee to rest—

As a mother her child I'd softly sing o'er thee,
And see thee no more by thy sorrow distressed.

O mine and not mine, thou sorrowful heart,

Wilt thy king at last open thy portals some day?

Then shalt thou and sorrow eternally part,

And homeward together thou and I fly away."

When quite young, said Gena, I had the care of my two sisters away from home. My mother with the rest of the family were in another country where she was obliged to remain with my father, who had met with a serious accident, taking him from business. One night I was overpowered with a strange sense of sadness and depression that I could not shake off. I could not sleep, I lay in a sort of wakeful reverie. I saw my mother standing beside me. She was in her long nightdress; she looked very pale, and spoke to me in clear earnest tones, "Gena, Gena, take care of the girls," she said, "be very kind to them, I can do it no more here. I leave them in your care." With one intense look of love and longing she vanished. I lay awake for hours sobbing. In the morning came a telegram. My mother had died in the night just at one o'clock, about the time of my vision for vision it seemed to me. I can not call it a dream, I am sure I was not asleep.

My mother had only been ill two days and I had known nothing of it. I had always tenderly watched and guarded my sisters, but the last appeal of my mother only deepened and made more sacred my sense of responsibility. I have a more vivid recollection of her as she looked that night than I have of any other hour of my life, associated with my mother's voice or presence. I could now, after all these years have passed, if I were an artist, perfectly picture her sad, sweet face as she looked that night.

Who shall say what intense love or longing prayer can do? Whither may it bear, or how may it inspire the departing soul? Only a year ago I had a brother two years older than I to whom I was devotedly attached. He was sud-

denly taken away from me. For days previous to his death he was unconscious. He had made no will, and he was unable to give any last directions about his earthly affairs. I was away from home at the time of his death and some weeks afterward I was very sick, unable to sit up. I lay one night very quietly. I was awakened, the room was quite light enough from the glow of the lamp outside for me to see distinctly the face and form of any one in the room. I saw my brother kneel down beside my bed and look at me intently. With no surprise or fear I lay quietly looking at him as if sure of his friendly nearness. And there came as if from his soul to mine these words, "Gena, I want you to write to Julia to make her will." Then came to me word-for-word directions about property followed by the wish that the daughter Annie should not be adopted by the person so earnestly urging it, and that to her should be given the largest share of the property as she would need it most. After these directions, with minute details about the will and the family, my brother vanished as gently as he came. I was too sick for days to visit my sister-in-law and advise her, and every night for three weeks this visit was repeated. I wrote to Julia giving her these directions. I had wished to see her personally, fearing she might neglect advice coming in such an unusual way if I should merely write it. She made the will and followed the directions and I saw my brother no more. I must say that the advice impressed thus upon me through my brother was just the advice he would have given had he been still with us as in his other days.

I lost a dear friend much older than myself ; I had tenderly watched over her during many hours of sickness. I was with her until the last. She said to me some hours before she died that if she could from the other world help or watch over me she would. Months after she died through the rascality of another I

had lost a large share of my income and was distressed very much by the loss. One day when worried about a debt that must be paid or serious consequences ensue, there came to me as in her own sweet clear voice, "Go to Herbert ; go to Herbert." Herbert was the son of my lost friend. I wrote to Herbert. He came to see me. I told him my present necessity. "Oh," he said, "why didn't you come before ?" He insisted on paying all the indebtedness and seemed really glad to do it ; would take no note of obligation from me.

A few days after his sister sent me a birthday present of some money that just exactly paid another debt that was troubling me. I can not help but feel that Helen in heaven watches over me and impresses her dear ones to help me. These things happened before I was married. I was very happy with my husband, he was as tender hearted as a woman and yet firm and self-reliant. I looked up to him and almost worshipped him ; I could not think of life or home or happiness without him. But my married life was very brief. The time came when I knew my husband must die. I watched the hours slowly move on. As he ceased to breathe I saw a soft cloud of vapor form over him until at last I could see very plainly the outlines of a form hovering only a little way above the silent breast, as if bound there by some slight invisible link. I think now of a little boat just fastened a moment to the shore before it sails out of sight. I saw a face, my husband's still, but so lovely, so peaceful, as if wrapt in a blissful sleep. As this slight connecting cord seemed to sever—this beautiful ethereal form thrilled as a bird winging its way, and then, I did so pray for one last look of remembrance—and the eyes looked on me tenderly as the form arose. I saw the outstretched hand and then the spiritual form of my living, immortal, husband gathering all its strength for its final flight, passed out of my earthly sight. My mind was

never clearer, my sight was never surer. I do not fancy, dream, or imagine—I *know* I saw my husband, and now never once think of him as in the grave.

There was a new book that had just been given him, and that he was reading the day before he died. I had never read any of it, but after he was gone I looked over it and read some things he had marked. They were these words, "I pray you my friends, if you indeed love me, see that my body is buried into dust that the vestal fire of the soul may pass on its way rejoicing." Pythagoras says, "This is that deposit out of the jewel of light passing on its way rejoicing. That it may be released unfettered it is a holy necessity that the body return to dust." At the bottom of the page my husband had marked with double lines these words of a scientist, "In some way I have become possessed with the belief that the soul of man has a counterpart of the body, and in the theory of the dual man I have long sought for the key of life and death. Whether this body and sinew he says is a thin, ethereal vapor which, according to natural law, death alone should set free, and a simple microscopic device might be made that would assist the dull sight of human eye so that it might penetrate the most minute particles of the air we breathe and thus witness the soul and the ethereal form take flight to the boundaries of the other world."

Gena has brought her husband's book to me and she says here is something about an object glass and proper conditions of light and molecular attractions and an astral body—I do not understand these expressions, but I have seen his friend pass away. It must be that I have seen through my skylight, where all my knowledge comes. As I have had no books to teach me, God sends his messages to me as direct as the telegraph comes. I opened the book and read what Gena has never read, but yet she has the same idea half hidden.

"This little world is one of God's great whispering galleries and is so conducted as constantly to bring God's messages to us in an unaffected simplicity, or polished elegance, in love's fidelity and nature's grace. If man will but rise above his grosser nature, and keep his harp-strings attuned to unselfish universal Love with a sincere and open-hearted veracity he will read the message of the Deity and commune with God, and men will then know the actual reality of things without seeing it enter the objective eye." I don't quite understand all that said Gena, but when we are left all alone God always comes to us. All the doors of happiness may be shut, you may be in trouble's darkest dungeon, but there will always be a skylight.

LYDIA M. MILLARD.

THE GOOD NEW TIME.

You may talk of the time, the good old time.

When the world was so honest and true,
But give me the time, the good new time,
When the world is being made anew.

I'll admit that our gold is not so pure,
And our silk is more mixed they say;
But a something has come that will endure,
When the gold and the silk will decay.

That something is Wisdom, whose price is untold,

With her science, discoveries, and arts;
On her mission divine to make and to mold,
And develop the good in our hearts.

You may talk of the time, the good old time,
When the wise and true sat in state,
To decide what the men in the good new time
Were to have for their creed and fate;

Or the time when the doom would be death
To the man who would dare to proclaim
That the sun did not move 'round the earth,
Or the world was not flat as a plain;

Or of arts that so long have been lost,
They were good for the men of that day;
But pyramids now are not half the cost,
And the printer can make them to "pay."

So give me the time, the good new time,
When all hearts will be honest and true;
When Wisdom will banish the era of crime,
And the world will be made over new.

A. P. BEEBE

Brooklyn.

located another group of occupants who are engaged in the field of love and affection. Here are reunions, social gatherings, courtship and marriage, the nursing, training, and education of children, and the enjoyment of home comforts. Here may be seen the child's toys, the hobby horse, juvenile books and all the household gods sacred to affection, some of them having served and solaced a dozen generations of children.

In the middle portion of this Castle we find a group of characters whose duty it is to manufacture and acquire and conserve whatever is valuable to stand watch and guard against all surprises, dangers and inconveniences.

The front basement rooms being occupied by the observers, the dealers in things and qualities, in the second story front rooms are located the members of the historical society. They gather data and remember knowledge for the information of all the other members. Here are the writers and editors, and the speakers that acquire and retain all the information that the group in the lower story observes. They make the books, papers and libraries and do the teaching.

The members who are inclined to treat of the philosophical and metaphysical and higher intellectual work, reside in the third story front rooms. These are employed in searching out laws, relations and first principles, and the philosophical and logical qualities of things and subjects. One of the members is especially employed in classifying, arranging and contrasting things and themes, and is inclined to speak in parables, metaphors, or in some form of criticism, and is fond of chemical and all kinds of analysis. It was he who dictated *Æsop's fables*, suggested the arrangement of the *Pilgrim's Progress*, and is the author of parables, proverbs, tropes and figures of speech. In this group there is an individual who recognizes everything that is droll and

ludicrous, shows up that which is facetious, being inclined to make amusement for the rest, to use the lash of ridicule, and to scourge folly into decorum; he makes droll and witty suggestions, throws a gay glance upon life's follies, thereby provoking laughter, and promoting health and happiness in the whole neighborhood. He takes in hand the insolent, vicious youth after every kind of punishment has been applied without obedience and reformation. He begins upon his victim with a roguish, frolicsome style of address, his eyes beaming with jolly kindness mingled with a mischievous twinkling, thus he ridicules insolence and makes awkwardness so laughable and vice so monstrous that the delinquent drops the error and seeks shelter in the ranks of those who are well behaved. If the reader will look along the balcony behind the funny member, he will find the region of music, art and æsthetics. This is the realm of imagination, song and poetry, refinement and culture; these are the decorators of society. Sometimes the philosophical members in the front room seek to exercise some restraint and guidance in order that the æsthetical members may not carry adornment too far, and that discretion shall be sure to lay the firm and enduring ground work.

In the tier of the upper back rooms or offices, dignity, ambition and persistency dwell, and have in charge topics relating to public sentiment; and act on these as the promoters and dictators; they might be called the elite, having to do with fashion, responsibility, respectability, and whatever concerns reputation and family pride.

The grand dome of this Castle has the residents of the great Court of justice, devotion, philanthropy and spirituality; occupying as they do the highest place, removed from earth, where they can overlook all the other members of the different groups, displaying a controlling influence, and may be denominated the "Government" of the Castle.

These members never fight or contend for their rooms or their rights; but employ all the influences of manly honor, from kind and earnest persuasions up through all the sanctions of justice, and all the motives that the love of God and man can inspire. And if these members are listened to, if their advice is not ignored but adopted, prosperity and happiness prevail in the Castle. It sometimes may occur that the domain of this group is contracted in its apartments and unfortunately entrenched upon by the rooms of the lower members, so that the rightful occupants are crippled in their action, and dwarfed in their size, health and strength. The true law of the Castle in respect to all its members, is, that there shall be co-ordinate action; every member having his full weight of influence, serving the whole in his capacity, and enjoying all the remuneration of the joint efforts of all.

The laws of nature in human life derived from excellent heredity trained and developed in harmony with the laws of its being in its best condition, is the proper object of our endeavor and the fulfillment of the Creator's laws.

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THE TEACHER.

THE person whose skill with the grindstone sharpens the axe or the scythe is as much a producer as he who fells the forest tree or squares the timber for the frame of the house or the ship, and the teacher who instructs a pupil how to keep accounts, manage correspondence, and qualifies him for commerce, banking, and other kinds of business, contributes quite as much to the acquisition of property as he who writes up the accounts, lays the plans for the business, and works out results. A firm on Broadway knew how to trade, buy and sell goods, but did not understand accounts, and their book-keepers and salesmen, and even their porter, combined to cheat the firm by theft, which they systematized, until the house

was thoroughly honeycombed, and although it supposed itself to be worth \$200,000 it learned one morning suddenly that it was utterly bankrupt. A business man needs the teacher so that he will know what his account books mean and how to understand them.

Those who have little education, and are obliged to work at some laborious calling, imagine that the professions constitute an easy way to respect and success. They fancy that the lawyer, the minister, teacher, or physician earn their money with very little labor. The blacksmith, the carpenter, and the farmer, who labor with muscle and might in the shoeing of horses, in the building of houses and working up trees into material for houses, and in the production of corn, are apt to think that the people who work with brain are only pensioners upon the bounty and leniency of the world.

Let the teacher, then, feel that although he does not wield the axe, the saw, or the hammer, or guide the ship or control the locomotive, he is no mean spoke in the wheel of the world's success and progress, and that all other men whose success depends upon the teacher's instructions owe him in no small measure their successful efforts in life. He may, therefore, while doing his duty faithfully, stand erect among the world's noble men.

But all can not secure success in teaching. Many persons are well educated and yet they can not teach. Teaching requires three things: First, the power to acquire knowledge; second, the power to remember it, and third, the power to tell it. This involves an elastic and energetic constitution, a good degree of what we call the mental and the motive temperaments, which give activity, strength of mind, and earnestness of character. Of course the teacher needs health. A dyspeptic, nervous person should not be engaged for the school room as a teacher, any more than a lame horse for service on the

road or the racecourse, or an unseaworthy vessel for service on the ocean. In the teacher we look for a large and active brain, and a fullness across the brow which gives strong perceptive power. With this development he is enabled to acquire knowledge. If he be full through the middle portion of the forehead, where the organs of memory are located, he may hold the knowledge which he acquires. If he has also a full and prominent eye, which donates the power of expression, he will be able to gather, remember, and express knowledge. The upper part of the forehead should also be large, giving strong reasoning power, so that the questions of inquisitive pupils may be readily answered, and that he may be able to explain the philosophy of the subjects of instruction. His back-head should also be well rounded and ample, giving him social disposition and the ability to awaken the love of the children toward himself and one another. He may have but a medium degree of Continuity, because there is so much variety, such frequent interruptions and changes, so many questions asked and answered, that if a teacher has large continuity he will be disturbed if broken in upon when he is engaged in some line of consecutive thinking. He should be firm, cautious, and dignified, which would give him ease, weight, and strength of character, and enable him to command the respect of his pupils as well as of their parents, thereby securing obedience from the pupils without discussion or hesitation.

He should be conscientious. Fairness should be seen in all his conduct. If pupils see that the teacher is just and fair they readily accept his dictum and obey his mandate. Partiality or favoritism which exhibits injustice in any form, giving one too much and another too little, will destroy the success and usefulness of any teacher. The teacher should also have the religious feeling of reverence and kind-

ness, impressing the pupils with the consciousness that there is a higher power and that reverence for such higher power, and leniency and kindness toward the less fortunate, are cardinal virtues. If the teacher have large Comparison, Constructiveness, and Ideality, he will by apt illustration and ready and ingenious methods be able to illumine a subject and make it stand out like one of *Æsop's* fables for a lifetime. A teacher should also be secretive and cautious, so as not to lose the power of self control, and be able to conceal the state of his mind, if he needs to do so. A loss of temper in a teacher is fatal to order and respect and the cunning urchins will soon find out a teacher's weak points and take advantage of them.

If I were selecting a teacher for boys half grown I would seek for a man who had good physical proportions, broad shoulders, broad cheek bones, a massive forehead; he should be rather wide between the ears and high at the crown, so that the boys may be impressed by the evidence of power and be careful not to provoke retribution. If a teacher have a kindly voice, though a firm one, it will aid him greatly in avoiding the chafing of the nerves of the pupils. He or she whose voice sounds like the barking of a dog will keep the pupils irritated and ready for a contest with one another or the teacher, and especially with the rules. A teacher with such an organization as I have described, if he be well educated in the branches he is to teach, will not be suspected by the pupils of any want of information, or of ability to give them the instruction they require; but if the teacher has a poor memory, is slow in perception, and has a weak or sluggish temperament, he will be found to hesitate and look puzzled whenever a pupil asks questions for information, and the more advanced pupils who could answer the questions themselves which others ask begin to think that the teacher is not as well versed in the subject as they, while the dull pupil, if he

has a bright teacher, learns to expect that he will give an answer as quickly as the soda fountain answers to the touch of the faucet.

One of the most popular teachers of Greek that I ever knew never opened a text-book during lengthy recitations. How much preparation she had to give each day to the lesson we do not know, but she would handle the pupils and the lesson with a fertility and readiness which commanded their respect for her rendering of the lesson, as well as for herself as a teacher, and there were some men in her class older than herself. Her pupils never argued with her about the Greek lesson. Of course few teachers come up to the highest ideal in organization, in culture, or in practice; but the study by teachers of the faculties or qualities necessary to success in their profession would enable them to double their power in the prosecution of their highly important work. Health is the first requisite; second, temperamental structure; third, the right mental development, and fourth, the culture and training which will give them a command of their powers and the facility of using them to advantage.

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AMERICAN INSTITUTE OF PHRENOLOGY.

OUR readers will not forget that the annual session of the Institute will open the first Tuesday of September; and it is important that all persons who intend to be students shall be present on the day of opening. Every lesson is important, and not one should be lost. Those who wish full particulars as to terms, course of study, facilities and expense of good and economical subsistence while attending the course, may write for the "Institute Extra."

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EXAMINATIONS BY PHOTOGRAPHS.

NEARLY every day letters are received by us asking if it is possible to read character by photographs, and in what manner they should be taken. To reply to these questions we have prepared an illustrated circular called "Mirror of the Mind," which gives pictures taken as we want them for examination, together with a table of particulars to be filled out as to height, weight, size of head, chest, color of hair, complexion, etc. Colleges occasionally make up a club of

ten, twenty, or thirty among the students, and pictures are received by us from South Africa, New Zealand, Australia, and from every part of our own country, and not a few from England.

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TESTIMONIALS ON THE SUBJECT.

B——, Ill., Dec., 1888.

FOWLER & WELLS Co.:

The Phrenological description made from photographs received. It is, as I supposed it would be, truthful and accurate. I believe I will follow your advice into the pursuit you recommended. My interest in Phrenology will never die out, for there is much in it to elevate.

Yours truly, —. —.

E——, Ill., Nov. 8th, 1888.

PROF. NELSON SIZER:

Dear Sir:—In October last you wrote my phrenological character from likenesses. I write now to say your work has satisfied me most truly; when I read it over carefully, and I have done so many times, it is as if I were looking into a mirror; yes, I can see things that would otherwise not have occurred to me. That which I needed most of all, and that which has led me to come in contact with you by writing, namely, "how to promote and preserve my health," has been placed within my reach, and I thank you for it.

Gratefully yours, A. R.

——, Idaho, Feb. 23d, 1889.

PROF. NELSON SIZER:

Dear Sir:—Many thanks for your phrenological character written from photographs.

After analyzing much of it I frankly confess that you hit the mark in many things; not only as my most intimate friends could have done, but many points were touched as only an artist of your skill could have done. Though I disbelieved before, I now think I am stubborn. A few of my most intimate friends have told me as much; but until now I only thought myself "unwaveringly firm," as I expressed it to them. But I can see, after reading your version of my disposition, to be excited to action by opposition, that I would probably hold out, under certain circumstances, after it became reasonable to yield. I have awakened to the fact that no amount of force on a basis of wrong could ever subdue my will; but a little child by friendship, love, and kindness could lead me around the world.

My Intuition is as you state, and I could relate to you some instances where it was a real foresight. I spent several years in an Indian country, and the manner of life, being constantly on the guard, accounts, probably, for my large development of Cautiousness. So much by way of comment on your delineation. It is all very true, and much a revelation.

Like the man you described in one sense, who clung to the boat all night in mid ocean (and the hair on his large Caution soon after became white), the night I spent in the blizzard was a fight for life, though I do not think my courage ever wavered, or that I suffered from fear; still the mysteries of this body and its relation to the mind I am put to thinking. But if you will pardon the great length of this letter, I will close by saying that I may send you several portraits of friends for examination. I am yours truly.

G. O.

CHILD CULTURE.

OUR CHILD IN THE KINDERGARTEN.

THERE was a time when the child was left to grope through the first few years of its life alone. No one seemed to realize that an education was needed to lift the little life into a freer atmosphere. The parents would have been offended if you had hinted at the possibility of their children not being educated. But now parents begin to recognize, realize, and assist in kindergarten training. After the exemplary life of the eminent leader "Froebel," and the labor he performed in founding the kindergarten, it is our fault if we fail to appreciate this grand system of education.

The child is like a seed planted in the earth: in infancy it just begins to peep from out mother earth into the great, wide, and beautiful world. Yes, beautiful, for the baby knows no sorrow, and every day it grows until we begin to realize what an influence it will have some day on the world. It will be either good or evil. Which shall it be? Now is the important time to train it, "for what is lost in childhood can not be made up," therefore as the gardener watches his rose-bush, and waters and cares for it, so it is the duty of the mother and kindergartener to watch the child that no harm or evil may befall it.

As the child grows, so the bud begins to form. We watch carefully each leaf, each part of the rose bush, that no worm may be found on it, for if there was one it would eat the leaf or bud and destroy its beauty. Each day a petal unfolds, and the gardener watches to see if the petal is perfect. If he sees the little insect on the petal he takes it off and destroys it; he will allow nothing on the

flower to mar its beauty. Is the mother, is the kindergartener, as careful of their plants as the gardener is of his? I am afraid not. Here is a flower whose petal of generosity is marred, resulting in selfishness. The mother sees the worm eating that petal, but the worm is happy; do not disturb it. No matter if that one petal is imperfect, it will not be noticed; the others will be all right! It is the gardener's duty to see that his part of the work of providing a perfect flower is done, and it is the mother's duty to see that her child blossoms into a beautiful child, so beautiful that admiring glances will be cast on it. Froebel said: "To train a child is the work of Nature and Man and God." And as Froebel is our guide, surely it is our duty to educate children under our care as he suggests, and as he did.

Children naturally love pretty and beautiful things. They love to watch birds and flowers; they love living things. Let us as kindergarteners encourage such thoughts and develop a taste that may last all through their lives, to love everything that is true and good and beautiful. Children are always natural, and Froebel would have us educate them in the most natural way, which is play, through self-activity or expression. "In childhood the outward form of activity can only be that of play." Our children, our kindergarten children, can learn through play, they learn through doing. A child may not draw the conclusions from nature that a grown person can; for instance, he sees a bird fly, and although he knows he has no wings, he can pretend he has by using his arms for

that purpose. He not only does not know what kind of a bird he saw ; he does not understand its habits, but let some one tell him about the bird, of the nest it builds, and its song, and the child's heart will at once go out to nature, and he will want to play, "A Little Bird Once Made a Nest." The kindergartener does not want to check the child in his emotions : she only wants to help him think for himself and show him the way when he mistakes or is in the wrong way.

We want the children "to love nature, man, and God." Therefore we can scarcely begin too soon in their lives to educate their little minds in that direction. The kindergarten is the only institution where such work is done in the first few years (the most important) in the child's life. The child is like the rose : "It opens its petals one by one, and rolls up its cup to the glowing sun, rewarding its tender care." The child looks to nature for its protection and guidance. In the kindergarten, or

child's garden, where the little ones develop into beautiful characters, it is the privilege of kindergarteners to raise each into a full blown rose, into a lovable and Christ-like character. Nor should the child be trained by nature or man only, for the most important is yet to come. Our guide said, "All education which is not founded on the Christian religion is one-sided, defective, and fruitless." He would not have any part of our child's education neglected. "Body and mind should be educated together." He would lead our child to look to God as the giver of all that is good and beautiful. God has given us the flowers, trees, the birds, and he has put us in the world to enjoy all of them ; but with them all he would not have us neglect to look to Him and thank Him for these gifts. Our child, our kindergarten child, is trained, as Froebel said, "by nature, man, and God." "But we know not when the seed we sow shall ripen, but must leave its growth to higher Powers." GEORGE BURTON.

PAINTING FOR ETERNITY.

"I PAINT for eternity," said Xeu-xis, and so does any woman on whom God has bestowed the honor of motherhood. With voice, manner, and expression, she is painting upon the imperishable canvas of her child's mind, a picture more beautiful than ever came from an artist's brush, or one upon whom mankind dreads to look.

Some one has said that the first six years of a child's life are the most impressionable part of its existence. I believe that impressi^oms made in the cradle are never effaced. "There is no reason for supposing that any perceptions which the mind has taken notice of, can ever be lost. If on a cold polished piece of metal, any object, as a wafer, is laid, and the metal then be breathed upon, and when the moisture has had time to disappear, the wafer is thrown off though now upon the polished surface,

the most critical inspection can discover no trace of any form, yet if we breathe upon it a spectral figure of the wafer comes into view, and this may be done again and again. Nay, even more ; if the polished metal be carefully put aside where nothing can deteriorate its surface, and be so kept for many months, on breathing again upon it, the shading form emerges. If on such inorganic surface forms may in this way be preserved, how much more likely it is that the same occurs in the purposely constructed ganglia of brain ?" Is it not possible then that our children receive in the cradle impressions which do much toward shaping their after lives ?

And this is why so much is due to maternal influence. Although the father's habits and conversation may have a material effect upon the child, the mother's power is by far the

greatest, owing partially to the more constant companionship, and partially to that mysterious sympathy between mother and child. It is the mother's hand, the mother's voice, the mother's acts which destine to make or mar the beauty of that wonderful mind picture. And fully equal to all of these in importance are the expressions which flit across her face. Long before a child has learned to know the meaning of the mother's acts or words, he is able to read her face as an adult would read an open book. And in order that this impression should be such as a wise mother would wish stamped on her child's

mind, it is necessary that the thought and feelings should be such as shall move them aright. The voice may be controlled, words may be held in abeyance, but the countenance is very likely to speak the whole truth.

The mother who does not feel herself growing purer, nobler, happier, because of the sweet morsel of humanity which she clasps in her arms, is missing the glory of motherhood. If she does not feel herself in a great measure responsible for the future welfare of the soul enshrined in that lovely casket, she has failed to understand her accountability.

MRS S. E. KENNEDY.

THE OVEN BIRD.

A FAMILIAR bird this little feathered bit of ingenuity is, and many of our young people may know him. His summer home is New England, coming up from the South in April or May. Its back is olive green with a

These birds do not select their mates until they arrive at the North, and then there is often much jealousy and quarreling among the males in making their choice.

Their nests are built on the ground in the woods, usually in some dry situation, but in the neighborhood of a swamp. Both male and female work most industriously in building the home in which to go to housekeeping, each bringing the dry leaves and grasses which they arrange compactly around the sides and over the top, until it looks like a little old-fashioned oven with the entrance on one side. They hollow out a place on the ground, which they line with soft grasses and here the pretty little four or five eggs are laid. These eggs are a delicate creamy white, spotted irregularly with different shades of reddish brown, or sometimes with a sort of lilac color. If any one approaches the nest, the male bird is very anxious and endeavors to draw him away, scolding violently all the time. If the female is driven off her nest she flutters to the ground, trailing herself along, and pretending lameness so naturally one would really believe she was.

Their song resembles the of-repeated utterance of quicha, quicha, quicha,



OVEN BIRD'S NEST.

fringe of yellow; its crown has two narrow streaks of black running from the bill, and these inclose a broader one of brownish orange; the breast and sides are streaked with black. It is six inches long including tail.

quicha, continually increasing in volume; and often in the night, while the mother bird is sitting on her eggs, the father will fly out of his nest and sing his song as if he thinks he must do something to amuse his mate.

Being so low on the ground, these nests are often attacked by snakes and skunks, which destroy both home and family. Their food is small insects and smooth caterpillars, also little spiders, to which they add berries in their season. In September when the young are able to travel, they leave for their Southern home.

The family we have been talking about has the more imposing name of *Scinus Aurocappilus*; but there is another family of Oven birds called *Furnarius Rufus*, which is a native of the warm parts of South America and the West Indies. These birds are also six inches long, but have red feathers above and white below. They build in exposed situations, generally on a tree near a house, or on a fence or a window-sill, sometimes inside the house itself. The male and female work together bringing lumps of clay or pieces of straw or twig, and make their oven-shaped house about six or eight inches in diameter, with the walls an inch thick. Under the hot sun these walls are thoroughly baked, and become very hard and firm. Near the entrance is a partition which reaches nearly to the roof, and behind this partition the eggs are laid and cared for, while the father of the family keeps guard in the outer room.

NORMAL EXERCISE.—Vigorous muscular contraction depends upon the state of the nerves, and the state of the nerves upon the state of the brain. Once convince a young man or boy of the importance of taking systematic care of the body, not only as a means of health, in its hackneyed sense, but as a means of positive enjoyment, and we will have no trouble about getting him to exercise. Show him in a hundred ways what well-regulated muscular exercise will do

for him; that it will give him strength, energy, courage, control; that it will help him ward off disease, overcome obstacles, and fight the battles of life without fear of failure or physical bankruptcy. Make him understand that thought, passion, anxiety, attention, etc., feed upon the body, and how dependent he is, not only for his happiness, but for his views of life and its possibilities upon the condition of his physical organism. Teach him these things, we say, in a practical common-sense way, by references to statistics, the experience of others, by the study of biography, etc., and he cannot be kept from his daily exercise any more than a scholar can be kept from his books or a business man from his newspaper.

Physical education in the athletic sense is, in our opinion, an evil, because it has no worthy ulterior end. It fosters an intense animalism for a few years, and then leaves it without any guiding or controlling influence. The result in too many cases may be inferred without further elucidation. What we want in our athletic clubs is higher aims and motives for physical training.

Physico-moral education is the need of the times. When the principles involved in such a training have taken root, our young athletes will realize that it is the careful preparation for a contest that does them good, and not the momentary excitement of a public performance.

D. A. SARGENT.

THE boy who always means to do
The very best he can;
Who always keeps the right in view
And aims to be a man.

Such boys as those will grow to be
The men whose hands will guide
The future of our land; and we
Shall speak their names with pride.

All honor to the boy who is
A man at heart, I say;
Whose legend on his shield is this,
"Right always wins the day."



HEREDITARY STATESMEN.

THE subject of heredity is one of those which can not be treated to its fullest extent in a single chapter or essay. That it has many distinct phases, one may readily determine if they will patiently examine its claims. Of these, one of the most important is that which relates to inherited talent. This indeed may be re divided as there are very many inheritances in talent which can not be well grouped together.

The study of heredity as it concerns America and Americans is a subject of vital importance. It covers a field comparatively large in scope, with little or no observation to show mankind to-day either what America is, or, what she will be if certain definite rules are followed. In the early days of America's existence when crudity in thought and action were the rule and not the exception, there was neither time nor chance to attend to the subject. Now that we are daily entering larger spheres of usefulness, it behooves us to look around and consider some of the traits which have made us what we are as a nation. The race of sturdy pioneers who came to New England between 1600 and 1700 were distinctly divided into at least two classes—religious and political exiles. Then, in the later days, there were those who came to make money irrespective of all other objects. Of the first two we

will speak more particularly, as they were largely in the ascendant. The exile for religion's sake was always a man of eminently strong convictions; a man liable to err, but possessed of more than the usual number of good traits that, with the relatively poorer ones, tend to make humanity well molded for life's work. One of those types was the early New England Puritan, who, rather than offend in the most minute particular, was often unnecessarily severe and illiberal in his theological views. It was "straining at a gnat," to be sure, but the period in which the good man lived had abnormally developed his spiritual nature. A man however intolerant of views opposed to his own, still, of such grain as to warrant the assertion that his descendants, as a rule, would not lack principle and firmness of character. His descendants were variously clergymen, deacons, statesmen, and lawyers—that is, if their ancestral inheritance from England was of the professional order. Rarely was a man, in the first or second generation of life in the new world, known to follow other than his ancestral calling, when it had been professional. Among the most celebrated instances of this we note the renowned Quincy family.

Edmund Quincy came to the colony of Massachusetts Bay in 1633. He

landed at Boston in September of that year with Rev. John Cotton. He was a man of substance, for he brought with him no less than six servants. He was elected as a representative to the first General Court of Massachusetts Bay, from the town of Boston. He was also the first named on the committee appointed by Boston to assess and raise the sum necessary to extinguish the title of Mr. Blackstone to the peninsula upon which the city stands. All this in four years, for he died in 1637, aged 33 years. He left a son Edmund and daughter Judith. The son was born in England, and lived to more than twice the age of his father, dying in 1698 at the age of 70. Edmund, Jr., was magistrate, representative from Braintree in the General Court, and also Lieutenant-Colonel of the Suffolk Regiment. When Andros was deposed and imprisoned, Edmund Quincy, Jr., was one of the committee of safety which formed a provisional government of the colony until the new charter of William and Mary arrived.

Judith Quincy, his sister, married the now famous "Mint-master Hull," who coined the "pine tree shillings." Their daughter married Chief Justice Samuel Sewall. From this marriage came the three Chief Justices bearing that name in Massachusetts, all descendants of Judith Quincy, and illustrating in a remarkable degree the descent of talent from father to daughter and her descendants. One of the grandsons of Edmund Quincy, Jr., (John Quincy) was prominent in public life for more than fifty years. He served as councilor and speaker of the Lower House. It was for John Quincy that his great grandson, John Quincy Adams, was named. John Quincy died about the time that John Quincy Adams was born. Of the Adams branch, Abigail Smith, granddaughter of John Quincy, who married President John Adams, has always been noted, and that her son, John Quincy Adams, was eminent is not a matter for

surprise. His son, Charles Francis Adams, who died in 1886, and John Quincy and Brooks Adams, his grandsons, have all added to the luster of their inheritance.

The second son of Edmund Quincy, Jr., named for his father, was successively magistrate, councilor, Justice of the Supreme Court, and also Colonel of the Suffolk Regiment. He was grandfather of Mrs. John Hancock. His son, Josiah Quincy, was Colonel of the Suffolk Regiment, making the third in succession of his family who had held that rank.

Colonel Josiah Quincy's sister Dorothy, who married Edward Jackson, was the ancestor of Oliver Wendell Holmes, and has been immortalized by him in verse. Josiah Quincy was the father of Samuel Quincy, who rose to the rank of Solicitor-General, also of Josiah Quincy, Jr., who died before his father at the age of 31. Josiah Quincy, Jr., was an eminent lawyer and speaker, whom John Adams called "the Boston Cicero." His son Josiah became successively State Senator, Congressman, Representative, Mayor of Boston, and President of Harvard College! He was also author of the *Municipal History of Boston* and other literary works, and finally died June 30th, 1864, in the ninety-second year of his age.

We certainly need not go any farther in delineating the achievements of this family.

It is, as a whole, an excellent example of inherited talent, the greater part of which was in statesmanship of the highest order. In a period of 230 years there were seven distinguished men in the male line of the Quincy family (averaging more than one to a generation), and in the female lines there had not been less than ten equally prominent as statesmen and litterateurs. This is an unusually large average for that period of time. Aside from these we may safely count as many more who, lacking national reputation were, as

men of highest culture, pre eminently an honor to their town, country, and state. It is hardly necessary to state that undoubtedly the continuance of talent within this family was largely due to exceedingly judicious marriages. It might readily have been otherwise if this well-known axiom had not been followed.

"Facts are stubborn things," and this was never more clearly seen than in the illustration we have given of the inherited genius of the Quincys and their descendants.

The re-enforcement of talent brought in each successive marriage was of an exceedingly versatile nature; and

having inherited this diversity of talent, they wisely followed that for which they had the greatest aptitude.

It would be pleasant to give a delineation of possible inheritance in lines other than Quincy if the limits of this article were sufficiently broad to permit it. Enough has been said to put those who are interested in such study on the track of more material of a similar character. Ours has been but to suggest; others may, if they will, go deeper; may learn how much more there is in heredity than a mere cursory examination can show.

CECIL HAMPDEN HOWARD.

STATUES ACCORDING TO ANTIQUE MODELS.

ALL about us we see variations in size, color, and gait, as we walk through a multitude of people. Some men are tall, some are short and thick; others show by their manner that some peculiarity of muscular make-up has modified their step. It is idle to anticipate an unvarying style of beauty among well built men. Some of these are seen to be heavy or light in type, small or large in limb, compact or expansive in development. Since every African negro is not equally black, as many a cow-boy varies not much from an Indian in hue, we must be prepared to expect such varieties as occur on all sides by influence of environment, family, education, occupation, and habits. Some are manifestly of one country and some of another. What can be recollected by the writer of this article concerning the variations observed on points of statues and sculptures of the antique?

As before hinted, a great dissimilarity of proportions is seen. Many athletes are cut in marble, as these appear more beautiful doubtless than ordinary men. Nor is a peculiar organization wanting in expression. Not every statue is a combination of beauties and excellences. I am almost ready to believe that some

which are esteemed composite in their make-up may be really cut from a single model. There is considerable individuality after all.

Athletes can be distinguished by the peculiar volume of the abdominal muscle at its origin upon the ninth rib. Unity is too imperative a law of taste to be discarded by the introduction of a foreign element—as a leg of a horse on the body of a brute of another kind! Horace the poet forbids this fault in literature. Evidently many of the most attractive statues were most carefully preserved, yet numbers incorrectly modeled exist.

As to proportions varying with nationalities, no more striking general characteristic is noted than between the Greek and Egyptian, the Greek being of decidedly more robust type and the Egyptian more symmetrical and compact. It is a mistake to suppose all the works of the Egyptians in this line to be conventional in proportion. A great number of the most beautiful and well proportioned figures are found in action and in agreeable attitudes.

It is expected to find early sculptures more heavy in build and more clumsy than later productions in the same country. Greek and Roman types, as well as Egyptian, show this variation.

It must therefore be inferred that the early type of a race is broader and thicker set than the late and more refined: which must be philosophically true, which the breadth of the tibia and the whole height illustrate. The early works look like grown children. To this an exception is to be made in Egyptian bas relief, where children are often pictured as small men, quizzical enough. As to the recognized classical statue, a few things may be noted, interesting and perhaps new. The hair is often shown as curly, or technically speaking, *flocked*, like the wool of sheep. It extends quite low on the forehead, showing not more than half the brow. The ear is mostly concealed in the upper half of the hair. Most heads incline to roundness or a round oval shape. The top-head appears especially round; the lower jaw is rather ponderous and strongly built. The mouth is drawn elegantly, with the under lip large and full; the eyes are not long but full; the nose is bold and pronounced. A decided prominence of the trapezius at its origin is visible beside the neck, giving an approximately sloping shoulder. Prof. J. C. Doldt, now of the Y. M. C. A. Gymnasium, of Providence, says the best man he ever knew had

sloping shoulders. This, then, is a sign of strength. I think, without measuring, that the chest appears broad. The waist is certainly so, as the swell of the hips on a line with the trochanter majors is certainly not marked. The groin is always depicted as vigorous and tenacious, a sharp line marking the location of Poupart's ligament. With well developed abdominals and strongly defined rectus, the middle of the man would delight a student of artistic anatomy.

In two or more instances I have found the bend of the lower limbs, especially in Egyptian models, rather unpleasantly accentuated. The foot is full, large, high, broad, and firmly planted; the little toe is cramped, as if crowded by a sandal, and the great toe is widely separated from the rest of its fellows, possibly by the strap holding the sandal to the foot. Nude figures are not sandaled.

The forearm appears quite large, proportionately, and the upper arm muscular. This may be admitted a pretty good type of man. Were the figure less broadly developed and more compact, it would approach the Egyptian ideal, which I frankly say I esteem the better.

HENRY CLARK.

ON THE TREATMENT OF CATARRH.—No. 8.*

THE great majority of persons who are troubled with catarrh have a pallid or sallow skin, thin, sharp features and a general appearance suggestive of a want of "vim" and energy. The voice itself of many may not be snuffy or obstructed and so betray disturbance of the nasal or pharyngeal membrane, although the frequent hem and hawk to clear the throat of the tenacious ooze that clogs glottis and larynx tells us of the atony that depresses the general nerve functions and suggests that if anything like a cure is to be obtained, it must be found in treatment that will

modify the general condition of the body. Local applications judiciously chosen and carefully employed will often give most grateful relief for a time, but unless we "strike at the root" of the trouble and remove that, the best external applications known will in the end prove aggravations.

A writer in one of our medical publications says: "I have collected every catarrh, asthma, and hay-fever 'sure cure' that is in the market, numbering in all fifty-eight, and have carefully examined them. Eighteen of these 'sure cures' are bold-faced frauds. One ounce of quassia chips, a pound of table

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salt, and forty gallons of water, will make one barrel of 'sure cure' that sells for one dollar for a bottle holding six ounces. The same quantity of water, a pound of muriate of ammonia, a pound of ground cubebs, and a little common potash will make another 'cure' that sells for fifty cents for a bottle holding four ounces. These two are the best of the eighteen frauds."

Certainly some of the constituents of advertised "remedies" are recognized by specialists as possessing special virtue in throat and nose diseases, but it matters not how compounded, whether by the pharmacist in accordance with the expensive prescription of the specialist, or by the machine process of the medicine manufacturer, they are sure to disappoint the patients who rely on them alone. In the treatises on diseases of the nose we find elaborate descriptions of the mechanical treatment of the atrophied or hypertrophied membrane, of the morbid growths, deflections of the septum, follicular disease, and carefully drawn representations of the numerous instruments used by specialists, but the emphasis laid on constitutional treatment, especially the hygienic side of that, is very slight. It can not be that these gentlemen who know so much about coryza acute or chronic do not recognize the great importance of a regime adapted to the needs of a patient; no, but the anatomical complications of the malady have almost entirely engrossed their attention and study.

In the outset of an attempt to cure a case advice should be given with regard to the daily life of the patient. A history of his habits being obtained, what ever is faulty in them in any particular should be clearly pointed out and their correction insisted upon. All the cases of chronic catarrh that have come to my notice have a history that includes salient errors of habit, and the majority owed their trouble to downright abuses of health either conventional or eccentric. Among the things as essential to

a cure, as they are to a prevention, of catarrh are care of the feet, care of the skin, comfortable dress, nutritious diet, abundant out-of-door exercise, sufficient sleep.

1.—*The Feet.* They should be kept dry and warm. Men, women, and children should wear substantial boots or shoes, large enough for perfect comfort. In cold weather the shoes should be thick soled, and woolen stockings be worn. Thin soled shoes are unfit for use even in summer, for contact with the hot pavements of a city street soon overheats the pedestrian thus shod, and the sudden change from the out-door activity of the warm street to the quiet and coolness of indoors, produces a prompt reaction that has effects, more or less disturbing, upon the circulation.

The catarrhal subject is troubled usually with cold extremities, the hands and feet when not in active exercise are clammy to the touch, and that without regard to weather. This condition indicates a defect in circulation, which in its turn, is due to central functional disturbance. Dr. Chapman, of Paris, has described a state of hyperaemia at the cerebro spinal centers of the nerves terminating in the nasal pharyngeal membrane as the cause of hay-fever, and his theory will apply with equal force to catarrh and asthma, the hyperaemia indicating an undue determination of blood toward the centers of circulation.

Women owe much of their suffering to thin soled shoes and slippers that the majority of them insist on wearing even in cool weather. I have seen hundreds of ladies otherwise comfortably attired shod only with low French shoes and filmy stockings, and that on raw and gusty days. Many are capricious with respect to the use of overshoes and will not protect their feet with them in snow or rain. Such conduct is as willful as that of a pampered cat, and positively suicidal. In winter during the fashionable entertainments people deem them-

selves bound to go to party, ball, or opera in light attire, their feet covering being especially light, and although the prudent ones may endeavor to protect themselves from exposures by covering their elegant foot dressing with overshoes while going to or from the place of entertainment, yet they run some risk of taking cold.

Some persons can not tolerate a rubber shoe because of the discomfort it occasions and provide themselves with heavy boots or gaiters with cork soles, for street use in wet or slushy weather. This is well enough if such foot covering is taken off when indoors, and they do not sit at desk or table with their damp boots still on. Dampness "strikes through." The best leather absorbs moisture and the feet are more or less affected by it. When the feet become wet, especially in cold weather, a clammy uncomfortable feeling is experienced, the circulation of the blood in the extremities is obstructed and becomes stagnated in the feet. Being diverted from its normal course a part of the blood goes to other regions causing over supply and local congestions, and no other organ more strikingly manifests the ultimate effects of the circulatory disturbance than the nose. An uneasiness and tickling of the pituitary membrane usually follows, especially with those who have a predisposition to nose disorder. This is the warning given by abused nature, and well for those who heed it, for after a few repetitions of the same indiscretion the individual finds himself the victim of one of the protean forms of this obstinate complaint.

It is not always convenient for some to change their wet shoes and stockings, but if they can keep moving so as to maintain a vigorous circulation there may be little or no mischief done to those tender membranes in the respiratory channels. The risk is run when one stops his activity and neglects to remove the damp feet clothing. A

good method to protect the feet against dampness, especially for those who walk much, is to wear inside soles of elastic, non-conducting material, and when removing the shoes at night, to take them out and let them lie all night where any acquired moisture will dry off.

Light woolen hose is regarded suitable covering for the feet in the cold season of the year; there are people, however, who can not tolerate wool, for them cotton or linen is acceptable. The hose, of whatever sort it is should be changed at the earliest possible moment when damp, and should not be so heavy as to sweat the feet. The disposition of the feet to perspire varies much in different persons, so that the kind of stockings worn by one person with comfort may be unendurable to another.

H. S. D.

A PATENT-MEDICINE-ALMANAC VICTIM.

Oh, patent-medicine almanac!

I was a towering giant
With a wealth of health and a vim, of limb,
To ills and pills defiant!
But now I have the phthisic,
And take every kind of physic,
Have a touch of sharp bronchitis,
And a raging tonsillitis.
And I feel thy awful twinges, cerebro-spinal
meningitis.

Oh, patent-medicine almanac!

I read thy fearful pages
With tears and fears and groans and moans,
And shakes and aches of ages!
And now I have the vertigo
And tumbling in the dirt I go;
Have a general blood corruption,
Loss of vigor, lack of gumption
And I feel that I am traveling down the last
stage of consumption.

THE SENSES: FIVE OR SEVEN.

[Abstract of a paper read before the N. Y. Academy of Anthropology, March 5, 1889, by Dr. Wm. M. McLaury, of New York.]

SOME philosophers maintain that each sense has a representative or correlative science built upon it, as the science of Optics for vision, Harmony and Music for hearing, Architecture and Mathematics for touch, etc. As touch is the primary and basic sense, so Mathematics is the primary and basic science. This is merely suggestive as to how much farther they are correlative or analogous. Sir Wm. Thompson claims that temperature, or the sense of heat and cold, constitutes the sixth sense, and he also suggests another, which he calls the magnetic sense, by which sensitive persons are made happy or miserable, when within the *aura* of others, by their polarity, according as they are attracted or repulsed. As evidence that the senses of touch and temperature are not identical, the senses of touch may be lost and that of temperature retained, or *vice versa*. There can be scarcely any discrimination between the painful sensations of heat and cold. As the Hot-tentot said when he touched ice, "It burns." Touch or sound long continued loses its effect, but when the pressure or sound ceases, our attention is attracted thereby. There are sweet and sour odors. We may, by the sense of smell, call up sounds melodious or discordant, and by the same sense, tints and colors may be perceived. This may be caused by association of ideas, and may be more easily experienced than described. The sense of smell is the most delicate of all the senses, and the particles making an impression on the olfactory nerve may be infinitesimal, and wholly unrecognizable by chemical tests, or by powerful magnifying lenses, or by any other means whatever. In short, where every other evidence of the substance of the thing may be gone, there still remains, apparently, the spirit of the departed thing manifesting itself to the sense of

smell. Hence some philosophers relegate this sense to the science of chemistry as its base, or relative sense, as hearing and seeing are to music and optics, in the domain of the relation between the senses and the sciences.

What Baron Reichenbach terms Odic power or Od force is the universal force pervading everything animate and inanimate, organic and inorganic, and even the ethereal something beyond our atmosphere which is said to be negative Od. It embraces every form of magnetism. Its manifestations are closely connected with Od polar action in organic and inorganic nature, also between the primitive and plastic order in matter, and the plastic growth of formations resulting from compound and complex forms, and may be designated by the words *vital force*.

Chambers's Cyclopaedia classifies six senses, naming the first the magnetic sense or the sense of organic life; second taste; third, smell (these three are emotional); fourth, touch; fifth, hearing; sixth, sight (these three are intellectual). Sir Wm. Thompson maintains that the sense of temperature, or the sense of heat and cold, constitutes the sixth sense. The sensations of temperature have an obvious external cause of a sufficiently specific nature, but we are ignorant of their specific origin. Therefore it remains a question we are unable to decide whether there are certain nerves especially appropriated to the impressions of temperature. Professor Carpenter places this sense next to touch, and cites a case in which a man devoid of the sense of temperature, though having the sense of touch intact, while sleeping over a lime kiln, had one of his legs burnt off and was not aware of it till in the morning, when, attempting to walk, his charred leg crumbled to ashes. It is through the sense of temperature that men and animals feel storms approaching even before they are indicated by the barometer. It is

found that the left hand is more sensitive to temperature than the right, whereas the right is much more acutely sensitive to touch. The sense of temperature recognizes the painful sensations of heat and cold, and by vigorous effort of the will-power we can withstand great extremes of heat and cold. It is reported of Boorhave that he was so opposed to heat that he would never suffer himself to go near the fire.

Dr. George M. Gould, in a recent number of *Progress*, suggests an explanation of that peculiar faculty which enables birds and animals to find their homes from long distances by the exercise of their magnetic sense. In the phenomena of sleep we experience sensations that are not produced by any of the five senses. All the indications of sight and hearing, of feeling, smelling, and tasting are experienced in our dreams, but surely not through our physical organs. May this not be accounted for by the many manifestations of the magnetic sense? The magnetic sense is the one in direct relation and contact with our intellectual and reasoning faculties. To the magnetic sense I would also refer the frequent and astounding phenomena known as sympathy. If we see a person injured, by sympathy we feel a sense of injury to the same part of our body. If we see one enjoying, we sympathize in the same joyful mood. If we see a cruel stroke aimed at another person, even a stranger, we shrink and fall back and act as though our own person was threatened, and through sympathy actually feel the pain.

A friend related to me a curious case of sympathy that could not have been conveyed by any other than the magnetic sense, to wit: An old couple living alone with a son at a farmhouse; the three had partaken of dinner, on a July day; after dinner the son went out to his work in the hayfield bordering on a lake. As the day was warm he decided to take a bath in the lake. Of

this the parents knew nothing; but within an hour after he had gone to his work his father and mother were taken violently ill as though strangling or drowning. Neighbors came to their aid, and with difficulty restored them to consciousness. They were hardly considered out of danger, when two men were seen approaching bearing the dead body of the son, who actually drowned while the parents were suffering from sympathy.

Blendings of health and disease are so gradual that no well defined limit can be drawn, as there is no one perfectly well and no one wholly diseased while alive. So it seems impossible to draw the exact line between physical health and disease as between sanity and insanity. And for the same reason that no one is perfectly sane in all that constitutes sanity, and no one is wholly insane. So physicians and alienists have to weigh the symptoms and give judgment according to the preponderance of evidence. The more we study the magnetic sense the better we are able to judge of health and disease, both physical and mental.

Coma, Somnambulism, Trance, and Ecstasy may properly be regarded as phases of sleep, but more like the hypnotic state than normal sleep.

McNish, in his "Philosophy of Sleep," says of Cabanis that he often saw clearly in dreams the bearings of political events that baffled him when awake, and that Condorcet, when engaged in deep and complicated calculations, was frequently obliged to leave them in an unfinished state and retired to rest, when the results to which they led were unfolded to him in his dreams. Sir Benjamin Brodie mentions a chemist who contrived apparatus for his experiments more than once while dreaming; and also of a mathematician who solved problems while asleep that baffled all his efforts in his waking hours. Carpenter, in his physiology, bears ample evidence of this phenomena of increased

mental power during sleep. Dr. Benjamin Franklin bears evidence of the same power.

Trance is incited by fear. The sudden alarm of fire in a church or theater may in a sense entrance the entire audience, making them do the very things they would not do in their normal condition. Animals may also become entranced by fear, and instead of fleeing from a threatened danger run right into it. It is rarely the subjects of trance commit crime while in that state, unless it is suggested, and then the suggestion sometimes produces a mental shock that restores the entranced one to a normal condition. Dr. George M. Beard says that mediums, instead of being entranced, entrance their deluded victims. Few persons writing on trance can see but one side of it. Mr. Grimes and Dr. Carpenter and Dr. Beard saw both sides of it; but very few see it in all its many-sided aspects, especially so as to concede to some of those entranced the possibility of mind or thought reading.

Many things deemed miraculous may scientifically be accounted for by the careful study of the phenomena of the magnetic sense. There is nothing infernal; there is nothing supernatural. There is a sufficient cause in nature for every event that ever occurred, yet this does not destroy faith. Science is faith without superstition—a faith that knows what to receive and what to reject.

Trance may be self-induced, and, unlike several other abnormal conditions, may be indulged in without injury to health or the shortening of life. Acts which in the trance state are logical, coherent, and consistent, will in dreams be extravagant and absurd. The brain does not act as a unit either in the active condition of wakefulness or sleep. Different parts and organs act stimulating different faculties and emotions with different degrees of force. Where cerebral activity is harmoniously diffused, as in the normal wakeful state, man is

said to be under the control of will. And by a constant watchfulness and effort of the entire ego we may do much toward keeping up this harmonious activity, as also by effort we may direct this to special organs and their functions and faculties. Cases are numerous where people spend half their life in trance, but what they learn and know in the normal state is entirely lost and forgotten in the trance state. See the case of Miss Fidelia X—, reported by Dr. Axam; also of Miss Reynolds, of Pennsylvania, fully narrated by Dr. Jerome Kidder in his book on "Vital Resources." She was the daughter of a clergyman; in her normal condition she was sedate, pensive, and melancholy; slow and sensible in her intellectual character, but almost destitute of imagination, whereas in the trance state she was gay and lively, full of fun and fond of social life. Dr. A. K. Mitchell reports the case of a young girl who in her normal condition or in the condition of childhood was slow, indolent, and querulous, but in trance life was quick, energetic, and witty, even vivacious. The history of these cases portrays almost as great contrasts in the character of these subjects as that delineated by "Dr. Jekyll and Mr. Hyde."

This seventh or magnetic sense is most prominently set before our minds by the sexual magnetism. This is the most potent stimulus accessible to our race. By a wise development and a healthy exercise of the love of nature there is scarcely a limit to the capacities for generating health of body and mind. The physiology of the whole passion of love has not yet been written. That it generates force and increases mental and physical power is undoubted. The Creative power bestowed this boon to man not alone for the perpetuation of the race, by the generating of new beings, but to be rightly understood and utilized for the healthy growth and perfect development of the mind and body of the man and woman.

NOTES IN SCIENCE AND INDUSTRY.

A Mine of Ozokerite.—Ozokerite, or ozocerite, is a mineral wax not found hitherto in any considerable quantities except in Moldavia, and in Galicia, Austria. Two or three years ago, however, Mr. J. Wallace, of New York, after a long search, discovered a mine of the wax in paying quantities in Utah, on the line of the Denver and Rio Grande Railroad, 114 miles east of Salt Lake City.

About 150 acres of the mine have been exploited thus far, and in Jan., 1888, the production of ozokerite in paying quantities from this mine began, and it is expected that the production will soon amount to 1,500 tons per year. The consumption in this country of ozokerite, and its by-products, for all purposes to which it has been thus far applied, has amounted to about 500 tons per year. Its main uses have been for the adulteration of beeswax and in the construction of wax figures; it is used in connection with paraffine in the manufacture of the best grades of candles; it is employed very largely also in the manufacture of wax paper, its value for this purpose arising from its resistance to all materials containing acids; a great part of the body and polish in many kinds of shoe blacking are the result of a liberal use of ozokerite in its manufacture. But the chief use to which this wax seems to be destined is as a waterproof insulator for magnetic wires. The experiments thus far made have seemed to show that for this purpose ozokerite is preferable, all things considered, to any other substance hitherto employed. It is now in use extensively by eight of the electrical companies of this country, and if it can be produced as cheaply and in as large quantities as Mr. Wallace now anticipates, its use as an insulator is probably destined to very great extension at no distant day.

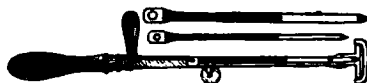
Instructive Handkerchiefs.—The cotton handkerchiefs provided for the French soldiers are now decorated with special texts and cuts for the technical and sanitary instruction of the wearer. The center is occupied by the cross of the Legion of Honor upon a red background, and the in-

scription underneath it, *Honneur et Patrie*. Around this central point are grouped a circle of medallions, containing representations of officers of all grades, from the modest sub-lieutenant to the proud commandant of a corps d'arme. The different uniforms are pictured so distinctly that the French private can tell at a glance to what grade any officer whom he sees may have attained. The special pocket handkerchief prepared for the infantry soldier has exact drawings of the arms used by him with explanations of their mechanism. The borders of the handkerchiefs are hemmed in with a framework of the national colors, and within the framework are printed a number of sanitary precepts to be observed on march and during a campaign.

The Fairy Rocks of Nova Scotia.

—The Smithsonian Institute at Washington, has sent an expedition to Nova Scotia and secured facsimiles of the "fairy rocks," on which are curious hieroglyphic characters, evidently very old, which may throw some light on the history of the early discoveries of America. The markings are cut upon a rock of highly polished slate, and the intaglio is about a sixteenth of an inch deep.

A Woman's Invention.—Anything relating to woman's work seems peculiarly the property of women and when she invents something its usefulness is generally beyond question. Lately we were shown a small device for the execution of embroidery with great dispatch, and have obtained



an illustration of it for the consideration of our readers. While very simple and costing a mere trifle comparatively, it is really a form of sewing machine, and does its work with unexpected satisfaction to those who try it for the first time. It is strong and durable, all the working parts being made of the best material and exactly on the principle of a sewing machine.

With presser foot and automatic feed, it measures its own stitches and makes the

loops perfectly, regular in length and as closely together as desired. It works as uniformly and certain as a sewing machine, and renders easy and practicable, that which until now has seemed impossible. For tufting and embroidery in the home manufacture of rugs, carpets, lap robes, piano and table covers, curtains, and many other things this machine is a ready assistant, and so easily operated that a clever child can work it, after a little practice, with perfect facility. One who is expert can run it at a rate of 200 stitches a minute.

Language of Adam and Eve.—

No subject has been more fertile of speculation than the origin of language, and on few perhaps less satisfaction can be obtained. The Jews positively insist that the Hebrew tongue is the primitive language, and that spoken by Adam and Eve. The Arabs, however, dispute the point of antiquity with the Hebrews. Of all the languages except the Hebrew, the Syriac has had the greatest number of advocates, especially among the Eastern authors. Many maintain that the language spoken by Adam is lost, and that the Hebrew, Chaldee, and Arabic are only dialects of the original tongue. Goropius published a work in 1580 to prove that Dutch was the language spoken in Paradise. Andrew Kemp maintained that God spoke to Adam in Swedish, Adam answered in Danish, and Eve spoke French, while the Persians believe three languages to have been spoken in Paradise—Arabic, the most persuasive, by the serpent; Persian, the most poetic, by Adam and Eve; and the Turkish, the most threatening by the Angel Gabriel. Erro claims Basque as the language spoken by Adam, and others would make the Polynesian the primitive language of mankind. Leaving, however, these startling theories, we may sum up the words of Darwin: "With respect to the origin of articulate languages, after having read on the one side the highly interesting works of Wedgwood, Farrar, and Prof. Schleicher, the lectures of the celebrated Professor Max Muller on the other side, I can not doubt that language owes its origin to the imitation and modification, aided by signs and gestures, of natural sounds, voices of other animals and man's own cries.

Chinese Ducks.—It is stated that there are more ducks in China than in all the world outside of it. They are kept on every farm, on the private roads, and on all the lakes, rivers, and smaller streams. There are many boats on which as many as 2,000 are kept. Their eggs constitute one of the most important articles of food. They are hatched in establishments fitted up for the purpose. Some of them turn out as many as 50,000 young ducks every year. Salted and smoked ducks are sold in all the towns, and many of them are exported to countries where Chinamen reside.

May Not Women Criticise Each Other ?—

We think so. But there are men who ridicule all such attempts. They assign envy, jealousy, spite as the only motives. They seem to think all women are much alike, or if they differ in character, it is of small consequence. Some men only contemplate women through the amatory. tinged, it may be with the ideal.

Men would judge it queer, if, when they would criticise each other, women should exclaim "Hush!" It is a part of our duty to expose faults and set forth contrasting virtues. Here is one of the fields for the preacher, the lecturer, writer, exhorter, and neighbor. It is also, in fact, quite laboriously occupied.

Women differ widely as men in traits. This appears in novels, not a few of which are written by women. Not as much crime is committed by woman as by men, but the former are as likely to be subtle, heartless, selfish, vain, or mischievous. When a noble, true woman would do her part in redeeming her sex from evil states of mind or wrong habit, to enlighten and elevate, it ill becomes a man to sneer at the effort. If he does not want to take any part he can keep a respectful silence. The best men approve when woman is faithful to woman. She better knows woman's imperfections, their causes and the way of regeneration. Matrons for condemned women is the cultivated sentiment of our time. One sex can not reach the flowery borders of the millennium without the other. Each has a special work to do for its own, may therein receive some help from the other, while both co-operate in great, general reforms for the common good of the race. L. H.



NEW YORK

June, 1889.

"NEW LIGHT ON PHRENOLOGY."

"It is a curious fact that modern research appears about to establish a firm scientific basis for some of the teachings of phrenology just at the time when that doctrine has passed almost entirely out of vogue. At the Anthropological Institute in London, some little time since, Mr. Bernard Hollander read a paper on centers of ideation, bringing together the results of many experiments in applying galvanic currents to different parts of the brain.

"It has been pointed out, for instance, by various trained observers that the emotion of joy throws into action the great zygomatic muscles which draws the mouth upward and backward, while at the same time the orbicular muscles are more or less contracted. Now it has been found that there is a definite portion of the brain where a galvanic current produces exactly this effect upon the same muscles, although a current applied elsewhere does not move them.

"It is thus apparent that the effect of a galvanic current upon this portion of the brain is to produce the physical expression of joy, and it is exactly in this place that Combe located his organ of Cheerfulness, which he afterward called Hope. Another learned professor has

stated that the brain centers for the facial movements are found to correspond with Gall's center for mimicry or Imitation. In still a different spot the galvanic current will cause movements of the lips, tongue, and cheeks, indicating that here must be the seat of gustatory sensation. In the year 1824, when phrenology was attracting great attention, many men claimed to have discovered the organ of Gustativeness or Alimentiveness, which they located over this same spot.

"There is also another center where the current causes contraction of a certain muscle which retracts the angle of the mouth and is strongly contracted under the influence of fear, and for this reason has received the name of the muscle of fright. It is in this region that Gall and Spurzheim located their organ of Cautiousness, which they found largely developed in timid people. There is still another center which, when excited by the current, is said to cause 'rising of the shoulders with extension of the arms,' and both Darwin and Mantegazza have long since referred this gesture to 'the expression of patience, submission, and the absence of any intention to resist.' Just here was placed Gall's organ of Veneration, and when this is defective in children, Combe says, they are regardless of authority, prone to rebellion, and little attentive to command.

"It would seem from the facts gathered and compared by Mr. Hollander, that the founders of what we are accustomed to consider as the antiquated system of phrenology, though unable in what was the state of knowledge at that time to demonstrate their conclusions, must

have been extremely shrewd and careful observers of all the facts which lay within their reach, and that the theories which they based upon these observations are well worth a careful reexamination in the light of modern science."

The above is an editorial that appeared in the *New York Sun* for May 3d, last. In another place the reader has probably noted a summary of the paper read by Mr. Hollander as furnished by its author for our columns. When it is understood that the British Anthropological Institute has among its members several of the most distinguished investigators in the field of Cerebrology and that the paper received more than common favor in the discussion that followed its reading, we can scarcely think that "the doctrine" of phrenology "has passed almost entirely out of vogue."

The writing of such an article as that quoted, shows the editor of the *Sun* to be alert, as a rule, to what is passing in the world of science, and appreciative of developments that affect human nature, but when he intimates that the doctrine of the mental constitution according to Gall and Spurzheim, "has passed almost entirely out of vogue," we think that his mind has been so pre-occupied with thought and work relating to his own sphere as to forget what many are doing and saying on that very subject.

In the article on "The Gall Collection in Baden" a quotation from Prof. Buchner, the eminent German physiologist, is given, that in very definite terms speaks of the "jealous adherents to the phrenological theory" as numbering "millions," and of his making "many

enemies" on account of the opposition of his views of the constitution of mind to phrenology. Certainly if this doctrine were "out of vogue," a foreigner merely visiting America could scarcely be expected to find the state of popular sentiment he describes.

It would appear that the results of modern observation are forcing the facts of phrenology upon the attention of physiologists. The experimentors with scalpel and galvanism have demonstrated certain "centers of ideation" that the scientific world appears ready to adopt, and in nearly every instance these centers but confirm the "empirical" theories of the phrenologists. We agree with the *Sun* writer that these theories "are well worth a careful re-examination" by those who in the glare of modern electric science have ignored the real sources of the impulses given to the study of mind and brain.

HUMANE OR MORAL.

A GENTLEMAN of Massachusetts showed an appreciation of the great need of moral culture in society by offering a prize of one hundred dollars for the best essay on "The Effect of Humane Education on the Prevention of Crime." As the time for the delivery of the manuscripts by those competing closed March 15, we suppose that the committee intrusted with their examination has ere this selected the best and awarded the prize, so that we may expect to see the "best essay" in print before many weeks.

The statement of the subject as given above apparently limits the discussion of crime prevention to one factor, in the moral group. This may have been in-

tentional on the part of the originator of the scheme, but it is much more likely that in his employment of the word "humane" he had in view the moral nature as a whole, as formulated by psychology. In our common speech we are disposed to use "humane" as synonymous with "kind" or "benevolent," and to speak of it as one of the noblest in the circle of virtues. This certainly is true, but we have heard of generous, benevolent persons who were greatly wanting in honesty, and of those who were treacherous and cruel in their conduct toward some people while they were tender and kind toward others. Not long ago an American prelate distinguished for his benevolent establishments was found to have betrayed the confidence of a community, by wrongfully using a vast sum of money that had been placed in his charge as a saving funds.

To do evil that good may come is a course that is false and mendacious fundamentally, and can not nourish a vigorous growth of sound morality and make a community law-abiding, refined, and scrupulously just. Yet this principle has its advocates to-day, despite the lessons of history.

To prevent crime there must be no easy, compromising treatment of the causes of crime but a direct suppression of them. Our politicians and statesmen constantly err or mistake in their measures of human reform because they fail to attack the causes of vice and crime with firmness and impartiality. They do better in legislating for animals than for men, and that too, in the full view of the fact that lenity and compromise in the treatment of evil must al-

ways prejudice effort for its suppression, and render the final result a failure.

So in the education of the moral nature, one part should not be neglected while another is being brought out by stimulating exercise; unbalance will surely result, and a one sided expression mar the character. Exaggerate such one-sidedness and we reach the extreme of criminal act.

SAVING THE BOYS.

WITH so many evidences at hand of the mind's susceptibility to changes for the better, who can reasonably cling to pessimistic views of human nature? Up among the Berkshire hills there is an experiment going on. No, it is not an experiment, but an institution fully organized, the purpose of which was matured and what the results would be known before a step was taken to carry out the plan of its founder. By the gift of a charitable man the Burnham Industrial Farm was established and it is doing its work well in training to usefulness neglected boys who in the streets and slums were pursuing lives of vice and of whose future every criminal possibility might have been predicated.

The plan is simple. The boys are kept busy at study, play, or work from morning till night. The supervision is strict yet kind, and such moral influences are brought to bear as would be appropriate in any institution. From a report this extract is taken:

"The system pursued is to give the boys great freedom, and at the same time constant supervision day and night. They form with their instructors a busy,

happy family ; though of course there is the usual amount of quarrelling, bad words, laziness, carelessness and worse, to be expected in a household of twenty-five rough boys. Lying and stealing often prevail among new comers, *but they do not continue long*. To fight against all these evils, and gradually to overcome them is the arduous task of the superintendent, matron, and teacher."

Out of thirty-eight who have been under the training of the "Farm," only one has proved incorrigible so far, and there have been some among them whose character in the outside world was of the lowest type and pitied or despised by the orderly. One boy is men-

tioned in the report who was taken to the "Farm" and on whose admission the superintendent was assured that nothing could be done with him. In one year under the farm discipline he became obedient, industrious and faithful. He now has been returned to his parents with perfect confidence in his future behavior, and is doing excellently in the trade to which he is bound.

How full of hope are such results ! They should not only encourage belief in the amenability of every type of perverted character to means for its correction and elevation, but promote the establishment in all mixed communities of institutions similar in purpose to Burnham Farm.



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.

ALWAYS write your full name and address plainly. If you use a pseudonym or initials, write your full name and address also.

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. Personal and private matters addressed to the Editor in the professional capacity of a physician will also receive his early attention.

HEADACHE.—*Question.*—Can you advise me how to get rid of an almost daily headache?
VICTIM.

Answer.—Headache is one of the bugbears of the medical profession, and it

would be impossible to give a satisfactory answer in a few words, if we knew all about Victim's constitution and habits. Most cases of headache are simple nervous reflexes of functional disorder that could be relieved with a little earnest care of the personal hygiene. When any one comes to us complaining of headache we examine into his dress, diet, employment, and habits. Tell him to wear comfortably fitting clothing, and low-heeled shoes, stop coffee, tea, alcohol, and tobacco, eat nourishing food regularly ; take abundant sleep, exercise in the open air, some hours every day. If we suspect any special organic weakness to lie at the bottom of the head trouble attention is given to it. Nerve tire is the great cause of most pain in the head.

DO THE FALLING LOSE CONSCIOUSNESS?—J. B.—This question has been variously answered. The statements of those who have deliberately jumped from elevated structures like the East River Bridge, or Niagara Suspension bridge negative it. They were perfectly conscious during the descent. But

persons who accidentally fall from high points, having suddenly lost their footing or become dizzy may "lose themselves" for the few moments occupied in the fall, one suddenly startled by anything experiences a shock that for a time confuses his nerve centers and there is consequently a failure of distinct intelligent perception.

HAT COURTESIES.—S. M.—We have it from good sources that the custom of lifting the hat had its origin during the age of chivalry, when it was customary for knights never to appear in public except in full armor. It became a custom, however for a knight, on entering an assembly of friends to remove his helmet, signifying "I am safe in the presence of my friends."



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

The Penal Problem.—There is much discussion at the present time in the State of New York of the subject of convict labor. As no physical regulation can be accomplished on other basis than that of the observance of physical law, neither can moral reform be effected except by the recognition of, and deference to the needs of our moral natures. No perversion of nature is ever blessed.

Thus if we take from a person healthful exercise, honorable incentive to action, and the reasonable hope of happiness, it is idle to expect him to develop the Christian graces, for the outgrowth of despair is always vice, never virtue. A plant will not attain the highest possibilities of its species without culture, neither will a good life be engendered by the endurance of scorn, neglect, discouragement, and enforced idleness. Every one is convinced that the plant pays for its nurture in producing superior food, but it is just as important to the body politic even in the worldly point of view, to foster the growth of souls. If it cost time, money, forbearance, and endurance of many disagreeable things on the part of the strong, yet they should show their gratitude for their strength by the care they take of their

weaker brethren. Miss Bird, an English woman, traveling some years ago in Japan, has made note of the excellent prison regulations in Hatsodate. The prisoners in that city work at piece work and the cost of their keeping is deducted from the proceeds of their labor, and the surplus of their earnings are deposited subject to their order when their term of imprisonment expires. By this means instead of releasing a penniless, depraving outcast to become a probable scourge to society an individual is restored to the world possessed of a little capital, and endowed with hope which is the dividing line between the outcast and the citizen. All incorrigible cases will in time be recognized as belonging to the province of the physician. Perhaps a better plan might be devised, but whatever system is adopted let us hope it may be replete with the instinct of a common humanity, and based upon a regard for our common brotherhood.

ELEANOR BROOKE.

Weeds.—God made nothing in vain, not even weeds, since they occupy their appropriate place in the vegetable kingdom, subserving the general good when our servants, not our masters. They may "choke the crops," but as sometimes asserted, do not "impoverish the soil." Farmers practically acknowledge this when they allow the land to "rest," allowing the weeds to grow undisturbed, obtaining a part of their nourishment from the soil, but far more from the air, then dying, depositing their nourishment obtained from both sources in the soil, while the soil, during this rest, absorbs some of the foulness from the air. Indeed, aside from this constant absorption from the air of the filth thrown out by decaying animal and vegetable matter, etc., etc., by the vegetable world, human beings could not long survive, being poisoned by their own breath, carbonic acid gas being blown out at every breath. Land thus rested, in a few years, with no other dressing becomes enriched in part by the decay of the weeds.

We are told by good authority that all of the mere woody fiber is made from this gas which we are constantly throwing off by breathing, the leaves of the trees, etc., serving the double purpose of purifying the air.

so that animal life can be continued, and furnishing a large per cent. of the nourishment of the trees. This is indeed one of the prominent arrangements in nature by which the refuse, the poisons, the general filth of the earth is disposed of, reappearing in the form of delicious fruits, valuable food, objects of ornament and utility. As another illustration of this great principle, I will simply cite that of the ocean, receiving immense amounts of filth, sewerage from the cities, putridity from the distillery, the slaughter-house, and every conceivable source, which without purifying agencies, would soon become like a vast cesspool! But to avoid such a catastrophe there are myriads on myriads of minute creatures constantly feeding on such, while oysters, clams, and many other such scavengers, "swine of the ocean," are imbedded in the sands immovable, receiving what falls to the bottom, near the shore, and what is brought to them by the tides; in this way the ocean is kept reasonably pure, at least, with still other means of purification. While therefore, it is not desirable to cultivate weeds on the land devoted to other crops, on account of "choking out" such crops, they have a general mission, on lands not thus occupied, doing an important work in the purification of the air.

On this principle vines with thick leaves, having large absorbing powers, with much substance to decay, as the squash and "creeper" between the rows of corn, being killed and turned under, then decaying, will add to the richness of the soil, nourishing the corn. To be of an advantage, they must not be too near the corn, must in no sense "choke" it. DR. J. H. HANAFORD.

PERSONAL.

Now it is Mrs. Margaret Arnold, who lives with her son near Washington Court-House, Ohio, who is said to be one hundred and twelve years of age. "She has never had a day's illness in her life and even now she has a good appetite and fine digestion." Yet Mrs. Arnold is not the oldest of her family by three years, for she has a sister aged one hundred and fifteen, and a younger brother and sister, the former one hundred and four the latter one hundred and nine. We wonder if this can be another Western joke

served up with all the apauage of authenticity.

WARD, one of the champion scullers of America, is said to keep a bar-room somewhere on the Hudson river. This seems to be the standard vocation to which sporting "gentlemen" of eminence attach themselves. It would be better for the morals of the sporting world were it totally "dis-barred."

MICHAEL EUGENE CHEVREUIL, the aged French chemist, died April 9, at his home in Paris. He would have been one hundred and three years old had he lived until Aug. 31 this year. A sketch of this eminent savant was published in the October number of the PHRENOLOGICAL for 1885, with a portrait recently taken.

WISDOM.

"Thou must be true thyself,
If thou the truth would teach."

A WORD of kindness is seldom spoken in vain; while witty sayings are as easily lost as the pearls slipping from a broken string.

THE capacity for happiness like every other, needs continual exercise for its growth, and development. If it is continually checked and postponed, it will wither away.

A SOCIABLE man is one who, when he has ten minutes to spare goes and bothers somebody who hasn't.

WHEN home is ruled according to God's word, angels might be asked to stay a night with us, and they would not find themselves out of their element.

If you want to ascertain the circumference of a man, ask his neighbors; but if you want to get at his exact diameter, measure him at his own fireside.

MEMORY seizes the passing moment, fixes it upon the canvas, and hangs the picture on the soul's inner chambers, for her to look upon when she will.—Haven.

MIRTH.

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

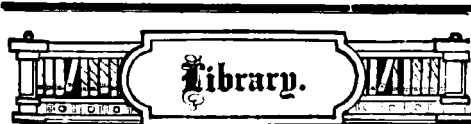
GLUCK, the composer, having one day mislaid his temper, shouted to his servant,

"This is really unbearable! Are you mad, or am I?"

"Oh," said the man, humbly, "surely your excellency would not keep a servant who is mad!"

"BROMLEY, were you at the church fair last night?" "Yes, Darringer." "What did you buy?" "Nothing." "What was sold?" "Nearly everybody."

A YOUNG man proposed for the hand of a beautiful girl. As she hesitated, he said, "I wait your answer with bated breath." The girl, who is a good deal of a humorist, said, "Well, Mr. M., you will have to bait your breath with something besides high wines to catch your humble servant."



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 the Editor with recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

THE PERICOSMIC THEORY of Physical Existence and Its Sequel, preliminary to Cosmology and Philosophy proper. By Geo. Stearns. 12mo, pp. 338. Published by the Author, Hudson, Mass.

This volume is the result of much thinking on the part of its author. From title page to Finis it is occupied with the discussion of topics of high importance psychologically, and the discussion is conducted in terms of more than common profundity. Mr. Stearns has not written for the masses, because the masses do not care for such books; would not to use a strong phrase, "pick them up in the street"—but wanting to be amused seek diversion in reading, not instruction.

The aim of the author of the "Pericosmic theory" seems to be to set up a new system governing the motions of the planets and to refute the old or generally received ideas of cosmical organization. He postulates three points—"1. The dual struc-

ture of the physical frame of nature (is) the Ether a fast receptacle of matter.

"2. That the ethereal vehicle of matter is an atom—an indivisible unit of concentric force.

"3. That the medium of light is also the physical agent of gravity as it can be only with the axial rotation of its volume by which means matter is indued with vehicular motion the diametric difference of this and of orbital motion being the genetic cause of planetary revolution."

These three constituents of the Pericosmic theory he argues are together essential to the order of physical existence and cosmic evolution.

Whoever can follow him in the course of his technical demonstrations will be impressed by the breadth of his conceptions, and the skill of his reasoning. In the application of his views to psychology he treads on favorite ground, but we must confess that his inferences are welcome while the procedure of their deduction is obscure to us.

STUDIES IN THE OUTLYING FIELDS OF PSYCHIC SCIENCE. By Hudson Tuttle, 252 pages. Price \$1.25. New York: M. L. Holbrook & Co.

Mr. Tuttle is no obscure peddler of old notions in a dress more or less fantastic, but a careful, earnest thinker. He entertains certain convictions with regard to a spiritual existence, and reasons of them with little of the dogmatism of a bigot rather with the liberality of wide observers. In his book he aims to build upon a scientific and rational basis the doctrine of Immortality. He recognizes the fact that we live in an age of growing scepticism; that evidence which was once generally accepted is no longer so, and that in the mind of a growing class of intelligent persons, faith in a future state of existence has a very slender hold. In his opinion it is the right and duty of this generation to place this doctrine on an enduring basis. The author believes that there is a large class of facts which have a direct bearing on the subject, and he brings these into his discussion in a very interesting and cogent manner. What ever may be thought of his views and methods, they are certainly full of interest, and the final chapter containing the author's declarations of personal experience is graphic.

and if true would settle the whole question in favor of a future life.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX. 12mo, pp. 544. New York. E. B. Treat & Co.

This well printed and compact volume covers a broad field of recent medical experience, and is an excellent reference book for the practitioner. The list of contributors contains many names of eminence, establishing the authority of the text. The feature that marks the book as of special significance is that the treatment suggested for the long list of diseases placed in alphabetical order is for the most part new or out of the conventional order, and much pains are taken in the discussion of "new remedies," those especially that have sprung into sudden favor—like acetanilide, antipyrin, calcium sulphide, nerium odorum, eserine, securing particular attention. We note several drugs regarded of high value in the "Directory of New Remedies" that our eclectic Homeopathic contemporaries would call old, but we presume that Dr. Wilde who prepared this part of the work deems himself warranted to call them new to general practice. There is an excellent article on Massage that supplies not a little information as to its technical treatment. As for the section on Electricity it is a treatise in itself. The more important ailments are given the space their merits deserve, and in most of the cases an epitome of an older treatment is appended to that favored by more advanced physicians. The experienced reader must note the tendency to simplicity of prescription and the consequent disuse of shot-gun dosage. This intimates an actual advance in medical procedures and is assuming to all who aim at a system of medication that shall deserve the title of scientific.

AMERICAN RESORTS; With Notes upon their Climate. By Bushrod W. James, A. M., M. D., Member of the American Association for the Advancement of Science; The American Health Association, etc. With a translation from the German by Mr. S. Kauffmann of those chapters of "Die Klimate Der Erde," written by Dr. A. Woeikof, of St. Petersburg, Russia, That Relate to North and South America and the Islands and Oceans Contiguous

Thereto. 8vo, pp. 285. Price \$2. Philadelphia and London: F. A. Davis.

The title of this book declares its purpose in the following: Intended for invalids and those who desire to preserve good health in a suitable climate. The author endeavors to cover the field, and make the work a useful guide to those who "seek a country" whose atmosphere is genial and conducive to their physical being. The headings of the twelve chapters will give the reader a good idea of its scope, viz:

1. "Medical Climatology,"—definitions of climate, modifying influences, atmospheric changes, forests, climate of the Western Continent, etc.
2. "Benefits and Dangers of Health Resorts,"—dependent upon individual peculiarities, importance of residence in a suitable climate, individualization of climatic prescriptions, mental impressions, congenial company, advantages of American health resorts, etc.
3. "Sea-side Resorts,"—they afford a variety for either winter or summer residence, etc.
4. "Fresh-water Resorts,"—lake regions of New York New Jersey, Thousand Islands, lakes of Florida, etc.
5. "Mountain Resorts."
6. "Trips upon Lake and River."
7. "Mineral Springs, and Summer Resorts."
9. "Winter Resorts."
10. "Therapeutics."
11. "Mexico and South America."
12. "Translation from Die Klimate der Erder."

Deriving his information from the best authorities extant, he speaks of the advantages to be found by the health seeker abroad, but after fair consideration he is of the opinion that it is not necessary for Americans to seek relief at the resorts of the humid Riviera, such as Nice, Mentone, San Komo, Santa Monica, Cannes, and similar places; or at the more questionable health resorts, Such as Rome, Naples, Algiers, or Palermo, which afford the excitements and unsanitary accompaniments of city life; when in their own land they may enjoy equally good or even superior climates at the health resorts of Florida, Southern California, and other places of kindred clime. "Truly, the climate of the health stations located amid the Alpine Heights or fastnesses of the Pyrenees offers many attractions. But that of the resorts in the Colorado Rocky Mountains compares very favorably in every respect. Many of

the European spas are but prototypes of more or less noted mineral springs in this country, numbered here by the hundreds."

Certainly the broad stretches of our Continent afford an infinite variety of scene and climatic resources, and a favorable locality may be reached by the invalid at home, throwing out of account any necessity of exposure to such risks as an ocean voyage necessarily requires.

The work meets a want hitherto known to the physician and meets us, we think, admirably.

PUBLICATIONS RECEIVED.

THE CONSTITUTION OF THE UNITED STATES and the Declaration of Independence in German, French, and English. Translated by A. H. Laidlaw, Jr.

An opportune publication at this day of celebrations in honor of the founder of our national polity. Our German citizens are many and but few are conversant with the principles that enter into the substance of our peculiar institutions. One reason for this ignorance is the lack of a cheap and easy means of instructing them in these principles. Now that lack is supplied. Our French fellow-citizens are much less numerous, but to them such a work as this of Mr. Laidlaw is just as needful. That it has already received the commendation of many thinkers can not be wondered at, as the translations are well done and the notes and appendix are of historical and political value. Published by Laidlaw Bros. & Co., New York.

ALMA; or Otonkah's Daughter. By Gay Waters.

This is an Indian story, related to the far West, published in the Dennison Series; cloth, \$1. Series in paper for the year, one volume issued monthly, \$3.

BROKEN LIVES. By Cyrus McNutt.

This is number two in the Dennison Series for 1889. T. S. Dennison, Publisher, Chicago.

FUN AND FACT. By F. H. Chambers.

A series of short sketches in which topics of all sorts are discussed in a crisp, humorous style; 160 pages. J. S. Ogilvie, Publisher, New York.

THE LIMITATIONS OF TOLERATION is the title of a pamphlet containing a report of a discussion on religious belief, that took place at a meeting of the Nineteenth Century Club, New York. Published by the Truth Seeker Company.

ON THE EVOLUTION OF SAVAGES BY DEGRADATION. By Rev. F. A. Allen, M. A. A paper read before the Victoria Institute, of Great Britain, contains a large array of data bearing upon the topic. The Editor of the P. J. thanks the Hon. Sec'y of the Victoria Institute for his courtesy.

"THAT DUTCHMAN," or *The German Barber's Humorous Sketches.* By Julian E. Ralph. Considerable fun in this little book for 10 cts. J. S. Ogilvie Publishers, New York.

IVAN THE SERF. By Sylvanus Cobb, Jr. Author of "The Gunmaker of Moscow." One of the most popular stories of this author, republished in the Fireside series, by J. S. Ogilvie, New York.

PIONEER PITH. The Gist of lectures on Rationalism. By Robert C. Adams. Certainly bold, free treatment of the Christian faith and Christian history. Truth Seeker Company, New York.

TRUTHS THAT I HAVE TREASURED, or *Stories of Health on a Psychic Basis.* By Susan Wood Burnham. Rather transcendental teaching, and may be very agreeable to certain types of organization. Purdy Pub. Co., Chicago.

YELLOW FEVER. Absolute protection secured by scientific quarantine. Dr. Wolfred Nelson makes a strong argument in behalf of a rigid system of quarantine scientifically organized, the resources of hygiene and antiseptics being employed to destroy the disease germs in the locality where the fever is found.

PROCEEDINGS OF THE NATIONAL EDUCATIONAL ASSOCIATION; at the meeting in Washington last year. Circular No. 6 contains papers and addresses on Moral Training in Public Schools, County Institutes, Selection and Qualification of Teachers, Normal School Training, School Programmes, and Alaska, etc., showing that topics in current interest in public education came in for a large share of consideration.

THE SALOON MUST GO. By J. Ellen Foster, is an argument against license and of course in favor of prohibition. The moral and physical influences of the liquor saloon are illustrated. Price 10 cents, J. N. Stearns, agent, New York.

ECHONDROSES OF THE SEPTUM NARIUM AND THEIR REMOVAL. By Carl Seiler, M. D. Many sufferers from nasal catarrh owe their trouble in this respect to growths in the nasal passages that may be removed by a slight operation. Seiler speaks in this paper of peculiar growths which are frequently overlooked by the physicians. The paper is a bright one and descriptive of the treatment and the instruments that the writer has found remedial.

CASSIUS MARCELLUS CLAY. A visit to his home in Kentucky, his peculiar habits, and remarkable career. By Hon. A. W. Campbell. The Editor thanks the aged statesman for this interesting souvenir.

SCIENTIFIC TEMPERANCE. Instruction in School and Colleges. From December, 1887, to December, 1888.

From Mrs. Mary H. Hunt, the superintendent of this department of the great work of the W. C. T. U., this interesting report comes, and it tells the pleasant story that there are now upward of 12,000,000 school children in our country who receive in some form instruction with regard to the ethics and science of temperance. This is a great achievement, and due mainly to the perseverance of the earnest women who have undertaken to do work for social improvement systematically.

SIGNS OF THE TIMES.

This is the title of a pamphlet recently published by the Religio-Philosophical Publishing House, of Chicago. It is an address delivered last year by Prof. Elliott Coues before the Western Society for Psychical Research. In it are some striking announcements "from the standpoint of a scientist" regarding religion, spiritualism, theosophy, hypnotism, and occultism. "Magnetism" he claims to be the pass key to psychic science, and deems the views of the physiologists in attempting to explain hypnotic phenomena as of little value.

CURRENT EXCHANGES.

Annals of Surgery. May number, a very full number. An interesting case is reported of an air tumor of the neck from pneumothorax. Illustrated. Forty abstracts of recent surgery are arrayed in the department of Surgical Progress. The whole number intimates improvement. J. H. Chambers & Co., St. Louis.

Treasury for Pastor and People. As full as usual of suggestions and help to the practical Christian, whether in the pulpit or in the common

channel of every day life. E. B. Treat, New York.

Le Devoir. French review of social questions, and leading organ of co-operative industry. Madam Godin, Guise (Aisne).

Builder and Woodworker. Monthly. For the designer, constructor, and artisan. New York.

Harper's Weekly. Late numbers, enlarged reflections of scenes and incidents of the Centennial Festival. Finely illustrated. Harper & Brothers, New York.

Western Rural and American Stockman. Weekly. Chicago.

The Hahnemannian. Monthly repertoire of Homoeopathic Medicine. Philadelphia, etc.

Ohio Journal of Dental Science. Monthly. Ransom & Randolph, Toledo, Ohio.

New York Tribune. Daily and weekly editions.

Youth's Companion. Weekly. Enterprising and widely circulated favorite. Boston.

The Eclectic Magazine of Foreign Literature. The May number has a good selection of the most recent publications by foreign writers of eminence, on topics of current interest. New York.

The Century for May does not devote much space to Centennial glorification, but gives us a good list of attractive subjects, with admirable illustrations here and there. Orcagna is the old master discussed this time; "Samoa," occupies a score of pages; Round About Jerusalem; A Ride Through the Trans-Baikol; Recollections of Jean Francois Millet; The Monasteries of Ireland are notable. New York.

North American Practitioner. Monthly journal of the Post Graduate School. Has an independent flavor we like. Charles Truax & Co., Chicago.

The Popular Science Monthly, June, has new chapters in the Warfare of Science by Dr. A. D. White; also Glaciers on the Pacific Coast; Agnosticism, by Prof. Huxley; Fabulous Astronomy; "Cowardly Agnosticism;" a sketch of Wm. G. Sumner, and considerable comment on "Christian Science." D. Appleton & Company, New York.

In **Harper's Magazine** for June we find a second paper on Social Life in Russia, Our Artists in Europe (well illustrated), Saturn's "Rings," Montreal, The Negro on the Stage, in which the middle-aged reader will recognize some of the older knights of the cork and buskin, Problems of Psychic Research, etc. New York. Harper & Brothers.

AMERICAN INSTITUTE OF PHRENOLOGY.

Institute Extra.

Devoted to the Interests of the American Institute of Phrenology.

No. 18.]

MARCH.

[1889.

THE session of the AMERICAN INSTITUTE OF PHRENOLOGY for the year 1888 was the twenty-fifth, and the class was the largest that has at any time received instruction. The grade of intelligence was equal to that of any previous class and included in its membership several persons who have already had successful experience in the phrenological field as lecturers and examiners. Some of these had been graduated from the Institute several years ago, and came back for another course to review the subject and gather new material in the way of facts and illustrations for further work. Among our students the learned professions were represented as usual, for clergymen, physicians, teachers, and others avail themselves of the opportunity to gain a knowledge of human nature as revealed by Phrenology, to aid them in their professional work; while some others not intending to follow Phrenology as a profession, desire to widen their knowledge of character as an aid to them as students and teachers, or, in business and home life. With a view to giving our readers an idea of what the Institute is and what it aims to do, we can hardly do them better service than to give some account of the closing exercises of the Institute, indicating the spirit and objects of the teachers and students.

PHRENOLOGY is an interesting and important subject, and the public desire lecturers and professional work in this field. Some have undertaken to advocate and practice Phrenology, who were not well prepared for the work, and the public were either misled or disgusted with their efforts, and thus the subject was made to suffer. Accordingly, some leading friends of Phrenology resolved to establish a Normal Institute so that the public could be supplied with lecturers and examiners who had enjoyed opportunities for instruction in the science, and therefore applied for an act incorporating the AMERICAN INSTITUTE OF PHRENOLOGY, which was passed by the legislature of the State of New York, April 20, 1865, with the right to hold real estate to the amount of one hundred thousand dollars; to collect and keep for public exhibition a museum of busts, casts, skulls, and portraits illustrating Phrenology and Physiology; to instruct pupils, grant diplomas, etc.

NELSON SIZER, *President.*

C. FOWLER WELLS, *Vice-President.*

HENRY S. DRAYTON, A.M., M.D., *Secretary.*

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FOWLER & WELLS CO., 775 Broadway, New York.

CLOSING EXERCISES OF 1888, AND PROGRAMME OF 1889.

OPENING REMARKS BY MR. N. SIZER.

The time has arrived which has been waited for, hoped for, dreaded, expected, and yet feared. Some of the best incidents of life are

those which we approach with mingled emotions of joy and sadness, hope and fear. We are made up of many faculties, and when we are doing something that is new or specially important, different classes of feelings are

awakened, some that are joyous, some that are ominous, and some that are tender; and so, made up as we are of many strings, sometimes we have harmony, and sometimes all the strings do not play in harmony.

Now we have come to the close of the twenty-fifth session of the American Institute of Phrenology, and we proceed as usual by inviting those who are present, that have contributed to the instruction of the class, to say something, after which a few of the students chosen among themselves for that purpose, will speak; and perhaps there will be time afterward for others of the class to volunteer. If we had but ten students, we would get a speech from every one of them; as we have forty or more, the time is too short to do everything that might be pleasant and profitable for us.

Mrs. Wells, as Vice-President of the Institute, is invited first to speak.

ADDRESS BY MRS. WELLS.

Words, winged words of thought, have been given you for weeks, morning, noon, and night, without stint; and your interest in them has not flagged.

Now you have reached the closing day of the class for 1888 of The American Institute of Phrenology, and *should* be wiser than at its opening. Hereafter, it will be *your* place to give wings to thoughts, and, if they shall be conveyers of wisdom, you will be blessed in their utterance; and *if there be* a future life, your messages to others will not be without their influence on yourselves in the future.

And here I would say that *to me* it seems as if one can not set a high value upon this life if he do not expect it to be continued hereafter; nor can he have much appreciation of a Creator or first cause that would place us here to live and strive and suffer merely for this short existence. *These bodies* were adapted for *this life*; and, when they are worn out, and are no longer adapted for the use of their tenant, the mind or soul or spirit, the clod is left: its uses lie in another direction.

Those of you who go from here into the lecture field have a responsibility resting upon you toward those you essay to teach, and I would counsel you to do as if you knew there would be a future life, from whence you can look back upon this with thankfulness for the good done, and with regret for errors.

Here you will be sought for counsel, and will be looked to for an example. Phrenologists are expected to be perfect, and, if any human ought to be so, it is one who has drunk from the well-spring of truth and enjoyment. A true Phrenologist is wise above all others, and should be lenient toward human failings, not, however, as gods, but as humans; for he understands the frailties, the besetments, of humans.

If you have learned wisdom here, *live* it as you pass along. Be an honor to yourself, and to the Institute from which you learned it. Consider yourself, each one of you, a branch of this tree. Love it with a love which shall bless it, and make it live and flourish. It has been planted, but can not *grow* without nourishment; and that is for you to watch and see to. We, who have for so long labored for it joyfully, are no longer young, and must, in the course of nature, lay off the harness ere long, and we want to feel that the Institute will not die when we pass off the stage of ac-

tion. We have done what we could, and *tried* to do it well. Where we have done well, there you should walk in our footsteps. Where we fail, learn by our mistakes, and avoid them. Be learners still, for *we* can not teach you everything; and if we could, you can not learn everything in a few weeks of time.

Varied phases of life will present themselves; be wide awake to make the most of them for future use in teaching life's lessons, for teach you will, continually. See to it that what you teach shall be of value to be taught. Life is not mere theory, but *practical*; and you must, therefore, be practical in your teaching. Self-knowledge should be your most important lesson; and, when that has been acquired, you need to know *how* to *impart* to others what they need to know. There will come in use the lessons you have learned on the voice, and its uses and treatment, as well as those lessons in Phrenology *per se*; for Phrenology is but a part of "Life's stupendous whole," though it leads to, and is closely allied to, all the other great truths or sciences.

Live and labor and learn as if you expected to be called to take the places of those who will be obliged to leave the field. Whether lecturing or examining, do not speak on stilts, or talk "over the head," or ability of understanding of your auditors; but be definite in saying just what you mean, and mean just what you say.

A teacher and defender of Phrenology should labor for the sake of Phrenology, and *not* merely for the dollars and cents it may help him to obtain. We understand that "the laborer is worthy of his hire"; but a Phrenologist should be actuated by a missionary spirit, and work for "the good he can do," rather than to hoard up the wealth that perishes in the using, and which you can not "pass" to purchase a place in the next life higher than this life merits. If you have a high object in view, say the procuring of a Grand Central House for this institution and its appurtenances, cabinet of illustrations, etc., I would heartily wish you success. By the way, *that* will be done some day, and blessed be those who can do the most in that achievement. Hoping that it may be done during my life, I feel as if I could then die in peace, for that is my great desire; but it is not in my power to do it alone. Some persons seem to think the name Fowler & Wells Co., and The American Institute of Phrenology, represent millions of dollars; but, unfortunately, that is not so. Yet I live in the hope that persons who have been benefited by Phrenology—and there are many who have been—may at length see it in their way at least to leave a bequest that shall procure the needed Home for Phrenology. It would be well for it to come in the form of a memorial for those who have labored in the struggle for the early existence and promulgation of the gospel of Phrenology. It would be a grander monument than any pile of marble that could be erected in any cemetery or public square. What is needed is a fire-proof building, where could be kept in safety, yet on constant exhibition, the vast collection of specimens illustrative of the science, with an auditorium where lectures could be held every day. It would be well if it were endowed, so that those who were qualified and willing might devote their whole time to advocating and practicing the science, and receive adequate compensation; until there shall be in every town a public practical Phrenologist, to whom

every child may be taken for advice as to what he is best adapted to as a calling for life, and be educated accordingly; and the examiner shall receive his compensation therefor from the public treasury, as doctors are now paid for vaccinating children against small-pox. The public could well afford to pay that tax, for *then* we should not need to pay for the support of policemen, courts, jails, prisons, executioners, and all the paraphernalia of evils that grow out of distilleries, breweries, and the many liquor saloons; for then children would be so educated as to understand and avoid the effects of such stimulants. When that time comes, we will have arbitration, instead of brute force or war to settle differences, and, therefore, have no need for ships of war, armies, and "Arms and Ammunition."

Do you see how much there is for you to do? The adage, "Many hands make light work," is applicable here; for there is a niche for each one of you, and enough for you all to do. *Expect* that millennium that is surely coming: help to *build up*, not pull down, whatever will best conduce to hasten that period.

With a parting blessing to the class, individually and collectively; hoping you may not be classed among those who having eyes, see not, and ears, hear not; and hoping that wisdom may be unfolded to you as by a skylight, and not as through a glass, darkly—I wish you good-speed in the line of your duty.

ADDRESS BY DR. DRAYTON.

MR. PRESIDENT, LADIES, AND GENTLEMEN:—I may, by way of introduction, remark in reference to what the Vice-President has just said concerning outside opinion that the Fowler & Wells Co. and the American Institute of Phrenology represent millions of dollars. All those present will probably admit that, if this be a financial mistake, and there are no millions of dollars in those establishments, there is much, however, of *common sense*.

I have but one thought in mind at this time; it is a simple one, and easily suggested by the tendency of modern thought and liberal philosophy toward what is called pessimism. Men of great talent and shining scholarship are much given to lamenting the weakness of human nature; they speak of its defective constitution, its brutish selfishness and crime, and are heard asking the question, "Is life worth living?" These men discern but a low, material origin in man, consider him but a higher kind of machine, and see no future for him beyond the horizon of death. These men find no cheerful promises in philosophy, no encouragement in appealing to science, and to religion they make no appeal, for to them that is but an emotion, transitional and vague, an aspiration, a superstition. Nevertheless they are a prey to cravings that have never been satisfied. These men, like Jean J. Rousseau, find themselves at the confines of old age and dying ere they have begun to live. How gloomy their vision of life! how sad and even dangerous to the tender soul that would take counsel of them.

I will not say how much of error such men as Malthus, Goethe, Schopenhauer, Strauss, Haeckel, and Harrison, have entertained; how miopic their vision of the natural world in its higher and spiritual relations; but the truth is evident to one of clear convictions that they

grasp not with an earnest appreciation the inner meanings of human destiny. *Life is worth living*. It is a glorious privilege to live. In earth and air and sea, and in the boundless canopy of heaven, where gleam a million stars, the willing soul may gather infinite delight. The evidences of plan on the part of a benevolent Providence, to the open-eyed, are patent all over the universe, patent to the man who looks upward and not down. A Hindu poet truly says:

"I doubt whether those who through every clime
Have wandered and sought in peace and in strife,
For gold and for treasure, have ever found time
To study the genuine value of life."

What has this to do with us? This certainly: If there be a class of teachers whose mission is to demonstrate the value of life, it is they who teach the principles of a true mental science, for it is theirs to show man what he is, to teach the plain, blunt truth of organization, and at the same time declare its possibilities, yea, probabilities, of forward, upward development, through a proper and earnest using of the powers that belong to a man.

Longfellow, in one of his poems, makes a beautiful instance, which is in point here. An ignorant country youth sits by a hearth-stone, and in the lambent play of the burning faggots tries with awkward fingers to draw pictures on a bit of board with charcoal. While thus occupied, a wandering artist enters, takes the rude crayon from the young man's hand, and, with quick and easy motion, sketches a graceful scene upon the board. Thus the rude peasant's talent is aroused to vigorous activity, and he learns a precious lesson from the stranger's example.

It is a weak and shameful spirit that would decry human life. Out upon the man or woman who puts on the insignia of Phrenology and disgraces it; such are false to their privilege and great trust. I do not believe it possible that a true man would do this. No, with a remembrance of those world-lights, Gall, Spurzheim, Bell, Elliotson, Vimont, Pinel, Fossati, Mann, and Howe, those great men whose heads were bathed in the rich glory of lofty conviction, far above fog, doubt, and suspicion, we should be encouraged in our belief that man is most excellent in faculty, most competent in capacity, a being whose origin is divine and whose future in this world and in another world is safe with his Creator.

ADDRESS OF REV. ARTHUR CUSHING DILL.

MEMBERS OF THE GRADUATING CLASS, LADIES AND GENTLEMEN:—To instruct and counsel you has been a pleasure; to bid you "farewell" causes me pain. Your Institute course is ended. Your life work begins to-day. I say begins, for even those of you who return to your already chosen occupations or professional duties will, in a certain sense, begin again with, I trust, nobler ideas of man and woman, more exalted ideas of the Creator and yourselves, inspired to a whole-hearted life of self-sacrifice in humble dependence upon and devotion to Almighty God.

I am here to bid you a long farewell. "Farewell!" 'tis a beautiful word, for it is a prayer that thou mayest fare well. "Fare-thee-well!" Lips, teeth, and tongue reluctantly articulate the sad sounds, while the heart that

feels them is pained. "Farewell!" The moaning wind seems to feel it; the sighing trees seem to speak it; the departing birds sing it. And, as I shall stand a few hours later "on old Long Island's sea-girt shore," and a few days later looking out upon the Atlantic from off Ocean Grove's deserted beach, where the waves dash and splash on the rocks, while the receding waves foam and wash the shells, and polish the stones—there, amid the ceaseless sighs and smothered moans of old ocean, I shall think of this deserted lecture-room, and of you and this "farewell."

"Fare thee well : but not forever.
Life is short, but never more
Shall we cease to be. Yea, never
Till eternity is o'er."

We are spirit, and not merely flesh and blood; and that flesh and blood hath nothing to do with real personality and consciousness. I am a person, not because I have eyes, mouth, face, body, limbs, or even a brain. Take away my eyes; I am still a person. Take away my mouth, and let me eat and breathe through an inserted tube in my throat; take away my limbs; even destroy my body and brain—and I still live!—myself, the conscious ego, lives! I am a spirit, born for eternity, an intelligent mind, affectionate and free-willed. I have a body of flesh. Its head-center contains a brain of nerve-cells, the organ of that mind. This body is the servant of my spirit, and I pray God unceasingly lest at any time I should become subject to its desires; with Paul, "Lest while I preach to others, I myself become a castaway;" "I keep my body under," and use it only as God would have me use it for His glory and man's good. I who speak unto thee am a spirit. I would give more for a pennyweight of spirit than for a ton of flesh, yea, a universe of matter. I am a spirit. We are more than matter. Matter is and ever has been subject to the spirit, intelligent, affectionate, ruling, dominating spirit.

You have studied MAN in the flesh, in the American Institute of Phrenology, which has no peer in the world, and where, I dare say, you have gained a more correct idea of man, and have learned more of human nature, than you could have done in all the other institutions of the land. But in these, my last words to you, as I did in my address to you at the opening session, I warn you of sensualism and sensuality. Think of men and women, first of all, as immortal spirits; and remember that this explains the wretched and wicked lives of many persons of talent, and why the gifted sometimes sink so low that they dishonor the human race. It is a question of spirit, of what sort it is, good or evil. The timid, delicate, slender, narrow-headed girl (beautifully personated by Adele Belgrade in Salini's *Gladiator*), is less afraid of the half-starved lions, angered at the point of the keeper's lance, now roaring in anger, hunger, and pain, than is the trained gladiator, with his wide animal brain, and large Destructiveness and Combativeness. Hamlet is right; a guilty "conscience doth make cowards of us all."

The word of God is true; it is "a lamp unto my feet, and a light unto my path." "Moreover, by them is thy servant warned, and in the keeping of them there is great reward."

"It is not by might, nor by power, but by my Spirit, saith the Lord." The difference between men, then, in the end, is a difference

more of spirit than it is of flesh and brain. The good man—and by the good man I do not mean the goody, good-for-nothing man, with little or no brain, and scarcely anything else; but the out-and-out, every-day, strong-hearted, generous-souled, pure-minded "honest man, the noblest work of God," who is animated by the Holy Spirit of God. And the evil man, working with the natural laws and the spiritual laws, or the natural laws in the spiritual world, is ruled and enslaved by the evil spirit. Let the evil spirit be dethroned, and God's spirit enthroned, and, even though Destructiveness be large, Acquisitiveness enormous, and Amativeness "seven," God will be honored, and men will be blessed by a noble life of good influence.

The body is but dust and earth, and to it shall it return. Throw not thyself away as if to sink into the grave and be lost with it. But rather let thy body be to thy spirit what the boiler is to the engine, to confine and increase the powers, and direct the force, of thy mind, the soul. When done with it, let it drop back to earth—"earth to earth, ashes to ashes, dust to dust"—whilst thy soul moves upward, and is lost from sight of earth in the vaulted, star-lit dome, the portal porch of the Temple of God.

ADDRESS BY MR. SIZER.

FRIENDS AND FELLOW STUDENTS:—The end of our class-work is reached. Together we have wrought and toiled, and to-day we have come to the point from which our lives radiate around the belted earth. In our class we have indeed the ends of the earth represented. We have one student from New Zealand, another from Australia, as far from where we are assembled as they can be placed on the face of this round earth. We have students from old England; we have students from every part of this broad land; and Canada supplies us with several. The Pacific slope has sent her brain and hope and power for work. We have tried, in our instructions, to relate you to life so that you shall go out with new forces and that hereafter life shall be wider, higher, and richer. We have no secrets to conceal. We have no purposes to hide. We desired to unfold what we have been able to learn and to know by time and study and experience.

From this time your life takes new form, new responsibility, new hope, new assurance of success. It is a life-work, but, thank God, it is a work for man, the highest entity that we know of God's creation. We come not here to study the planets, vegetables, fruits, or insects. We come here to study man's proper study, MANKIND. All else is embodied, because all else is below him. This side of heaven we can speak of nothing so rich and immortal as man himself. A little child when it first opens its shining eyes upon life, is worth more than the most massive planet that swings its lazy bulk through the universe, and shall live when planets have ceased to move. You have a large work. It is a work that ministers to mind and body as well as to estate. Every man that you rescue from a downward or wrong course of life is a new creation. It is helping a man to be more than he otherwise would be. You become to him a father, an elder brother, a renewing spirit, for you show him the right path, and

teach him to follow it. In my long experience (now half a hundred years) in this field, I look back and the shining pinnacles of memory glitter in the descending sun of my life, and I rejoice in whatever I have been able to do, which has ministered to human weal, because it rewards myself as much as it helps those who have been benefited by it.

Forty-six years ago, in the town of Northampton, Mass., a woman who had been a teacher, and a good one, invited me to her house to examine her eldest child. I found enormous Destructiveness and Combativeness and in the face and eyes of that little girl, two and a half years old, there was mischief and an evil spirit. The broad, bulging middle lobes of the brain filled my hands and startled me. I reached forward and took hold of the other little one, the sister, with its narrow, high head, and then of the mother, and found in her a beautiful development, large Order and Conscientiousness and Firmness. I looked at the mother and said, "What is the matter with this little girl?" She said, "That is what I want to find out." "I suppose," said I, "that you have brought her up to be afraid of the whip, that you have tantalized and annoyed her Destructiveness and made it overgrow until the child is like Ishmael, her hand against every man, and every man's hand against her." I think you have been too severe with her. Why is not the younger one developed in the same way?" The mother told me this, that she had been a teacher, she had "boarded around;" she made up her mind, seeing the misbehavior of children in families, that she would, if she ever had children of her own, train them better (and I suppose that teaching other people's half-trained children has a tendency to make a teacher's oppugnant faculties sharp); and when this little girl came, the mother made up her mind she would begin early to train her "in the way she should go." The child was early seated at the table, and when she reached for things, a small switch was freely used to correct her with; and in that way she kept the little child's Destructiveness and Combativeness boiling hot. The child never could be easy, and speak out what a child might innocently say. The mother wanted her to be proper and correct and orderly, and obey the least injunction and the slightest wish of the mother, so the child became worse and worse; and "finally," said the mother, "she has a kindly disposition, she loves pets, she is intelligent, and when she is not angry or stirred up in that way, she seems to be good. On one occasion I punished her for something she had done. She could not fight her mother, so she picked up a pair of iron tongs, about as heavy as she could lift, somewhat like a very heavy club to a man, and struck her pet kitten and broke its back, killing it then and there; and the poor little girl cried for about a week about the dear cat she had killed."

The truth is the mother had trained the murderous spirit into the child by trying to make it so perfect, contrary to a child's emotional life, and she made up her mind, she said, when she saw this girl whipped into perverseness, that the next child she had should be trained differently, "and I have taken a different course with this little one and you say her head is different." She did not know anything about Phrenology, and wondered at the differences, and when pointed out, recognized them. Now I fancy that her future

management will be an exposition of the value of Phrenology to mothers.

Our life in the practice of Phrenology is full of all kinds of droll incidents and opportunity to benefit others. It may interest you to mention a case which occurred some years ago. A little coterie of six men and their wives in Brooklyn had formed themselves into a kind of social club, and they dined once a fortnight around in each others' houses; they read aloud the same books, and sang. If they wanted to go to a concert, twelve reserved seats were always procured in advance, and they all sat together, rejoicing in whatever was good. They heard the same lectures. If they went to a theater they would go together. They went to the same places; they saw and read the same books, and they ate the same food at each others' tables; and they were all-sufficient among themselves socially, and looked very happy. One of the women was a believer in Phrenology, and they used to rally and ridicule her about her belief in Phrenology. Finally she became a little warmed up in the subject, and said: "Go over to Fowler & Wells and ask Mr. Sizer, 'Please examine my head and write it out;' and when he gets through he will ask your name, and you just say: 'AB, CD, XYZ, 521,' anything, and pay him his fee, and agree on a time when you can go there after the statement." The six men came in that way, and when the last gave his as W. P. I said: "What in the world is up, anyway?" and then he told me the story. The woman said if she could not take the written descriptions which I should make of those six men and read them once through and give the correct name of each, she would refund the entire cost herself.

He agreed to report to me, and in a few days he came back and said: "She read them once through and stated the owner of each;" and they then packed them off to Boston by express to the wife of another of the party, who happened to be visiting there, and she read them twice and sent the names back. That was a very sharp ordeal; but in all my long experience I never have been put into a corner so as to feel ashamed of what I was able to do; but as Rev. Mr. Graves said of me once, to the audience, when he and I were lecturing together: "Mr. Sizer will follow the phrenological developments no matter where they lead him;" and I will state one thing, I do not remember that I ever did switch off from what seemed to me to be the truth respecting a person, regardless of consequences.

In a place where I was lecturing in Worcester County, Mass., in 1840, during the "Harrison, Tippecanoe and Tyler too" campaign, those memorable days of long ago, they planned to bring forward the weakest young man in town, who had been brought up carefully and nicely, as his father was wealthy. He was handsomely dressed; his nails were clean, and everything about him looked shining. They brought him into the church for examination at my first lecture in the place, and called out his name as Esquire Jones; and when he came up through the broad aisle to the pulpit where I was, there was a suppressed titter all over the house. Of course I did not know what it could mean. I looked at the young man, and I did not see a chance to put very much Esquire on him. His head measured, I think, twenty inches. I examined it carefully; my heart fluttered, and the audience was still. I reached forward over the

pulpit, as ministers sometimes do, and doubled up one of my hands into a hard lump, and I said, pointing to it: "When you have a small head, you have not much timber for a justice of the peace. If you have no better timber than this, I think you pretty poorly off. Will you ask any questions?" The minister promptly said: "I think the audience is satisfied." They did not, in fact, want anything said of him, because he was the son of the physician there.

"Then they called out for 'Dick Williams,' and a great, broad, brawny man came up the aisle with one boot over the trousers and the other foot with an old shoe on, and he was grimed with charcoal, his hair was full of hayseed, and he wore an old, red, sweated woolen shirt. He sat down with a kind of awkward good-for-nothing move. I measured his head, and it was twenty-three and a quarter inches. I felt of his solid muscle, and the brain was grandly developed. I, of course, was in a flutter and anxious. I studied the poor fellow, who looked as if he might have been drunk and roughly treated; yet he did not look like a drunkard, though he looked as if he might have been rolled in the gutter. Finally I got myself wound up. There is where Combativeness sometimes comes in. I said: "This man may have had bad habits and have gone to the bad; he may have abused himself; he may have been disappointed in love; whiskey may have done its part; but," said I, "there is not a man in this town that could have become more than this man with opportunity, and he ought to be a man of mark and power. He may not be, but God meant it; the man may have spoiled it by wrong habits or bad surroundings." I added: "Have you any questions to ask?" The minister responded: "There are no questions, sir. The examination of the first was all right. We called him Esquire Jones as a blind. You have now been examining Esquire Jones himself. He is the owner of all these factories and iron mills. Once a year he has a kind of frolic in going to the forest with forty or fifty men to make charcoal for the year; and we went out several miles to see him when we found you were coming here, and requested him to make himself as rough as possible and to come home and be presented as he looked in the charcoal camp, as he has been presented now." He added: "Permit me, in the name of this audience, to welcome you here into this house and church and to my own table. We have had men here that somehow had no convictions, or had not the courage of them. You have passed the wonderful ordeal; you have been successful." He then came half way up the aisle and met me at the bottom of the pulpit stairs to shake hands, and I afterward dined with him. Now suppose I had taken the first man's white hands and nice clothes as an indication of talent and position and described him accordingly! Suppose I had taken that big, broad, brainy, brawny man, the king of the town, and made him out a good-for-nothing loafer because he looked scruffy, ragged, and rough, and thus set people laughing at me, they would have sent me out of the town.

You see, we have had all sorts of trials and triumphs. I had a letter about two years ago from a young man in Canada, who writes:

"Fowler & Wells Co.:—Your delineation of my character from likenesses surprises me in a great many ways; but coming from so prominent an expert, I am determined to

follow your advice and study law. For many years the platform has been my ideal, though circumstances compelled me to abandon it for a time; but now I shall leave my home-life and move out of the surroundings I am in. I am not too old to make a step in the direction you point out. In my youth I had a fair education; but while the practical knowledge of life and men and things became enlarged, the scholar became less. I trust I shall be successful in acquiring knowledge. I shall do my best faithfully and leave the rest to Providence, which has kindly watched over me when a poor wanderer among the fields of the Alps, and in the prairie frosts in the Northwest. Yours gratefully,
G. A."

Letters like that, coming as the result of that which one has helped men to become, sweeten life. The amount which people pay us for our services is necessary to keep our bodies going, but we want something more for our souls to do than merely to get a living. "The bread that perisheth" must be had; but that which perisheth not, but lives forever, shall greet us when we get through with the life that now is, and enter upon that which is to come.

I welcome you, brethren, into this broad, generous, and noble field. You are working at the best material men have touched or attempted; and the world is wide, there is enough for us all to do, ten times more than we can do. Let us do it faithfully, and every good word and work that you do, shall bring its ultimate reward sometime.

I now have the pleasure of calling upon those students who have been chosen by their associates to speak in behalf of the class. The class is so large that only a few could have time to speak. Professor Hatfield, one of the chosen speakers, has been three hours already on the ocean, returning to his home in England, and he has left for us a manuscript which I shall ask Mr. Gray, of the class, to read to us.

ADDRESS BY PROF. HATFIELD, OF BRADFORD, ENGLAND.

TEACHERS AND MEMBERS OF THE CLASS OF 1888:—At the present time Phrenology is attracting a good deal of attention in the old country. The science is most ably represented in the world's metropolis by Professor L. N. Fowler, who publishes the *Phrenological Magazine*, which is in eager demand by thoughtful people, and the veteran Mr. Craig, of the London *Daily News*, is ever ready to defend the science in the press. Mr. Nicholas Morgan comes next in intelligence, scholarly ability, and power to read character.

A good phrenologist generally draws large audiences and is well patronized, and many people are now glad to avail themselves of the benefits of phrenological examinations. There are several itinerant lecturers of inferior ability, and some of low morals. The performances of such disgust the people and excite prejudice against the subject. There has recently been established in London the "British Phrenological Association," the professed object of which is to elevate and protect the science from misrepresentations.

The chief opponents of Phrenology are the medical men, some of whom are bitter in their antagonism. The principal reason is that they do not want the masses to understand much about mental science, as most of them

thrive on the ignorance of the people. In my opinion, every phrenologist should be a hygienist, and teach the people how to live and what to eat in order to be healthy and happy, since morals are very much affected by the physical conditions.

When I commenced my career as a public phrenologist, I had to read my lectures, but soon discovered that reading was not a success. At last I made a venture to speak from brief notes, and found that this answered my purpose much better and increased my influence with the audience.

When only sixteen years of age, I accidentally became acquainted with phrenological literature. At the house of a friend I was looking over his books. I came across a bound volume of the *American Phrenological Journal*. The subject was quite new to me, and seemed to open up a new world of thought. I read page after page, and began to wonder what it all could be, and was anxious to know something more. This gentleman, being well versed in this and kindred subjects, gave me all the information I desired, loaned me books, and suggested the best to purchase. I afterward removed from that part of the country to a business center, where there were books, newspapers, libraries, and lectures.

Phrenologists visited this place, and I eagerly listened to their lectures and became fascinated with the subject. I had my head examined by Prof. L. N. Fowler, and he told me: "Whatever you do you will never be content unless you become a Phrenologist." I had such a love for it that I determined to become one. I was long anxious to attend a session of the "American Institute of Phrenology," in order to receive the best possible instruction, as I was aware that in England the science suffered much through the want of thorough training and the deficient moral principles of some of its practitioners.

Lord Beaconsfield once said: "Everything comes to him who waits," and I waited; and at last the opportunity came to attend this Institute.

I am a wretched sailor, and have a superstitious dread of the water, as it is only a few years since my mother was drowned in crossing a river; but I summoned up courage enough to make the ocean trip; and having conquered the obstacles that at one time seemed insurmountable, I am now a graduate of this Institute.

During the last seven years I have lectured and practiced Phrenology in public, and though at first my success was very meager, each year has been better than the preceding one.

I love the *JOURNAL*, and have read it for the last eighteen or twenty years, and would not be without it; and I am very glad that I ever came in contact with its pages.

For the remainder of my life I shall remember with pleasure this visit to the American Institute of Phrenology. The lectures and practical demonstrations by Professor Nelson Sizer are simply priceless. No practical Phrenologist can afford to be without his instructions and suggestions. No living man has had such a rich and varied experience in the practice of Phrenology. He has been so kind, so considerate, and so cheerful, and has done so much to make us all understand the principles and details of the science of Phrenology and human nature, that I shall always be grateful to him.

We can never forget Mrs. Charlotte Fowler Wells, with her motherly kindness, her enthusiasm, her patience, her industry, and her eager desire to impress us with the importance and solemnity of the subject; indeed, she has been a corner-stone of Phrenology for the last half century.

The scholarly lectures by Dr. H. S. Drayton should inspire us to read, observe, take notes, and to be abreast of the times in reference to the brain functions and the physiological discoveries of the day. His lectures evince deep reading, close study, and scientific observation. The lectures by Drs. J. Ordronaux, R. A. Gunn, and N. B. Sizer, have also been rich with information which we could not have easily gleaned from reading.

The Rev. A. Cushing Dill has been most persevering in his endeavors to teach us to lecture and speak effectively and elegantly. His hints on breathing, articulation, and voice-culture, we shall find invaluable.

We now wend our way to different parts of the globe, feeling better, stronger, braver, and more efficient for the great work that lies before every reformer. We must ever be on the alert for new facts and new ideas, and avoid the egotism, conceit, and vanity which mar the usefulness of so many men.

Of course we expect to make money, and can not get along without it, but this should not be the chief end of our labors. When people discover that a phrenologist is greedy and mercenary, they soon lose faith in him. We must ever remember the moral bearings of the subject, and that the great law of compensation is constantly at work, and if we do wrong the consequences are sure to follow. The poet has it:

"The mills of the gods grind slowly, but they grind exceeding small."

In conclusion, I wish to express my gratitude and thanks to all of our teachers for their uniform kindness, and trust that the American Institute of Phrenology will soon be established in a permanent home of its own. I, for one, shall esteem it a pleasure to contribute to such an end, and hope that this matter will be speedily taken up and definitely settled.

ADDRESS BY MRS. MARIETTA
MESERVE MORRIS.

PHRENOLOGY IN THE SCHOOL ROOM.

KIND TEACHERS, FELLOW STUDENTS, AND FRIENDS:—With eager hopes and pleasant anticipations I hailed the first possibility of coming to New York to learn from the very fountain head of this grand science of Phrenology, to receive the words of wisdom direct from the lips of those who have made the "Study of the brain and its influence upon character," a special, earnest study for the last half century.

We had influence and responsibility before, but, after receiving our diplomas and entering the field, some as ministers, physicians, teachers, or lecturers, etc., it will be increased many fold. We shall be teachers in a broader sense. Phrenology has done more than any other science or art for the improvement in the past fifty years in the treatment of insanity, idiocy, and the management of criminals. Its influence has been felt in Theology, Letters, Law, and Teaching.

Our best educators of to-day consider Phre-

nology the true science of mind and the only one that can be applied to the education of children. If we would save the nation and improve the morals of society, we must save the children. Phrenology would enable the teacher to solve many difficult problems in school-government, which, without it, will remain a mystery and result in serious injury to the young. Children often seem dull in one or more studies, but Phrenology would enable the teacher to appreciate the strong faculties and perhaps see the possibilities of a Watt, Webster, Beecher, Edison, or Nest. He or she will find the child's weak faculties, cultivate and stimulate them to action, and guide his efforts in that direction in which he can make the greatest success in life.

So great is the responsibility of the teacher in training and educating the children with as many different dispositions and equally as varied home training, that, if it were possible, we would have him or her perfect. In order to select the most capable person to fill this important position, the applicant should be examined by a competent phrenologist.

The teacher is required to teach many branches. Among these are Botany, Physiology, etc. One more study is necessary, that of Phrenology. If, as many claim, we have already too many studies in our schools, would it not be better to put aside some less important study, for is not the study of "Human Nature," the crowning work of our Maker, of greater importance than that of plants or flowers? Physiology in most of our schools, is taken up more as an accomplishment than a useful study. The pupils do not begin this until they have finished the common branches and are ready for the High School. The greater part of them never reach this point, for necessity compels them to leave school before Physiology is reached.

Those who are fortunate enough to study Physiology, begin at the feet and work up to the head, every part increasing in importance as they advance. They have finished the eye, and one step more, the "Masterpiece" of this wonderful structure, the brain, the seat of thought and nervous system, is reached. But this controlling organ, upon whose health, size, quality, development, and culture our character, talents, and natural tendencies and capabilities depend, is little more than named. Its beauties, grandeur, and importance are passed over unexplained. Phrenology is the only true Physiology of the brain.

The best teacher is he who best understands the material he is working with and how to make the most of it—the pliable, stubborn or susceptible nature of the children, whose future success or failure in life is in his hands, like clay in the hands of the potter. The children of to-day are the men and women of to-morrow. A teacher's work lives after him. In my eleven years' experience in teaching, I had the opportunity of using Phrenology in the school room, with the most encouraging results. I found it a wonderful incentive to study, good conduct and self-improvement to pupils and teacher alike. I made it plain and interesting to them with a bust, illustrated model head, the PHRENOLOGICAL JOURNAL, and books written for the teacher.

In the present educational system, but a very small portion of the brain is considered worthy of notice. The child's intellect may already be overworked and sapping his bodily strength, yet with pride the teachers and

parents keep up the crowding, cramming process, while, through neglect, his Executive, Moral, or Social nature is starving or running wild.

The perfect man or woman is one that has a well balanced Physical, Moral, Intellectual, Selfish, and Social development. If a child has already too large Firmness, do not excite it by setting your Firmness against his. Appeal to his reason, Conscientiousness, and self-respect. Put your hand on his head; tell him what organ makes him stubborn. Let him examine his own head; show him pictures to illustrate this. Be kind but firm, and let him feel you are his friend and helper. He will soon feel you are right, and, knowing his weakness or his excess, he can control himself better. "To be forewarned is to be fore-armed."

Other very large or small organs, as Self-Esteem, Combativeness, Destructiveness, Hope, Acquisitiveness, etc., should be treated in a similar way. Don't appeal too much to Approbativeness, which is the most abused by being the most used organ, by teachers, friends, and parents, in governing children. It takes the place of Conscience, Self-Esteem, Caution, and Reason; and in fact it becomes the pivot around which every action or thought revolves, in most heads. If a child neglects its duty or does a wrong act, don't say, "What will people say of you? How will it look? That is not pretty or nice," and many other ways of teaching it to think, live, dress, and to mold its whole existence by this abnormally active Approbativeness. Teach them to do right because it is right, and through self-respect, that the boy just like other boys, and the girl that must be like other girls, do not amount to much.

Teach them to be themselves, to think for themselves. Do not wait to see what Mr. or Mrs. Grundy will say or think of them, but do what their better nature tells them is needed and right to be done.

Little children as well as older ones can understand Phrenology and like it. By appealing to reason and all the noble traits of character in children, through Phrenology, I found they were easier controlled, learned better, and the love, respect, and confidence they showed me, never could have been gained by force of the rod. I gained the respect and confidence of the trustees and parents, and so was able to get positions more readily. They also became interested in the science themselves.

Sister students and teachers, Phrenology has done even more for me than all this. Through Phrenology in the schoolroom, I met the dearest, truest friend, companion, and helper of my life, my husband.

Dear instructors, fellow students, and friends, we must soon bid each other farewell, and begin our important life work. Some in the North, South, East, and West, others in the Old World and on the islands of the sea. May we not falter, but push steadily onward, each doing his part well. We shall ever look back upon the past weeks as being full of instruction, interest, and pleasure, ever gratefully remembering our kind teachers, Mrs. Wells, Prof. Sizer, Dr. Drayton, Drs. Sizer, Gunn, and Ordronaux, Rev. Mr. Dill, and others who have labored so earnestly and untiringly to help us prepare for this great work. May your lives be long, happy, and prosperous. May we ever be willing and able to help

bear the burdens you have borne so long and faithfully alone, shall be the constant prayers of the Phrenological Class of 1888.

ADDRESS BY PROF. GEORGE MORRIS.

WORTHY AND RESPECTED TEACHERS, FRIENDS, AND FELLOW STUDENTS OF MANKIND, THE MASTERPIECE OF CREATIVE GENIUS:—For the past six weeks we have been studying heads at headquarters. It was not fashion or fancy, but love of knowledge that brought us from England, Canada, New Zealand, Australia, and from almost every corner of the United States, to this, the only chartered institution in America, or the world, which teaches how to read character. The first time that I heard of this science, the thought of its vastness made me tremble. After seventeen years of careful study, now every photograph, face, head, or skull that I see or examine delivers up a full description of itself, past, present, and future.

We have in this class, men yet in their prime, who in early manhood learned from Phrenologists, from one for a few cents, from another for a few dollars, *what they could do best*, vocations they had never thought themselves capable of following. They did as the Phrenologists told them. To-day, with comfortable fortunes, for which they have Phrenology to thank, they are with us, studying this physiological, mental philosophy, for their own pleasure and benefit, and also that they may help others. There are thousands who have been helped by this science. Several have visited our class and told us how Phrenology had helped them. Others we have seen receive just the needed word of encouragement, their doubts and fears removed, and they went on their way rejoicing. Professor Sizer, Mrs. Wells, and Dr. Drayton have given us such letters on temperament, brain, and skull development as no other three teachers in the world could give. They instructed us by examining living heads and faces before the class, and by having each student study heads, faces, pictures, and skulls under their direction. A few days ago I brought three men to the class, whose histories I knew, but carefully instructed them to dress and act in such a way as not to give the examiner or class any clew as to what their vocations or social positions were. Professor Sizer, without having heard them speak, told their true character far better than they could have done it themselves. As fast as the Professor could talk, he told those men their past histories, present conditions, their hopes, ambitions, and possibilities for the future. He put his hands on one of the men and in less time than it takes to tell you, he said, "Sir, there is a certain branch of a certain profession for which you have all the physical and mental qualities necessary." Out of the many ways of making a living in this great city, this science enabled our teacher to name the particular branch of that profession which the young man has already been following for years, and in that special branch has no superior of his age in America.

These wonderful unfoldings of character we have seen in this class repeatedly. We are sometimes inclined to wonder that a mistake should ever be made by anyone in reading character. It is so easy when we know how.

Dear friends, this is the proudest and happiest day of my life, as I see forty-three earn-

est students, and among our teachers Doctors of Medicine, Divinity, and the Law, and two veterans of Phrenology that have worked hard in its service for fifty years, without growing weary in well-doing. Let us compare this Institute of Phrenology (chartered and protected by the law of the State) with Phrenology ninety years ago, when Dr. Gall, the discoverer and founder of this science, stood alone in the civilized world, like the voice of one crying in the wilderness, saying, "This is truth, though at enmity with the philosophy of ages." His discoveries, compared with the metaphysical teachings of his day, stood like a solitary star upon a dreary night, rendering darkness visible.

Phrenology as a *profession* is only fifty-four years old, but to-day we have professional phrenologists, located in respectable offices in nearly every large city in the civilized world, and hundreds of traveling examiners and lecturers whose popularity and financial success is only limited by their ability and industry. The future of Phrenology is bright. The world is hungry for a knowledge of human nature. Phrenology alone gives this much needed information. I feel happy as I compare this large class with the one I attended ten years ago in this Institute, with only nine students, and again the class of twenty-four that I attended four years ago. Times are changing for the better.

My dear brothers and sisters, who are just entering the lecture field with the finely illustrated bills, pictures, skulls and casts, the knowledge you came here with, and the practical lessons you have received at this Institute, you can never be able to appreciate the difficulties we encountered who commenced lecturing without any such scientific training. Twelve years ago I entered the lecture field; my bills to attract the attention of the people or my knowledge of the subject to interest them after they came, did not equal yours. The people were hungry and I gave them the best I had and dished that up hot. In that way I gave over 200 lectures. In 1878, I came to this Institute hungry, got full and went back into the lecture field with all I could carry in my head, note-book and trunk. Then I lectured for six years with such success as I had never dared to hope for. In that time I made a comfortable fortune and came back in 1884. At the second course of lectures I learned more than at the first. Four years ago I went to work again with my six old lectures much improved, and one new one, but soon found I had learned more than I had supposed. I had plenty to say and to stop only half unloaded troubled me, so I cut five of my lectures in the middle and made ten. They grew too long. I divided up again. Two years ago I gave a course of lectures at Portland, Oregon, lecturing seventy-two times in that city of 60,000 people. I could have lectured there until now, so far as the people were concerned, but having told them all I knew, I came East to learn more, and now feel well repaid for my work, time, and money expended in coming here for the third time.

In a few weeks we expect to go to work again. Some may ask, "If you made a comfortable fortune in the first six years after graduating the first time, having doubled that in the past four years, why do you still travel?" Because we can not help it. We love the good work for its own sake and for the good it will do. We visit only large towns,

carry our rubber bed, etc., rent rooms and keep house. We stay from one to three months in a place. Mrs. Morris helps me in the office, receives callers, explains books, charts, and cabinet during the day and also gives four lectures in each town. We do not know of any way to live that is more useful, pleasant and profitable. And we hope soon to save money enough to help build a college, a home for Phrenology in this city.

Beloved instructors, in the last four years you have improved much. Long may you live, for your labors are needed.

Fellow students, the harvest is great, and the laborers are few; let us go earnestly to work. If in the field our paths should cross, we will shake hands, sit down, compare notes, and have a good visit.

ADDRESS BY IDA V. DAVIS.

FELLOW STUDENTS OF THE CLASS OF 1888:—As we meet for the last time in our familiar classroom, I hope we feel the responsibility resting upon us as graduates of this Institute; and when we take up our vocation as professors of Phrenology, we will do our duty honestly and faithfully, and that while we view our profession from a financial standpoint, and take into consideration that we must live, and that it takes money to spread this grand knowledge of ours throughout the land, we must also remember that we are teachers of the human race; and although we are not perfect, we should conduct ourselves in such a manner that everyone will respect us and no slur may be cast on our beloved science through any act of ours.

In our lectures let us be plain, and practical, that even the children may understand them, and not be afraid to give good advice to those who need it, but be sure it is good before you give it. When a mother comes to us with her little boy and says, "What can he do best?" let us think carefully before we answer, for his whole future life may depend on the advice we give, for he may be a success if guided rightly, or a failure if put on the wrong track. For instance, if you wanted a man to go straight to Chicago, you would not put him on a train for Florida. Let us teach men that God has given them every organ for their good; and if they go astray, it is the perversion and not the fault of the faculty. Let us impress upon the minds of the women of our nation the responsibility resting on them as mothers, for "As the twig is bent the tree inclines." Let them also understand that they can influence the coming generation even before birth, and teach them Phrenology, that they may know how to train their children, for this alone gives the true plan of education. May Veneration and Spirituality make you look to God for help in your good work, and Conscientiousness make you honest and just, and your Benevolence make you kind and sympathetic as a means of influence. Combativeness and Destructiveness will make us brave and thorough in our work. In everything we undertake, let us try to remember the advice given us by our honored instructors.

Sisters in Phrenology, let us, like our venerable preceptress, Mrs. Wells, be brave and persistent in our efforts to introduce Phrenology throughout the land. How thankful we should be for the opportunities afforded us by

this Institute for the study of human nature, especially when we look into the past and see how, from the days of Gall and Spurzheim, Phrenologists have struggled to place the science of the human mind on such a basis that it may stand through coming ages. We came here thirsting for knowledge, and our kind teachers have labored faithfully to satisfy our thirst. Hoping we may do credit to their teaching, I will bid you "God speed."

ADDRESS OF J. C. MILLER.

IMPORTANCE OF PHRENOLOGY TO BUSINESS MEN.

ONE of the characteristics of the people of this country is that they are generally successful; and while it is true that some failures occur, success is the rule. But, whenever there are failures, they can be traced to incompetence, or inability to command the situation properly. While it may not be essential that every business man should possess a classical education, it is very important that he possess an education that will enable him to judge men as they appear in society in general; that will enable him to put the right man in the right place. There is certainly no course of study that treats so closely and definitely on the subject as Phrenology. We take, for instance, the business man who can read the temperaments of his customers; he finds a man with the Motive predominating; he knows that strength, firmness, and durability are to be the leading features, not only of the purchases, but that the language during the transaction should be full of energy, life, and positive assurances. But, should the Mental predominate, he knows the reason has full sway of the faculties; and the language as well as the tone must be milder, slower, and more deliberate.

Business men need to cultivate Acquisitiveness, as it would not only tend toward the acquirement of property, but the means of bringing about habits of economy and frugality, and thus prove the old adage, that "It does not depend so much on how much we make as on what we save as a surplus." Thus, with causality in the foreground, we secure the requisite amount of planning and thinking, and that attention which is always necessary to success. We see men everywhere, who, by their Firmness and perseverance, show to the world that they know no such word as fail, but go on with a steadfastness that is miraculous, and a consciousness of duties well performed. It is not only the mission of Phrenology to point out the means of success, but to determine who is honest, to decide who has ability, force of character, self-respect, and noble aspirations. It also aims to teach us the laws of health, which articles of food are really essential, and which are the superfluities, and those which are injurious and detrimental to health; and to it belongs the honor of an unalloyed, unselfish temperance movement.

It is a lamentable fact that business men so often become selfish and greedy. If Phrenology could only lay on a guarding hand, and say, "My friend, you have cultivated Acquisitiveness long enough; you have acquired sufficient property for yourself and family; retire, and build up your overworked energies, and see that you teach your children the perseverance, tact, and skill requisite to the suc-

ness you have attained," it would in a great measure disprove the oft-repeated adage, that "it is a misfortune to be the child of wealthy parents."

ADDRESS OF W. A. CORBION.

SUBJECT: PHRENOLOGY IN THE DRAMA.

MR. PRESIDENT, INSTRUCTORS, AND FELLOW STUDENTS:—About three weeks ago, after a casual sojourn of pleasure, on returning to this city from Manhattan Beach, with my worthy classmates, Messrs. Barnes and Gardiner (I trust their pardon for this personal designation), the subject of Phrenology held the boards—to use stage vernacular—and the question was, "Of what use is Phrenology to the business man?"

Mr. G. thereupon entered upon a defence of Phrenology, and graphically depicted of what value the acquisition of Phrenology will be to *him*, as a business man. There were many good points so well brought out and acquiesced in by his colleagues, that the subject was soon exhausted; when Mr. B. turned desperately upon me with the interrogation, "Of what utility is Phrenology to the actor?" and with the intensified stare of a mesmerist did he look into the sockets of my eyes, until I thought he saw my small Self-esteem. I collapsed, thinking of nothing but, "Angels, and ministers of grace, defend!" I soon recovered consciousness, and gasped out, "I don't know." The question was a stunner—probably never before asked. It suggested to me the likeness of the Thespian art to Phrenology.

I knew that Phrenology and the characters in the drama were so closely allied that I could not see how the chain was linked, so perfect was it in all its parts. This suggested to me the theme of this essay—Phrenology in the Drama.

Phrenology is as old as Adam, while human nature is as old as man himself. If as old as man, why not as old as Roscius, the first actor the Roman world has ever seen; as old as Garrick or Betterton; as old as Mathews, Mrs. Siddons, or even Charlotte Cushman and Edwin Booth? Are these not stars—phrenologists that shine light upon human civilization?

Phrenology is the *science* of delineating character. Is not acting the *art* of delineating character? One the reading, the other the portrayal of human nature—are they not inseparable? Is not Dante, Moliere, or Milton; is not Scott; is not Dickens, Mark Twain, or Fanny Forrester, each a phrenologist? Truly! they are delineators of character. Who dare reproach that "sweetest songster of all songsters," Shakespeare, the actor and dramatist, that godlike phrenologist, that *man*, who could dream a character better than all the gods could make one? Aye, listen to those beautiful lines of Romeo and Juliet. With what wondrous passion does Amativeness, Ideality, and Benevolence sally forth!

Romeo—She speaks:
O, speak again, bright angel! for thou art
As glorious as this night, being o'er my head,
As a winged messenger of heaven
Unto the white upturned wondering eyes
Of mortals, that fall back to gaze on him
When he bestrides the lazy pacing clouds,
And sails upon the bosom of the air.

Juliet—Oh, Romeo, Romeo! Wherefore
art thou Romeo?

Deny thy father, and refuse thy name:
Or, if thou wilt not, be but sworn my love,
And I'll no longer be a Capulet.

Romeo (aside)—Shall I hear more, or shall
I speak at this?

Juliet—'Tis but thy name that is mine
enemy.

Thou art thyself, though, not a Montague.
What's Montague? it is nor hand, nor foot,
Nor arm, nor face, nor any part
Belonging to a man—O, be some other name!
What's in a name? that which we call a rose,
By any other name would smell as sweet;
So Romeo would, were he not Romeo called,
Retain that dear perfection which he owes,
Without that title—Romeo, doff thy name—
And for that name, which is no part of thee,
Take all myself.

Romeo—I take thee at thy word.
Call me but love and I'll be new baptized;
Henceforth I never will be Romeo.

And, when that well-meaning Moor, with his lack of Secretiveness and want of reason, with his outraged Benevolence, Friendship, and Veneration, and perverted Self-esteem, discovers his error, how with his energy of character and terrible Sublimity does he wield the organs of Destructiveness, Combative-ness, and Firmness, to end his miserable life in perdition! Where, after being wrought, perplexed in the extreme, and played upon, he silently gazes on the remains of his devastation, on that sweet, innocent piece of clay, Desdemona, he repeats these lines:

"Oh! ill-starred wench—pale as thy smock!
when we shall meet at compt this look of
thine will hurl my soul from heaven, and
fiends will snatch at it—cold—cold, my girl!
even like thy chastity—O cursed, cursed slave.
Whip me, ye devils, from the possession of
this heavenly sight! Blow me about in winds!
roast me in sulphur—wash me in steep down
gulls of liquid fire! O Desdemona! Desde-
mona! dead! Oh! Oh! Oh! Oh!"

And with what power Shylock interprets the language of Firmness, Acquisitiveness, and his standard of Conscientiousness!

"My deeds are upon my head. I crave the
law—

The penalty and forfeit of my bond.
An oath, an oath—I have an oath in heaven.
Shall I lay perjury upon my soul?
No; not for Venice!

When it is paid according to the tenor,
It doth appear you are a worthy judge.
You know the law—your exposition hath been
most sound. I charge thee by that law
whereof you are a well deserving pillar,
Proceed to judgment! By my soul,
I swear there is no power in the tongue of man
To alter me—I stay here upon my bond."

Are not the following lines emblematic of the faculty of Benevolence?

"The quality of mercy is not strained; it
droppeth as the gentle rain from heaven upon
the place beneath; it is twice blest—it blesteth
him that gives, and him that takes. 'Tis
mightiest in the mightiest. It becomes the
throned monarch more than his crown."

Thus, I could quote from dramatists and poets, from Homer, down the ages, to the modern age of Thespian literature. But to do this would be only a repetition of what has already been done; besides, it would take more time than I am privileged to command. These few examples show concisely the object of this discourse, and further I have nothing to say.

I feel deeply honored with the privilege of this address, and modestly do I say it, as your youngest speaker, I have reason to feel humiliated on treading this stand, hallowed by the presence of speakers older and abler than myself; and as a sense of gratitude for the interest manifested in this poor attempt at a subject worthy the exercises of an experienced litterateur—I leave this threshold with a hearty farewell, and a wish that you who take up this subject of Phenology may thrive beyond all measure of power and success.

Mr. SIZER—We now have the pleasure of introducing the valedictorian of the class, Prof. Windsor, who can speak for himself.

ADDRESS OF PROF. WM. WINDSOR, LL.B.

MR. PRESIDENT, MEMBERS OF THE FACULTY, LADIES AND GENTLEMEN:—The duty devolves upon me, as your valedictorian, to pronounce the formal farewell of this class to the American Institute of Phenology, and its corps of efficient teachers. That duty might be weighed down with sadness, and would be, were it not for the fact that I feel an exultation in the knowledge that the word of farewell that I speak at this moment is the word of command that will send this band of brave and good men and noble women into the field of human improvement. I would fain at this time, eulogize the science of Phenology that I love, to which my life has been consecrated for some years, and to which it always will be consecrated as long as it lasts; but I feel that I can, perhaps, do that better by relating a little personal experience, and laying upon this family altar, if I may use the term, a tribute which will pay a debt of gratitude that I owe to the Fowler & Wells Company, as well as to the faculty of this Institute.

Some years ago, it was not so very many, I was a struggling lawyer; I had graduated with honor from my alma mater; I had gone out into the world, prepared by the indulgence of a father who wished me to have every advantage, with an education which was supposed by our college professors to place me equipped for the battle of life. But I found in coming in contact with men, that there was something wrong, there was something lacking. After all the expense and all the time that I had devoted to the acquisition of knowledge, it was comparatively useless in fighting the hard battle for an existence and for wealth. About that time, I addressed a letter to the Fowler & Wells Company; I invested in the "Student's Set" of books, familiar to all of you, and in a subscription to the PHRENOLOGICAL JOURNAL. I was induced to do that by the opinion of four phrenologists, the last one the lamented O. S. Fowler, who said to me that I was in the wrong pursuit. They all said, "You will do well as far as the work is concerned, but you will never acquire a great deal of success financially as a lawyer. You are qualified for a successful career in Phenology." I made that investment, and laid the case before the Fowler & Wells Company, and a letter came back with the books, and it was signed by the name of Turner. That letter contained words of encouragement; that letter placed me in correspondence with that firm, and began the relationship which has continued to this day; and I have learned to look for those letters,

and I have learned to look for them very much; and those letters have always been in harmony with the spirit displayed in that Institution, and in that office, the spirit that encourages men and women to do better and make the most of themselves.

Phrenology has been for me the philosopher's stone, which turned everything to gold from the first. After I read those works, after I had learned by diligent application to make examinations, I boldly entered the field, and burned the bridges behind me. I consecrated everything to the science of Phenology, and I made a success of it. I felt, however, in drinking from that fountain of knowledge, when reading the books that I had ordered, that it would be still better if I could come, and have a personal acquaintance with the men who wrote those words that did me so much good; and, if I could learn what they could tell, and receive the benefit of their experience by that wonderful evanescence of mind to mind, which transmits knowledge which can not be recorded, I felt that it would enhance still further my prospects for success. It is enough for me to say that the expectation has been gratified.

In taking a final farewell of the Institute as such, and its corps of professors collectively, I beg to express the hope that we shall all meet this side of the grave, and extend congratulations mutually for work well done in the grandest field that ever opened inducements to good workmanship in any direction.

I want to say to the younger members of this faculty, Dr. Drayton, Mr. Dill, and I would also address Dr. Sizer, if he were present, with the other members who have lectured incidentally to us, that it has been a privilege to associate with them; it has done us good; they have held up to us examples, as men, as teachers, in their personal life, in the spirit that speaks from the eyes, and can not be sounded merely in words, or coined to be written upon parchment; they have given us an inspiration, which makes me proud to know that I can be considered a brother with them in this field of human advancement. I am glad that they are young men—that I am a young man; and I am honored to feel that it is possible that, in the great future, we may work side by side in the work that marches onward toward the goal of human perfection.

There was never any good work accomplished, ladies and gentlemen, that did not have the sustaining power, the prayers and the influences of a good woman behind it; and I wish to say, before I quit this branch of my subject, that I owe to Phenology the magnificent creature who shares my pleasures, my triumphs, and my labors, in the double capacity of wife and business partner. I say that with pride, because she is responsible largely for my success; and I do not lower my self-esteem any when I say that with all the honest effort that I could make, I could not have accomplished as much as I have, nor could I expect to accomplish as much as I could hope to with a justifiable ambition, without her aid. And I am proud that I belong to that profession that places woman on an equality with man, and looks simply to what is her brain power, as the measure of her talents.

And when I reflect upon the history of this Institute, and I read of the foundation of the Fowler & Wells Company, and I contemplate its mighty influence as a missionary in my country, I recognize behind that influence the

prayers and the good work which only woman can do, in the personal influence of Mrs. Charlotte F. Wells. And, Mrs. Wells, while we may say to you a temporary farewell, be assured that every member of this class looks forward to that time when your wishes shall be gratified. Realize that every member of this class goes forward with a desire to aid you in that laudable ambition; and, if it should happen that it can be accomplished while you remain to witness that consummation so much to be wished, no one will feel greater pride in it than the members of the class for which I speak. The world owes you much. Whatever has been done by the Fowler brothers, whatever has been done by the American Institute of Phrenology, whatever has been done by the association of the Fowler & Wells Company, bears upon it the unmistakable impress of your personality; and, when the human race shall be called before the judgment-seat, it will be better—will have achieved a higher ideal, and before the all-searching eye will pass a better examination because Charlotte F. Wells has lived.

Mr. President, my mind goes back over fifty years of your professional life; I see a long procession of nearly three hundred thousand men and women with whom you have been brought in personal and professional relationship; I see them coming to you burdened with the cares of humanity, groaning under the ills which flesh is heir to, afflicted with disease, troubled with the mistakes of life, laboring in wrong professions; young men with the blight of a mistaken vocation upon them; mothers with infants in their arms, with that burden which only maternal love can feel for the welfare of the infant; I see the aged coming to you, anxious to benefit posterity. A mighty army. I see that army marshalled by you; I see their cares lifted; I see young men in the flush of manhood, owing their success to your timely counsel; I see the ravages of disease disappear from the wasted form, from advice that you have given; I see the infant inheriting from ancestors a more or less depraved constitution, which impels that infant toward social and spiritual destruction; I see that infant turned aside and directed to the very best that there is in him; I see that army marching forward, and I hear them with one accord rise up and say that it is to you, to your personal influence, to your personal advice, that they owe the great benefits that Phrenology has conferred upon them. I say, sir, that your example as a practical phrenologist, the timely words of counsel that you have spoken, or the good that you have done, can not be measured by any pecuniary value. The profession which you have done so much to advance is in its infancy, and your name, as is proper, will be associated as one of the great leaders that have given to the world this priceless inheritance of human knowledge. Posterity will never forget you as long as the English language is spoken; as long as literature shall be preserved, the names of Gall and Spurzheim and Combe and the Fowlers and Sizer will be remembered with gratitude. And I speak from personal experience when I say that it is impossible for one to go into any town of any size on the Western continent, and announce himself as a phrenologist, without meeting those who love and honor the name of Nelson Sizer. We honor the names of Cæsar, Wellington, Washington, and Grant; but the triumphs of those men, how-

ever much they have advanced the interests of humanity, were gained through tears and blood; your triumphs, sir, are those which pour upon the human mind the sunshine of life, and direct the possessor into a higher, better, nobler existence.

Members of the class, the profession which we represent is second to none in its far-reaching possibilities. In the evolution of society, it is destined to take the place of two professions, once co-existent or identical, and destined henceforth to be identical. Society demands of us the teaching abilities now represented by the minister of the Gospel, and his purity of character; it demands further the anatomical knowledge, and the scientific attainments of the physician; and the time is coming, and is now, as I am glad to recognize in one member of our faculty, when the minister of the Gospel will not be considered competent to discharge the high duties of his office unless he is first a phrenologist, and is able to understand men and how to deal with them. And, in the same way, the same high requirement will be expected of the physician; so that the acquisition of Phrenology, and a knowledge of the art, is going to be demanded of those two professions; and the phrenologist stands as the leader of both.

The world is broad, and humanity is hungering for the knowledge which you alone can give; humanity is anxious to pay you for your services, if those services are valuable. You can offer to them what no one else can; you can give the mother encouragement for the welfare of her offspring; you can raise the fallen among the youth of the land; you can cheer old age, and point out how the closing years of a life may be spent in happiness, and in usefulness to the human race at large. Your talents are going to be required of you. We can not all be great, but we can all be true. And in presenting Phrenology to the people at large, let me ask of you, as one who jealously guards the interests of this science, to consecrate your lives to its upbuilding. Be honest, be truthful, be courageous, be just, and your future will take care of itself; and, finally,

"Let Ambition,
Pointing the way to Fortune and Renown,
Allure us to those proud, supernal heights
Which only gods, and men like gods, attain."
(Applause.)

Besides those chosen by the class to speak, several other students handed in essays, for which we lack room here. They may appear later in the JOURNAL, as one of them, entitled "Adaptation," was published in the JOURNAL for December.

RESOLUTIONS OF THE CLASS.

Preamble.—The students of the American Institute of Phrenology, having completed their studies in the course of 1888, adopt the following resolutions:

1st. *Resolved*, That we recognize Phrenology as a system practically defining the abstract theories of mental philosophy.

2d. *Resolved*, That we heartily recommend to all students of Anthropology, the American Institute of Phrenology, with its scholarly and efficient professors, its fine collection of educational appliances (skulls, busts, casts, oil paintings, etc.) not found to be in any other institution of its kind.

3d. *Resolved*, That we hereby express our

sense of obligation to the present staff of teachers, who during the course of 1888, have spared neither time nor pains in communicating the necessary knowledge required by us in the practice of this all-important progressive science—Phrenology.

LIZZIE HENDERSON, } Committee
 PROF. G. MORRIS, } on
 EDWARD MASTERS, } Resolutions.
 PROF. W. HATFIELD, }

TO THE PRESIDENT OF THE AMERICAN INSTITUTE OF PHRENOLOGY:

Dear Sir: The secretary of the present class of 1888 has been instructed to hand you a copy of the foregoing resolutions, investing in you the power to print hereunto the names of the class.

Respectfully,
 WM. A. CORBION, Secretary.

Wm. James Andre, Pennsylvania.
 H. F. Ahrends, New York.
 Milan Day Barnes, New York.
 J. W. Beard, Virginia.
 E. G. Bradford, New York.
 E. E. Candee, New York.
 J. H. Chapman, Texas.
 Wm. A. Corbion, Pennsylvania.
 Lewyn Frank Cutten, M. D., Canada.
 Ida V. Davis, Washington Territory.
 Wm. H. Doncaster, Pennsylvania.
 Charles A. Gates, Minnesota.
 James O. Gardiner, Illinois.
 G. B. Getchell, Maine.

James Gray, New York.
 Rev. Arthur M. Growden, New Zealand—
 now of Tennessee.
 G. P. A. Gunther, New York.
 J. B. Harris, Indiana.
 Chas. L. Haskell, Massachusetts.
 Prof. William Hatfield, England.
 Lizzie Henderson, Canada.
 Thos. Geo. Howard, Canada.
 John Hoole, California.
 E. Howard, Canada.
 Edmund Howd, New York.
 Thos. B. Hurley, Maine.
 Minnie H. Leggett, New York
 Alex. MacGregor, New Jersey.
 C. F. M. McGuire, New York.
 Thomas McKenna, Rhode Island.
 Robert C. J. Meyer, Illinois.
 Edward Masters, Australia.
 John C. Miller, Ohio.
 Prof. Geo. Morris, Oregon, Traveling.
 Marietta M. Morris, Oregon, Traveling.
 Geo. Peasley Russell, Tenn.
 Mary Elizabeth Smith, Canada.
 Daniel D. Stroup, Pennsylvania.
 Wm. P. Underwood, Colorado.
 Canada Wendell, Illinois.
 Prof. Wm. Windsor, L.L.B., Texas, } Travel-
 Mme. Lilla D. Windsor, " } ing.
 Catherine A. Winter, Ohio.

LIST OF GRADUATES TO 1888.

WE are often written to by persons in different States to ascertain if "Prof.—" is a graduate of the American Institute of Phrenology. Some persons whom we never before heard of have professed to be graduates of the Institute, and even publish it on their circulars, endeavoring thus to secure consideration. The following list embraces the names of all the graduates up to and including the year 1888. All our students have a diploma, and it would be safe to ask to see the diploma of those who claim to be graduates, or else write us for a class circular.

STATE.	CLASS OF	STATE.	CLASS OF
Abel, Miss Loretta, M. D.	New York.....1877	Batthey, O. F.	Massachusetts.....1883
Adams, Elijah M.	Missouri.....1875	Bausch, Albert	New York.....1887
Adams, Miss F. R.	Iowa.....1883	Beard, J. W.	Virginia.....1887, 1888
Ahrends, H. F.	New York.....1888	Beecher, Eugene	Connecticut.....1870
Alderson, Matt. W.	Montana. 1875, 1879, 1880	Beverly, C. A., M.D.	Illinois.....1872
Alexander, Arthur J.	Indiana.....1871	Beall, Edgar C.	Ohio.....1877
Alexander, W. G.	Canada.....1884	Beer, John	New York.....1878
Alger, Frank George	New Hampshire.....1880	Bentley, Harriet W.*	Connecticut.....1881
Anderson, Alex. H.	Canada.....1884	Bell, James	New Hampshire.....1881
Anderson, Geo. W.	Canada.....1887	Boettger, G. W.	New York.....1887
Anderson, Samuel H.	Pennsylvania.....1887	Bonine, Elias A.	Pennsylvania.....1888
Andre, James Wm	Pennsylvania.....1888	Bowers, W. L.	Ohio.....1887
Arnold, Chas. H.	Massachusetts.....1870	Brady, J. Bradshaw	New York.....1887
Arthur, Willio P.	New York.....1874	Brown, D. L.	Iowa.....1872
Aspinwall, F. E.	New York.....1872, 1873	Brown, Robert I.	New York.....1887
Austin, Eugene W.	New York.....1878	Bonham, Elisha C.	Illinois.....1875
Austin, Fred H.	Pennsylvania.....1882	Boussan, Miss O. M. T.	New York.....1877, 1882
Ayer, Sewell P.	Maine.....1883	Bradford, E. G.	New York.....1888
Barnes, Milan Day	New York.....1888	Brettel, Montague	Ohio.....1875
Barrett, Richard J.	California.....1886	Brethour, E. J.	Canada.....1884
Bateman, Luther C.	Maine.....1871	Brimble-Combe, Wm.	Australia.....1888
Ballou, Perry E.	New York.....1871, 1872	Brownson, Rev. A. J.	Indiana.....1884
Bacon, David F.	New Hampshire.....1875	Brush, Clinton E.	New York.....1887
Baker, Wm. W.	Tennessee.....1876	Bullard, J. H.	New York.....1886
Baillie, James L.	Ohio.....1881	Buck, Marion F.	New York.....1888
Bartholomew, Henry S.	Indiana.....1885	Burnham, A. B.	Wisconsin.....1881

*Deceased.

	STATE.	CLASS OF		STATE.	CLASS OF
Burr, Rev. W. K., M. A. Ph. D.	Canada	1884	Getchell, G. B.	Maine	1888
Candee, E. E.	N. Y., '73, '75, '78, '80, '88	1886	Gluckler, Ralph J.	New York	1882
Cady, Charles Everett	New York	1886	Goodrich, Geo. D.	Minnesota	1876
Campbell, H. D. *	New York	1874	Granberry, Prentiss S.	Mississippi	1873
Campbell, D. H.	Canada	1887	Gray, James	New York	1888
Carman, Lewis	New York	1883	Green, Wm. R.	Pennsylvania	1874
Cassel, Harry K.	Pennsylvania	1886	Greear, Rev. Samuel J.	Illinois	1875
Catlin, David C.	Connecticut	1877	Griffith, Wm. H.	Texas	1887
Centerbar, J. S.	New York	1881	Grob, Samuel	Pennsylvania	1881, 1882
Chandler, G. E., M. D.	Ohio	1873	Growden, Rev. Arthur M.	N. Zeal'd (now Tenn)	1888
Chapman, James H.	Texas	1887, 1888	Grumman, William E.	Connecticut	1885
Chapman, May	Massachusetts	1879	Guilford, Ira L.	Michigan	1876
Charles, G.	Canada	1876	Gunther, G. P. A.	New York	1888
Chesley, Egbert M.	Nova Scotia	1871	Haley, William T.	California	1871
Chester, Arthur	New York	1870	Haller, John S.	Pennsylvania	1868
Clark, Perry	California	1886	Hambleton, Harland E.	Ohio	1875
Clark, Thomas*	New Jersey	1874	Hamilton, Elliott A.	Michigan	1867
Clarke, Rev. Jas. Eugene	Maine	1877	Hanan, Henry V.	Kansas	1886
Collins, John	Wisconsin	1878	Hardy, John N.	Wisconsin	1870
Condit, Hilyer	New Jersey	1867	Harriman, O. B., M. D.	Iowa	1876
Constantine, Rev. A. A.	New Jersey	1875	Harris, J. B.	Indiana	1888
Constantine, Miss Eliza	New Jersey	1875, 1884	Hasle, George E., Lawyer	Mississippi	1879
Cook, J. R.	Ohio	1872	Haskell, Charles L.	Massachusetts	1886, 1888
Corbion, William A.	Pennsylvania	1888	Hatfield, Prof. William	England	1888
Corfman, A. J., M. D.	Ohio	1886	Hathaway, D. E.	Massachusetts	1874
Cowan, John, M. D.	New York	1870	Hawkins, William S.	Connecticut	1866
Cray, Edward A.	Rhode Island	1885	Hayward, Mary T.	New Jersey	1887
Creamer Edward S.	New York	1866	Hawley, Edwin N.	Ohio	1878
Crum, Rev. Amos	Illinois	1870	Henderson, Francis M.	Illinois	1867
Curley, Miss Maggie	New York	1887	Henderson, Lizzie	Canada	1888
Curren, Orville	Michigan	1873	Henderson, James	New York	1871
Curren, Thomas	Michigan	1873	Herrick, Miss M. E.	Massachusetts	1884
Curren, H. W.	Michigan	1874	Hilleary, Louis N., M. D.	Iowa	1877
Cutten, Lewyn Frank, M. D.	Canada	1888	Hlaer, E. W.	Indiana	1878
Daly, Oliver Perry	Iowa	1868	Hobson, A. Norman	Iowa	1849
Danter, James F., M. D.	Canada	1870	Hoffman, Uriah J.	Indiana	1874
Darling, Edgar A.	New York	1885	Hoole, John	California	1888
Davidson, E. A.	New York	1883, 1885	Holm, J. S.	Iowa	1874
Davis, Edgar E.	Iowa	1885	Holt, Chas.	New York	1875
Davis, Ida V.	Washington Ter.	1888	Holt, Miss Mirian J.	Texas	1876
Davis, Wallace	Pennsylvania	1875	Horne, William	Michigan	1874
Detwiler, D. W.	Pennsylvania	1880	Howard, E.	Canada	1885
De Vore, S. V.	Iowa	1887	Howard, Paul	England	1885
Dill, Rev. A. Cushing	New Jersey	1883	Howard, Geo. Thos.	Canada	1888
Diehm, Joseph	Kansas	1886	Howd, Edmund	New York	1888
Dodge, Lovell	Pennsylvania	1887	Hummel, Levi	Pennsylvania	1876
Dodds, Rev. David, M. D.	Iowa	1877	Humphrey, John C.	Alabama	1868
Doncaster, Wm. H.	Pennsylvania	1888	Humble, Frank	Pennsylvania	1886
Doolittell, Orrin	New York	1885	Hughes, Henry F.	New York	1870
Dornbach, H. F. A. *	Valparaiso, S. A.	1885	Huggins, L. E.	Ohio	1877
Downey, Rev. T. Jefferson	Ohio	1887	Hull, Herbert H.	Pennsylvania	1888
Duncan, J. Ransom	Texas	1875	Hunter, Rev. W. J., D. D.	Canada	1887
Du Bois, D. C.	Iowa	1877	Hurley, Thos. B.	Maine	1888
Dutton, Geo. W.	Nebraska	1887	Irving, Mrs. P. W.	Connecticut	1884
Drury, Andrew A.	Massachusetts	1882	Irvin, Rev. Robt. J.	Canada	1885
Eadie, Andrew B.	Canada	1877	Jackson, John P.	England	1867
Earley, John	Ireland	1883	Jamison, John A., jr.	New York	1884
Ebersole, John P.	Ohio	1885	January, Charles P.	Iowa	1879
Eckhardt, P.	Illinois	1884	Jennings, Alfred	Massachusetts	1871
Emerick, Lycurgus	Illinois	1876	Johnson, J. C.	Massachusetts	1884
Emery, C. Sumner, M. D.	Ohio	1887	Jones, Isaac S.	New Jersey	1888
Emery, Henry R.	Ohio	1887	Jones, John W.	Indiana	1886
English, V. P., Lawyer	Kansas	1886	Kelth, A. B.	Iowa	1877
Espy, John Boyd	Pennsylvania	1875	Keller, Martha J.	Ohio	1887
Evans, Henry W.	Pennsylvania	1867	Kimmons, James M.	Kansas	1884, 1885
Fager, Andrew C.	Ohio	1887	Kindig, David S.	Ohio	1877
Fairbanks, C. B. *	New York	1872	King, David M.	Ohio	1887
Fairfield, John C.	Pennsylvania	1876	Kling, George L.	Ohio	1884
Farias, F. A.	Virginia	1886, 1887	Kling, Wm. H.	Texas	1887
Ferry, A. L.	Illinois	1881, 1884	Kirkpatrick, Robert	Montana	1879
Field, J. H.	Colorado	1866	Kirven, P. E.	Louisiana	1881, 1882
Fitzgerald, Miss D. W. *	New York	1887	Knowles, Frank B. *	New York	1883
Fitzgerald, Miss Blanche	New York	1887	Kramer, John E.	New York	1886
Fitzgerald, Nat. Ward	Washington, D. C.	1885	Kunderd, Amos E.	Indiana	1886
Fleisch, Jacob	Ohio	1870	Lane, Rev. John C. *	Missouri	1869
Foster, Felix J.	Mississippi	1870	Langley, M. L.	Arkansas	1872
Foster, Henry Ellis	Tennessee	1879	Langmaid, F. W. S.	Massachusetts	1887
Fowler, Miss Nellie	New Jersey	1884	La Rue, Franklin	Montana	1888
Fraser, J. A. G.	Canada	1877, 1883	Lauer, Rev. J. D.	Ohio	1874
Freeman, Chas. E.	Iowa	1880	Lawrence, Alva, Jr. *	New York	1876
Freidrich, Martin	Pennsylvania	1882	Leavitt, Levi R.	New Hampshire	1870
Gates, Charles A.	Minnesota	1888	Leggett, Minnie H.	New York	1888
Gaumer, Levi	Iowa	1876	Leininger, John Wesley	Canada	1883
Gardner, James O.	Illinois	1888	Leise, Henry	Pennsylvania	1887
Gause, Mrs. Elva P.	North Carolina	1875	Lemon, J.	New York	1884
Gibbs, H. Clarence	Wisconsin	1874	Leonard, B. A.	Massachusetts	1880
Giles, J. C.	Texas	1886	Lee, Rev. Geo. A.	Pennsylvania	1873
Gillis, Benjamin	Missouri	1875	Leater, D. C.	Pennsylvania	1872

*Deceased.

	STATE.	CLASS OF		STATE.	CLASS OF
Linville, C. H.	Pennsylvania.	1879	Richie, Porter D.	Illinois.	1871
Lischer, M. E.	New York.	1883	Ribero, Manuel.	Spain.	1867
Lockard, E. M.	Pennsylvania.	1883, 1884	Robbins, T. L.	Massachusetts.	1872
Loomis, Benj. F.	California.	1886	Roberts, I. L.	Florida.	1872
Lounison, Wm. A.	Pennsylvania.	1886	Roberts, Jas. Thos.	California.	1882
Luxford, Frederick Wm.	New York.	1887	Roberts, Margaret E.	Pennsylvania.	1882
Macduff, Rev. R. E.	Kentucky.	1872	Robinson, Frank O.	Tennessee.	1886
MacGregor, Alex.	New Jersey.	1888	Robinson, G. M.	Illinois.	1881
Mack, H. Q.	New York.	1887	Roeseler, John S.	Wisconsin.	1884
Mackenzie, J. H.	Minnesota.	1873	Rogers, Ralph.	Tennessee.	1875
Macrea, Miss Flora.	Australia.	1884	Ronie, Paul T.	California.	1877
Maxwell, Robert G.	North Carolina.	1887	Rosenbaum, Fred Wm.	Ohio.	1878
McCoy, Jason B.	Ohio.	1886	Russell, Geo. Peasley.	Tennessee.	1888
McDonald, Duncan.	Michigan.	1887, 1882	Sadler, David M.	Maryland.	1879
MacIntosh, James.	Ohio.	1887	Sage, Enos A.	New Jersey.	1868
McDavid, J. Q.	South Carolina.	1874	Sahlin, Mrs. M. A.	New York.	1884
McNeil, James.	New York.	1873	Sanches, Mrs. Marie.	Sweden.	1880
McCrea, James.	Illinois.	1873	Sargent, C. E.	New Hampshire.	1874
McGuire, C. F. M.	New York.	1888	Scheaffer, J. S.	Iowa.	1884
McKee, William C.	Ohio.	1879	Scott, Martha A.	Colorado.	1881
McKenna, Thomas.	Rhode Island.	1888	Scott, Rev. William R.	Illinois.	1883
McKim, John J.	Massachusetts.	1887	Senior, F. D.	New York.	1872
McLaughlin.	Canada.	1882	Seybold, Frederick J.	Illinois.	1870
McNaughton, Samuel S.	New York.	1871	Shamberger, Daniel.	Virginia.	1885
Mann, H., Jr.	Vermont.	1883	Shultz, R. C., M. D.	Iowa.	1876
Manners, J. H.	New Zealand.	1877	Sievert, Miss Sophie.	New York.	1880
Mannion, Frank.	Iowa.	1879	Smith, Bartholomew.	Rhode Island.	1869
Martin, Edward E.	New York.	1885	Smith, Lundy B.	Missouri.	1874
Matley, John.	California.	1870	Smith, Mary Elizabeth.	Canada.	1888
Matlack, A. S.	Ohio.	1872	Smith, Thomas Wm.	Canada.	1876
Mason, James.	Massachusetts.	1880	Snell, C. L.	Pennsylvania.	1873
Mason, Lott, M. D.	Illinois.	1869	Sommers, Jarvis.	Connecticut.	1869
Mason, A. Wallace.	Canada.	1874	Spring, Geo. A.	New York.	1882
Masters, Edward.	Australia.	1888	Staples, Ernest L.	Connecticut.	1877
Merrifield, John C.	Canada.	1868	Sterling, Jas. R.*	Canada.	1884, 1886
Meller, Frank J.	Illinois.	1881	Stewart, Rollin.	Vermont.	1867
Memminger, Thos. F.	West Virginia.	1881	Stockton, Miss Alice.	Illinois.	1874
Meyer, Robert C. J.	Illinois.	1888	Stone, W. T.	Indiana.	1867
Mills, Joseph.	Ohio.	1868	Strong, J. Wilmer.	Pennsylvania.	1866
Mills, Rev. J. S.	Ohio.	1872	Stroup, Daniel D.	Pennsylvania.	1888
Miller, E. P., M. D.	New York.	1886	Suarez, Adolph B.	New York.	1875
Miller, B. Frank.	California.	1882	Sullivan, John B.	New York.	1885
Miller, Henry.	Michigan.	1887	Swain, Henry E.	New York.	1870
Miller, John C.	Ohio.	1888	Swift, Miss Edna A.	Connecticut.	1873
Moatz, Lewis.	Ohio.	1889	Taggart, Chas. Alvan.	Massachusetts.	1880
Moran, Maggie L.	New Jersey.	1885	Taylor, Jas. I.	Pennsylvania.	1886
Morrison, Edward J.	Illinois.	1868	Thackston, P. B.	South Carolina.	1885
Moore, Joseph H.	North Carolina.	1877	Thomas, J. W.	Missouri.	1879
Morris, Prof. Geo.	Oregon.	1878, 1884, 1888	Thompson, Benj.	Iowa.	1867
Morris, Marietta M.	Oregon.	1888	Thompson, D. D.	Canada.	1873
Mully, A. E. F.	New York.	1882	Thompson, J. A.	Pennsylvania.	1866
Musgrove, William.	England.	1875	Thompson, Miss M. B.	Ohio.	1876
Newman, A. A.	Illinois.	1867	Thurston, Calvin H.	Indiana.	1869
Nichols, Perry L.	Iowa.	1887	Tower, Henry M.	Massachusetts.	1881
Oestergaard, J. C.	Denmark.	1883	Tracy, John F.	New York.	1886
Oliver, Dr. F. W.	Iowa.	1885	Treasure, Edwin.	Pennsylvania.	1887
Olney, Henry J.	Michigan.	1875	Turner, P.	Illinois.	1871
Orvis, Heil F.	Wisconsin.	1886, 1887	Turner, Thomas.	New York.	1878
Osgood, Rev. Joel.	Ohio.	1882	Turner, Mrs. A.	New Jersey.	1887
Pallister, Wm.	Canada.	1882	Underwood, Wm. P.	Colorado.	1888
Parker, R. G.	Missouri.	1874	Wahl, Albert.	Illinois.	1879
Parker, Howell B.	Georgia.	1875, 1880, 1886	Waide, Robert.	Indiana.	1881
Patton, Edward M.	Illinois.	1874	Wait, A. H.	Kansas.	1883
Patten, William Perry.	Nebraska.	1876	Wallace, A. D.	Tennessee.	1877
Patterson, John A.	Missouri.	1870	Walters, Ell.	Ohio.	1874
Paulsen, John H.	Louisiana.	1877	Waterman, L. E.	New York.	1870
Pentney, John.	Canada.	1877	Watson, Chas. S.	New Hampshire.	1869
Piersoll, Sampson H.	West Virginia.	1870	Welles, R. W.	Connecticut.	1872
Perrin, Edward M*.	Kansas.	1869	Wendell, Canada.	Illinois.	1888
Perry, A. D.	Massachusetts.	1889	West, Mrs. Mary.	New York.	1876
Petry, Daniel F.	New York.	1866	Whitaker, John.	New York.	1869
Philbrick, S. F.	Ohio.	1873, 1874	Whyte, Fred M.	New York.	1884
Phipps, Henry T.	Massachusetts.	1887	Wiest, Ezra.	Pennsylvania.	1875
Pooler, Mrs. F. M.	Massachusetts.	1887	Wightman, Chas. S.	Rhode Island.	1871
Potter, Miss Helen.	New York.	1887	Wild, John P.	Massachusetts.	1865, 1886
Pierce, David F.	Connecticut.	1868	Wildman, Wellington E.	Ohio.	1876
Powell, Lefferts M., M.D.	New York.	1856	Wildman, Mrs. W. E.	Ohio.	1876
Pratt, Benj. F., M.D.	Ohio.	1875	Windsor, Prof. Wm. L. L. B.	Texas.	1888
Prather, Miss M. O.	Kansas.	1876	Windsor, Mme. Lilla D.	Texas.	1888
Price, David R.	Iowa.	1868	Winkler, Henry.	Indiana.	1877
Purcell, E. M.	Iowa.	1874	Winter, Catherine A.	Ohio.	1888
Ream, Elmer.	Indiana.	1885	Wood, Oscar D.	New Jersey.	1875
Reed, Anson A.	Connecticut.	1868	Wood, Elbert B.	Kentucky.	1879
Riddell, Newton N.	Nebraska.	1887	Wood, N. W.	Missouri.	1887
Rhone, Geo. W.	Pennsylvania.	1886	Worrall, M. B.	Ohio.	1877
Richardson, M. T.	New York.	1870	Wyscarver, T. J.	Ohio.	1874
Richards, William.	Pennsylvania.	1873	Young, C. P. E.	Sweden.	1883
Righter, M. Helen.	Illinois.	1876	Young, Henry.	Ohio.	1876

*Deceased.

C. F. WELLS, NELSON SIZER, H. S. DRAYTON, ALBERT TURNER,
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A Call For Help.—We feel justified in calling upon the friends of Phrenology and friends of the PHRENOLOGICAL JOURNAL to render us a little assistance at the present time. We have reduced the price of the JOURNAL for the purpose of increasing its circulation, and in this way a knowledge of Phrenology. We can not of course present the JOURNAL and its claims to every one, we shall advertise it largely and send out a great many specimen copies, but this is not likely to be sufficient to accomplish our purpose fully, and for this reason we take the liberty of calling upon our friends for their co-operation. At \$1 a year—and this is our club rate—we believe a club can be made up in every neighborhood by a person sufficiently interested to introduce the JOURNAL, and in towns and cities, of course many clubs could be made, one by almost every person who would try, and will not our friends make a timely effort and give the JOURNAL a new start with the new year?

CURRENT EXCHANGES.

The December *Century* closes the year with a number of considerable bulk, exclusive of its hundred pages of advertisements. How frontier life goes is illustrated by the frontispiece. Old Italian Masters follows, Duccio being the subject of biography and illustrations. Life on the Great Siberian Road, also illustrated, is a half romantic sketch in the seeming. From Sinai to Shechem, also illustrated, is seasonable. London from the well-known pencil of Pennell, A White Umbrella in Mexico, The Romance of Dollard (continued), Lincoln, The Rise and Fall of "the Irish Aigle," and a number of other topics make up an exceedingly good number. Century Company, New York.

Lippincott for December, has a thick novel, Dunraven Raneli, for its opening, and a sketch and portrait of its author follows. With the Fruits and the Wines is a story that is semi-critical. At Last, Six Days in the Life of an Ex-teacher, Trust and Title Insurance Companies, and Our One Hundred Questions, are capable of sustaining the reader's interest. J. B. Lippincott & Co., Philadelphia.

Harper's Monthly for January is early in the field, and makes a strong bid for public approval. Commodus, a play by Gen. Wallace, is a kind of follower of his successful novel; it hardly possesses the intensity of Herod, that tragic affair of Mrs. Chandler. Manufacturing Industry in Ireland, The Beaver, Russian Bronzes, Modern Amateur Photography, and The Ancient City of Wisby afford good material for the artist, and unusually interesting reading matter. The useful as well as the entertaining, appear to be more than commonly associated in this opening number of our old contemporary. Harper & Brothers, New York.

The Banker's Magazine and Statistical Register. Monthly. Albert S. Bolles, editor. Homans Publishing Co., New York.

The Sanitarian. Monthly. A. N. Bell, A.M., M.D., editor. Brooklyn.

The Christian Advocate. Weekly. Phillips & Hunt, New York.

The Cincinnati Medical News and Clinical Brief and Sanitary News. Monthly. Dr. J. A. Thacker, Cincinnati, O.

Power-Steam. Monthly. H. M. Sovetland, New York.

The Builder and Woodworker, a journal of industrial art. Monthly. Thomas R. Harwood, New York.

Building. An architectural weekly; an admirable piece of typography. Wm. T. Comstock, New York.

Once a Week. Fiction, fact, sensation, news. Weekly. P. F. Collier, New York.

America. A journal of to-day. Weekly. Slason Thompson, Chicago.

Le Progres Medical. A journal of medicine, surgery, and pharmacy. Weekly. Bourneville, editor, Paris, France.

Harper's Bazar. Repository of fashion, pleasure, and instruction. Weekly. Harper & Bros., New York.

The Youth's Companion. Weekly. Perry, Mason & Co., Boston.

Notes and Queries discusses history, folklore, mathematics, mysticism, art, science, etc. Monthly. S. C. & L. M. Gould, Manchester, N. H.

The Old Testament Student, with New Testament supplement. Wm. R. Harper, Ph. D., editor, New Haven.

Annals of Surgery. A monthly review of surgical science and practice. L. S. Pilcher, A.M., M.D., Brooklyn, and C. B. Keetley, F.R.C.S., London, editors. St. Louis, Mo. J. H. Chambers & Co.

The Hahnemanian Monthly. Pemberton Dudley, M.D., Clarence Bartlett, M.D., and W. B. Van Lennep, A.M., M.D., Philadelphia.

Medical Record. Well-known exponent of medicine. William Wood & Co., Publishers, New York.

Social Purity Pioneer. Oakland, Cal. This new publication is a creditable effort. Mr. Geo. W. James, as editor, enters upon the work vigorously and with full appreciation of the need of moral reform in San Francisco and other Californian cities. The paper, a monthly, is the organ of the S. P. Alliance of the Pacific coast.

The American Magazine for December has The Cathedral of New York, How People Live in Paraguay, The Apprenticeship of an Academician, Picturesque West Michigan, America's Crack Regiments—among the illustrated titles. New York.

"Brain and Mind."—We have been out of this book for a few weeks owing to a delay incident to the revision and enlargement of the work. We have added new chapters, introduced new illustrations, and brought the book up to the times fully, and a new edition will be ready in a few days. This is a standard text book on the subject, the most careful and methodical work ever published, and is recommended in all cases to those who wish to investigate Phrenology in a careful and practical manner. Also for use by students and in classes. The price remains the same as before, \$1.50. Agents can do well in selling this

The "Farmers' Call" says of HEADS AND FACES: The book is worth more than is asked for it. It is worth its price to those who are only curious and wish to be amused. But no person who reads the book can escape a deeper interest in the subject treated; and he will find it worth yet more in the insight it gives into human char-

acter and the interpretation of outward signs of character. Send for the book and study it until the human countenance becomes more than you have ever dreamt it could be to you—itself a most interesting book to be read with profit.

Practical Phrenology.—In this number a department for the illustration of the practical application of phrenological science has been opened under the editorship of Prof. Nelson Sizer. This is a development from the "Echoes from the Consultation Room," that have proved so acceptable to the readers of the PHRENOLOGICAL last year. Prof. Sizer's rich experience may be expected to render the department eminently readable and profitable. There also we should be glad to place the thoughts and results of those who are practising in the same field, so that the topics discussed shall have sufficient variety to meet all wants. There are theorists many in mental science; and while they subserve a useful purpose the practical worker is he who is specially needed to make the literature of the subject an efficient help to society.

fall below the high standard of excellence aimed at by the publishers."

Our Book Catalogues.—We issue one general catalogue and price list of our publications, being a complete list with titles, which will be sent to any address on application. We also issue a descriptive catalogue of the books designed especially for the use of TEACHERS, including "Science of the Mind," "Man Wonderful," "Vocal Music," Clark's Stencils, etc., and our catalogue of BOOKS FOR WOMEN includes descriptions and illustrations from our works, on Health and Diseases of Women and Children, Marriage, Heredity, Household affairs, Cook-Books, and domestic economy in general. WORKS ON PHONOGRAPHY AND TYPEWRITING is a most valuable catalogue for all shorthand writers and typewriters. It gives as nearly as possible a complete list of all the works now on the market on this subject, of foreign as well as American authors, with other information useful to those engaged in this line of work.

We have also issued a SPECIAL LIST of private Medical works designed for the use of those who need them; either of these will be sent to any address on receipt of stamp for postage.

Phrenological Examinations by Mail.

—We are frequently asked as to whether we can make Phrenological Examinations by mail, and in reply would say that this is done very successfully, when we have the properly taken pictures and the proper measurements given. For full particulars in regard to this, send for "Mirror of the Mind."

Club Rates.—With the reduced price of the JOURNAL we are making very low Club Rates, and call upon our friends to take advantage of this reduction, both in their own interest and that of the JOURNAL. Single subscriptions have been reduced to \$1.50 a year, but in Clubs, which can be made up in almost any intelligent community, we supply it at \$1 a year and to the person making up the club a copy is sent free. To each yearly subscriber is given a choice of either the Bust or Chart premium.

The "Graphic," of this city, says: A copiously illustrated, well bound and readable book is "Heads and Faces; How to Study Them," published, of course, by Fowler & Wells, and written by Nelson Sizer and H. S. Drayton. There is a wonderful record of character, personality, and temperament written unquestionably in every human face, if we could only decipher the complex and contradictory characters, and this is an intelligent effort toward unraveling their mystery. Of course the difficulty in arriving at conclusions by Phrenology and physiognomy is in drawing the balance between compensating qualities, and, in their many discussions of well-known subjects in this book, these writers suggest to the reader how this may be done, though of course in the end wisdom in doing must depend upon the ability of the observer.



BARON STANLEY, Governor-General of Canada.

[For insertion in space left vacant on page 291, December P. J., 1888.]

The "Journal," Ballston Spa, says: "We ought to have said, three weeks ago, that the PHRENOLOGICAL JOURNAL for November is full of interesting and instructive articles not to be found in any other monthly. It is invaluable as a family educator and we wish it could be a visitor in every home. The December number will not

Clubbing for 1889.—For the accommodation of our readers and friends we have made arrangements for the combination of other publications with our popular and useful magazine as follows: The subscription price to the **PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH** is \$1.50; and any of the following may be included at the prices given.

Names sent for the **JOURNAL** with either of these will count on Premium List, and to agents the same as though sent singly.

Eclectic Magazine.....	\$4 25	Scottish Am.....	2 60
Atlantic Monthly.....	3 40	N. Y. Evang'l, new	2 00
Lippincott's Mag.....	2 50	The Treasury.....	1 85
Harper's Monthly.....	3 10	Homiletic Review....	2 10
" Weekly.....	3 35	Am. Garden.....	1 60
" Bazar.....	3 35	World Travel Gaz'te	75
" Young People.....	1 70	The Pansy.....	85
The Century Mag.....	3 60	Baby Land.....	45
St. Nicholas.....	2 60	Peterson's Mag.....	1 60
Popular Sci. Mon.....	4 20	North Am. Review....	4 10
Godey's Lady's Book...	1 70	Tribune, Weekly.....	1 10
Arthur's Home Mag	1 60	" Semi.....	2 25
Rural New Yorker.....	1 85	Times, Weekly.....	90
Scribner's Mag.....	2 50	Sun.....	90
Cosmopolitan.....	2 50	World, ".....	90
Demorest's Mag.....	1 60	Country Gentleman...	1 85
Home Journal.....	1 60	Herald, Weekly.....	90
Am. Agriculturist.....	1 10	Illus. Chris'n W'kly.	2 20
Wide Awake.....	2 10	Weekly Witness.....	90
Our Little Men and		Poultry World.....	90
Women.....	85	Gardeners' Monthly	1 50
Our Little Oves.....	1 25	Herald of Health....	80
Critic.....	2 50	N. E. Journal of Ed-	
American Mag.....	2 60	ucation.....	2 15
The Independent.....	2 60	The School Journal...	2 60
Cassell's Fam. Mag.....	1 25	Pop. Educator.....	1 75
Baby Hood.....	1 10	Christian Union.....	2 60
Scientific Am.....	2 60	Christian at Work....	2 60
Phonographic Mag.....	1 10	Laws of Life.....	1 35
The Forum.....	4 10	American Field.....	2 50
Observer, new sub.	2 25	Good Housekeeping...	2 10
The Studio.....	2 00	Chic'go Inter-Ocean	
Galaxy of Music.....	80	Weekly.....	85
The Esoteric.....	1 10	Chic'go Inter-Ocean	
Puck.....	4 00	Semi-weekly.....	2 10
Judge.....	3 80	Mag. Am. History....	4 20
Modern Priscilla.....	40	The Old Homestead	35
The Home Maker.....	1 60		

The only condition for obtaining the above reduction is that the person ordering shall subscribe for, or be a subscriber to the **PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH**, then any number of the above publications may be ordered. Chart and Bust premiums are offered to new subscribers to the **JOURNAL** as above. Make up your list and send on the amount, saving time, money, risk, and trouble. Agents can often offer the above combination to advantage. Address all orders to **FOWLER & WELLS Co., Publishers, 775 Broadway, N. Y.**

Your Time Extended.—If you have sent \$2 for the **JOURNAL** for 1889, we will extend your time so as to make the term fifteen months instead of twelve, and so giving full value for money received.

The Practical Farmer is the name of a Journal published, in Philadelphia, devoted, as its title indicates, to the interests of the farming community. This is published at \$1 a year, and we will club it with the **PHRENOLOGICAL JOURNAL** at \$2. Address this office.

Names Wanted.—We desire the names and addresses of intelligent reading women, especially women with families, to whom we wish to send our new illustrated and descriptive catalogue of "Books for Women," containing titles, prices, and descriptions of works on the Health and Diseases of Women and Children, Heredity, Cookery, and Household affairs, etc., and to the first lady at each post-office who will send us the names of 50 women of the right kind we will send a copy of the new edition of our "Hygeian Home Cook Book." The names need not be sent from the same post-office; we would prefer that they should be carefully selected names of those who will be likely to be interested.

In Advance.—Our subscription terms are in advance and the **JOURNAL** is not sent to subscribers beyond the time for which it is paid, except that we send the January number, as it is found that some neglect at this hurried season to promptly renew, and, besides, this year we present improvements that we wish all to see, before deciding to drop the **JOURNAL**. We hope all who have not yet renewed will consider the receipt of the January number a reminder, and that we may receive the amount required before their names shall have been dropped from our roll.

Our Club Premiums.—Although the price of the **JOURNAL** is reduced from \$2.00 to \$1.50, this will in no way affect our Club Premium offers or our cash commissions to our agent friends, that is, for the same number of subscribers as before the different premiums are supplied.

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The Hammam, a Family Hotel, with Turkish Baths, 81 and 83 Columbia Heights, Brooklyn, N. Y. Three minutes' walk from Fulton Ferry.

Susanna W. Dodds, M.D., and Mary Dodds, M.D., Hygienic Physicians, 2826 Washington Ave., St. Louis, Mo. All diseases, acute and chronic treated without medicine. Send for circular.

The New York Medical College and Hospital FOR WOMEN, and Homeopathic Dispensary for Women and Children. 213 West 54th Street, New York.

Mrs. J. T. Campbell, M.D., 153 W. 128th St., New York.

OUR HEALTHFUL HOME is pleasantly located on Reading Heights. Send ten cents in stamps, for our Book Circular, with Portrait. Address, **A. Smith, M.D., Reading, Pa.**

Fowler & Wells Co., Phrenologists and Publishers, 775 Broadway, N. Y. Agents Wanted.

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CURRENT EXCHANGES.

Common School Education. A practical monthly that teachers may read with good effect. Eastern Educational Bureau, Boston.

Harper's Magazine for February discusses the work of John Ruskin, The Hotel Drouot, finely illustrated; Dakota, also well illustrated; Bull Gardens Indoors; A Russian Village; Norway and Its People; The Training of Children's Voices in Public Schools; Nepal, the Land of the Goorkhas, an out-of-the-way country attractively sketched with pen and pencil, and other specialties. Mr. Warner offers a well-packed "Drawer," while the other editors are fairly represented. New York.

Scribner's Magazine for February will interest those who study the problems of Physical Education because of Dr. Sargent's paper on The Physical Development of Women. New York.

The American Medical Journal. Monthly. E. Younkin, M.D., St. Louis. A well-arranged and progressive publication.

The Voice Magazine. A Journal of Expression—Vocal and Physical. Monthly. Edgar S. Werner, Albany and New York. Useful to the teacher and speaker.

Scientific American. A journal of practical information, art, science, mechanics, chemistry, and manufactures. Weekly. Munn & Co., New York.

The American Magazine. Illustrated. Monthly. Advancing toward the front line. The American Magazine Pub. Co., New York.

The Medical Analectic. An epitome of Progress in all divisions of medico-surgical practice. Brief notes and reports of value to the practitioner. Weekly. G. P. Putnam's Sons, New York.

The Doctor. Devoted to the physician in his social relations to the community. Semi-monthly. Charles Avery Welles, New York.

The Theosophist. A magazine of oriental philosophy, art, literature, and occultism. Monthly. H. S. Olcott, Publisher, Madras, India.

Good Health. A journal of hygiene. Later numbers indicate growth. Monthly. Battle Creek, Michigan.

The Home-Maker. Monthly. Devoted to the inner affairs of domestic life. New York.

The Medical Record. A journal of medicine and surgery; old-school yet liberal, and in favor of higher medical training. We like its views on "stock company" colleges. Weekly. Wm. Wood & Co., New York.

The Studio. A journal devoted to the fine arts. Monthly. Joseph J. Koch, New York.

The Electrical World. A review of current progress in electricity and its practical applications. Weekly. W. J. Johnston, New York.

In the *Century Magazine* for January a good deal from mediæval and ancient art and literature is to be found. Giotto, of the "Old Italian Masters," The Romance of Dollard, Pagan Ireland, Round About Galilee, are interesting topics in this field, and furnish the reader with reading quite out of the common track. Horses of the Plains, Strange True Stories of Louisiana, Olin Warner, Sculptor, An American Apprentice System, Pictures of the Far West, The West Point of the Confederacy, give to the number an unusually American character. The Announcement of the Emancipation is an important addition to the series on Abraham Lincoln. That stirring bit of war history, "The West Point of

the Confederacy," with its soldierly portraits and illustrations, gives us a picture of young "rebellion" that can awaken no malice. The Century Company, New York.

A Transaction in Hearts is the opening feature of *Lippincott's* for February. An ex-editor speaks of The Days I Went Journaling; Mr. R. H. Stoddard discusses Nathaniel Hawthorne; a lady contributor gives My Experience as a Government Clerk, and a variety of other topics fill out considerable space. Philadelphia.

In the *Popular Science Monthly*—D. Appleton & Company, New York—we note Dr. White's New Chapters in the Warfare of Science; Physical Training of Young Children; Giant Reptiles of a Past Age; The Devil Worshipers; On the Causes of Variation; New Facts in Alcoholic Heredity; Comments on "The Sacrifice of Education;" Sketch of John B. Stalls, with a portrait. The Flying Machine Problem has a participant in the discussion who thinks it possible.

Temperance.—Miss Julia Colman, whose articles have so often appeared in our pages, is now giving much of her time to popular lectures. She has devised a very neat and effective apparatus with which she illustrates her lectures, showing up the alcohol in wine, beer, cider, patent medicines, etc., in a most surprising and convincing manner. We wish every teacher in our schools might use it.

These lectures like her articles are crowded full of curious and useful information and they prove very attractive to the public. Her terms are moderate, especially when a round of lectures is secured in neighboring localities. Enterprising teachers who are trying to carry out the plan for scientific temperance teaching in schools, could add greatly to the popular interest on the subject by securing her for an evening lecture, in which case she sometimes favors the school with an address and experiments besides. The N. Y. *School Journal* says of her:

"For twenty years or more Miss Colman has studied the subject of alcohol in all its phases. She has taken courses of medical lectures and digested most weighty medical authorities. She has written a text-book, catechisms, and pamphlets; devised experiments and adapted apparatus, all bearing a most surprising amount of evidence against King Alcohol. From lectures, sermons, scientific works, medical authorities, and many other sources, with a vigilance that nothing escapes, she has collected material for many series of leaflets—a scientific series, a teachers' series, a public service, a beer series, a wine series, and several series for young people, mostly narrative, excellent material for supplementary readings. Miss Colman has given herself, body and soul, to this work. She receives no salary, and frequently makes up arrears out of her own personal funds, earned by her pen in early morning hours before she comes down to her business office."

The January Number of the JOURNAL is sent to all whose subscriptions are received now, unless we receive special instructions to the contrary. In this way all subscriptions date from the first of the year. \$2 when received for the JOURNAL pays for fifteen months and names are entered accordingly, instead of returning the surplus.

Prof. Markham's illustrated descriptions for the season of 1889, in connection with choice musical features, will comprise the following interesting subjects: America the land we live in, Italy, picturesque; Egypt, India, China, Switzerland, Japan, London, Paris, Belgium, Cathedrals of the old world, Caverns of Luray, Va., etc. Engagements for the above lectures are made by his manager, Mr. C. A. Price, Box 8, Station B, Jersey City, N. J., who will name open dates and favorable terms on application.

We have had an opportunity of listening to Prof. Markham's lecture on the Caverns of Luray, and it is seldom that so attractive and instructive an entertainment is given. He is able to convey to his readers a very vivid conception of this wonderful under-ground world, and we do not hesitate in commending the subject and the professor to any who are in want of an entertainment of this character.

Six Exquisite Water Colors.—The daintiest calendar of the season was issued by the Smith & Anthony Stove Co., of Boston, manufacturers of the celebrated Hub Ranges. It is in six sheets, tied together by a ribbon, each sheet being a fac-simile of a delicate water-color drawing, by Miss L. B. Humphrey, of Boston, and made especially for this purpose.

The designs consist of six charming sketches of child-life, drawn in Miss Humphrey's happiest way, together with delicate landscape scenes, and which are simply exquisite in coloring and treatment.

The set of six sheets can be had by sending 25 cents in stamps or currency to the above address.

China Busts.—We have for some time been importing a Phrenological Bust manufactured by L. N. Fowler, in England, in China-ware, the cost of production here being so much as to prevent its being practical to make them for the present demand. Sometimes there is a delay in receiving supplies, as has recently been the case, and orders accumulate somewhat, but we have recently received a large invoice and we are now able to supply them promptly as long as this lot lasts. The Bust is made nearly life-size; the names of the faculties are printed in plain letters on the surface. It has also the subdivisions as laid down by L. N. Fowler in his "Register" (price 25 cents). These busts can be cleaned the same as any china articles of tableware, and will last forever, barring accidents which should not happen. Subject as they are to very high duty and heavy freight, the price is \$5 net, no discount being allowed. Those who want something ornamental and useful and of lasting service, should send for one.

Masterpieces.—This work published at the close of last year, is attracting a great deal of attention. It is being read by students of literature in our public schools, containing as it does, gems of English literature with sketches of the authors, written in a fresh and attractive style. The work is sold at \$1.25 and to agents who canvass for this, liberal discounts are made.

Prof. and Mrs. Morris, on leaving New York about the holidays went direct to Minneapolis, opening there in a new hall at the beginning of the second week in January, and they and Phrenology have taken the city by storm. From correspondents who live there, we learn that half as many people were turned away from the hall the first night as could gain admittance. The interest continues, and they report to us that they have all the professional work they can do. A large stock of books was shipped in advance of them and we have since then received another and much larger order. We bespeak for them the confidence of the people, and it is quite safe to say, that whoever hears them lecture or receives their professional services will be benefited much beyond the cost of such services.

Who is to be Blamed?—A short time ago we received a letter containing \$1.50, with directions to send a book to L. H. Campbell, of Providence, R. I. A few days later we received a letter from another L. H. Campbell, stating that we had sent him a book without any order for it; he did not want the book, and if we would send stamps with which to pay the postage, would return it, and of course we saw from comparing the handwriting that the letters were written by different persons, so we immediately advised Mr. C. No. 2 of the mistake, and asked him to return the book to the post-office. A few days later Mr. C. No. 1 writes saying that he has not received the book, and we wrote him about the matter, and Mr. C. No. 2 has received our letter sent for No. 1, and writes us that he returned the book to the P. O. as directed. Now of course the trouble has arisen from the fact that the person ordering the book did not give street and number, and the post-office authorities in their zeal to deliver all mail matter as required, in looking at the directory and finding No. 2 the only person whose name is reported, delivered the book as above, and the same with the letter. Additional letters would meet with the same fate, so now what are we to do, how can we let No. 1 know that we have been honest and have not failed to fill his order? We refer to this by way of a hint or suggestion to our readers, "a word to the wise," etc.

The Home-Maker is the title of a magazine published in this city, devoted as its title indicates, to the home, and while there have been a number of publications of this class issued in the past few years, this we believe to be the most successful attempt in the making of something useful and attractive. We take pleasure in referring our readers to the prospectus in this number of the JOURNAL.

How to Mesmerize.—This is the title of a small Manual of Instruction, just published in London, written by Dr. James Coates, of Glasgow. It is very complete, comprehensive, and up with the times. We have imported a limited number of copies which we will send to any of our readers who are interested in the subject, for 50 cents a copy.

Clubbing for 1889.—For the accommodation of our readers and friends we have made arrangements for the combination of other publications with our popular and useful magazine as follows: The subscription price to the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH is \$1.50; and any of the following may be included at the prices given.

Names sent for the JOURNAL with either of these will count on Premium List, and to agents the same as though sent singly.

Eclectic Magazine.....	\$4 25	Scottish Am.....	2 60
Atlantic Monthly.....	3 40	N. Y. Evang'l.ist, new	2 00
Lippincott's Mag.....	2 50	The Treasury.....	1 85
Harper's Monthly.....	3 10	Homiletic Review.....	2 10
" Weekly.....	3 35	Am. Garden.....	1 60
" Bazar.....	3 35	World Travel Gaz'te	75
" Young People	1 70	The Pansy.....	85
The Century Mag.....	3 60	Baby Land.....	45
St. Nicholas.....	2 60	Peterson's Mag.....	1 60
Popular Sci. Mon.....	4 20	North Am. Review.....	4 10
Godey's Lady's Book	1 70	Tribune, Weekly.....	1 10
Arthur's Home Mag	1 60	" Semi ".....	2 25
Rural New Yorker..	1 85	Times, Weekly.....	90
Scribner's Mag.....	2 50	Sun ".....	90
Cosmopolitan.....	2 50	World, ".....	90
Demorest's Mag.....	1 60	Country Gentleman	2 00
Home Journal.....	1 60	Herald, Weekly.....	90
Am. Agriculturist..	1 10	Illus. Chris'n W'kly.	2 20
Wide Awake.....	2 10	Weekly Witness.....	90
Our Little Men and		Poultry World.....	90
Women.....	85	Gardeners' Monthly	1 50
Our Little Ones.....	1 25	Herald of Health.....	80
Critic.....	2 50	N. E. Journal of Ed-	
American Mag.....	2 60	ucation.....	2 15
The Independent.....	2 60	The School Journal..	2 60
Cassell's Fam. Mag..	1 25	Pop. Educator.....	1 75
Baby Hood.....	1 10	Christian Union.....	2 60
Scientific Am.....	2 60	Christian at Work..	2 60
Phonographic Mag..	1 25	Laws of Life.....	1 85
The Forum.....	4 10	American Field.....	4 50
Observer, new sub.	2 25	Good Housekeeping..	2 10
The Studio.....	2 00	Chic'go Inter-Ocean	
Galaxy of Music.....	80	Weekly.....	85
The Esoteric.....	1 10	Chic'go Inter-Ocean	
Puck.....	4 00	Semi-weekly.....	2 10
Judge.....	3 30	Mag. Am. History..	4 20
Modern Priscilla....	40	The Old Homestead	85
The Home Maker....	1 60		

The only condition for obtaining the above reduction is that the person ordering shall subscribe for, or be a subscriber to the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH, then any number of the above publications may be ordered. Chart and Bust premiums are offered to new subscribers to the JOURNAL as above. Make up your list and send on the amount, saving time, money, risk, and trouble. Agents can often offer the above combination to advantage. Address all orders to FOWLER & WELLS Co., Publishers, 775 Broadway, N. Y.

Your Time Extended.—If you have sent \$2 for the JOURNAL for 1889, we will extend your time so as to make the term fifteen months instead of twelve, and so giving full value for money received.

Our Club Premiums.—Although the price of the JOURNAL is reduced from \$2.00 to \$1.50, this will in no way affect our Club Premium offers or our cash commissions to our agent friends, that is, for the same number of subscribers as before the different premiums are supplied.

Our New Cover.—We have ventured on another change in the cover of the PHRENOLOGICAL JOURNAL, for while it is true that there is an attractiveness about old things to some people, it is also true that new things, places and people prove attractive, and we ourselves feel quite pleased with the efforts of the artist in presenting to us something new. It is believed this brighter effect will make the JOURNAL more pleasing to new friends who have not become attached to the old one.

Human Nature Library.—We feel we owe an apology to our subscribers who have ordered Human Nature Library for the delay in the publication of this. In the pressure of work incident to carrying on our business we have found it difficult to keep everything up close. With an unlimited capital so that more help could be employed of course more could be done, but we hope to make amends for the past in the future, and when once even again, to keep up a regularity.

An Old Friend Gone.—We received a paper recently containing a notice of the death of David Wetherby, Auburn, N. Y., December 14th, 1888. Mr. Wetherby was for many years a warm personal friend of the late Samuel R. Wells, and for a number of years, sent regularly a good club of subscribers for the PHRENOLOGICAL JOURNAL. Thus old friends are passing away, and we must look for new friends to take their place and sustain the cause.

Miscellaneous Books.—We are sometimes asked as to whether we can supply books, Charts, etc., which we do not publish ourselves. In reply we would say that we are prepared to furnish our readers with any book, map, chart, music, or other publication, no matter where or by whom issued, and always at the publisher's price or a little less. If you are in want of anything in this line, write us. We have the best facilities for procuring what that is rare and scarce. All orders will receive our prompt and careful attention.

Phonography.—We continue to be as we have been in the past, headquarters for Phonographic literature, carrying the largest stock of works on this subject ever kept by one bookseller. We deal in all systems, and are special agents for Isaac Pitman's, of London, and New York agents for Ben Pitman's, Longley's, and others. Our new revised and enlarged catalogue of works for phonographers and typewriters will be ready in a few days, and will be sent on receipt of stamp, to all who may be interested in the subject.

School Stencils.—Every teacher, and especially the teachers of country schools, and graded schools, where there is an opportunity for the display of genius in this line of their work, should try school stencils as an aid. We are agents for Clark's Stencils, a complete list of which will be sent on application, or if you will send 10 cents. we will send two samples.

Sixty-Five Thousand Heads and Faces.

—We are just going to press with another edition of *Heads and Faces*, making the Sixty-fifth thousand of *Heads and Faces*, and it is a matter of gratification to us that the sales during the past three months have exceeded that of any other time since its first publication. The book is working its way into the hands of the people who have never before been interested in the subject, and creating a phrenological sentiment wherever it is read. It is undoubtedly the best work for its price ever put into the hands of agents.

For "Men on the Road."—We have just published a very novel and attractive book called "How to be Successful on the Road as a Commercial Traveler, by an old Drummer." This is not a book of stories and comic pictures, but a sensible book which should be read by all who think of "going on the road," by one who knows from experience what kind of advice to give. Those who have examined the advance sheets pronounce it admirable. We should expect it to be of interest to merchants, and those who stay at home, as showing how the thing is done. Price only 20 cents.

Fickett's Invalid Head-Rest.—We wish to call the attention of our readers to an adjustable Head-Rest intended to take the place of bolsters, chairs, and piles of pillows so often used on the sick bed. It is certainly an ingenious arrangement, and will prove a great luxury and comfort to those who find it necessary to occupy a reclining position. A descriptive catalogue can be obtained by addressing M. S. Fickett, 134 Richmond street, Boston, Mass.

PRESS NOTICES.

Parents should read the *JOURNAL*, that they may better know how to govern and train their children. Young people should read the *JOURNAL*, that they may make the most of themselves. It has long met with the hearty approval of the press and the people.—*People's Educational Quarterly*.

The Phrenological Journal comes thoroughly loaded with important matters relative to the interest of health and mental science. Every reader should read the valuable matter contained therein.—*Abingdon (Ill.) Enterprise*.

This Excellent and valuable journal comes to us every month, regularly. We prize it as among the very best of our exchanges. It should be a visitor regularly to every family. We know of nothing that can take its place as a sound and comprehensive educator of young people. From its pages a man learns how to live happily, long, and enjoy good health.—*Georgia Medical Eclectic*.

A Man Twice in Love.—Although a married man, I have fallen desperately in love with another besides my wife, and that is, the *PHRENOLOGICAL JOURNAL*. I think as much of it as of my bread and butter; while one is food for the body, the other is excellent diet for the mind. You may consider me a life subscriber. Very truly yours,

W. L. H.

BUSINESS CARDS.

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OUR HEALTHFUL HOME is pleasantly located on Reading Heights. Send ten cents in stamps, for our Book Circular, with Portrait. Address, A. Smith, M.D., Reading, Pa.

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ADVERTISEMENTS.

SPECIAL NOTICE.—Readers will oblige the Publishers if they will state, when writing to any of our advertisers, that the advertisement was seen in the *PHRENOLOGICAL JOURNAL*.



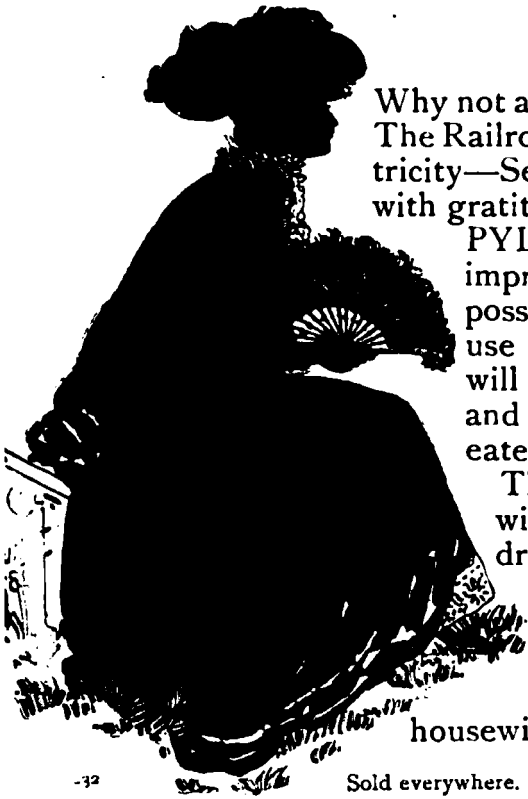
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On February 29, 1884, the FOWLER & WELLS CO. was incorporated under the laws of the State of New York as a Joint Stock Company, for the prosecution of the business heretofore carried on by the firm of FOWLER & WELLS.

The change of name involves no change in the nature and object of the business, or in its general management. All remittances should be made payable to the order of

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The Subscription Price of the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH is \$1.50 a year, payable in advance, or \$1.65 when premiums offered are sent to subscribers.

Money, when sent by mail, should be in the form of Money Orders, Postal Notes, Express Money Orders, Drafts on New York, or Registered Letters. All Postmasters are required to Register letters whenever requested to do so.

Silver or other coin should not be sent by mail, as it is almost sure to wear a hole in the envelope and be lost.

Postage-Stamps will be received for fractional parts of a dollar. The larger stamps are preferred; they should never be stuck to the letters, and should always be sent in sheets; that is, not torn apart.

Change of post-office address can be made by giving the old as well as the new address, but not without this information. Notice should be received the first of the preceding month.

Letters of Inquiry requesting an answer should inclose stamp for return postage, and be sure and give name and full address every time you write.

All Letters should be addressed to Fowler & Wells Co., and not to any person connected with the office. In this way only can prompt and careful attention be secured.

Any Book, Periodical, Chart, etc., may be ordered from this office at Publishers' prices.

Agents Wanted for the PHRENOLOGICAL JOURNAL and our Book Publications, to whom liberal terms will be given.

Our premium List, giving complete descriptions of the Premiums offered to subscribers, sent on application.

Our Descriptive Catalogues or our new List of "Books for Women" will be sent to any address on receipt of stamps for postage.

OUR REDUCED TERMS.

We have decided on a reduction in the price of the PHRENOLOGICAL JOURNAL from \$2.00 to \$1.50 a year, in consideration of the fact that it is our desire to secure as large a circulation of it as possible, and also of the fact that the larger the number printed the less is the cost for each. In doing this the size of the JOURNAL will not be materially changed, and it is our purpose to improve the quality in every way possible. The new price should certainly place it within the reach of all who would like to read it, and we will be disappointed if this change does not result in a largely increased subscription list. We shall continue the offer of the Bust or Chart premium to new subscribers as before, that is, to all who will send 15 cents extra with each subscription for boxing and packing the large bust, which is sent by express at the expense of the subscriber, or for postage on the chart or small bust, which is sent prepaid.

A Call For Help.—We feel justified in calling upon the friends of Phrenology and friends of the PHRENOLOGICAL JOURNAL to render us a little assistance at the present time. We have reduced the price of the JOURNAL for the purpose of increasing its circulation, and in this way a knowledge of Phrenology. We can not of course present the JOURNAL and its claims to every one, we shall advertise it largely and send out a great many specimen copies, but this is not likely to be sufficient to accomplish our purpose fully, and for this reason we take the liberty of calling upon our friends for their co-operation. At \$1 a year—and this is our club rate—we believe a club can be made up in every neighborhood by a person sufficiently interested to introduce the JOURNAL, and in towns and cities, of course many clubs could be made, one by almost every person who would try, and will not our friends make a timely effort and give the JOURNAL a new start with the new year?

CURRENT EXCHANGES.

Chicago Medical Times. A. L. Clark, M.D., Editor. A liberal and progressive journal of to-day. Monthly.

Building. One of our best Architectural Weeklies. Published by W. T. Comstock, New York.

North American Practitioner. Journal of Post-Graduate School, Chicago. Monthly. Charles Truax & Co., Chicago. A new clinical reporter that begins well.

Cosmopolitan. Illustrated Monthly. Literature, current and miscellaneous. New York.

Eclectic Magazine. E. R. Pelton, publisher. Has a choice selection of the best foreign literature. Monthly. No special bias evident. New York.

Harper's Weekly. American Journal of Civilization. Published by Harper & Brothers, New York.

La Gazette Medicale. Monthly. Represents the Faculty of Montreal, Canada.

Medical Advance. Monthly. Strong organ for a pure Homoeopathy. Ann Arbor, Mich.

Truth. Weekly exponent of current and general literature. Toronto, Canada.

Harper's Young People. Well known to the public. Weekly. Harper & Brothers, New York.

Scientific American. Weekly. Illustrates the Practical in Art, Science, Mechanics, Chemistry, and Manufactures. Munn & Co., New York.

West Shore. Monthly. An exponent of Western growth. Illustrated. L. Samuel, Portland, Oregon.

American Bookmaker. Monthly. Howard Lockwood & Co., New York. Devoted to the interests of the printer and binder for the most part.

The Century for February opens with a paper on the famous French artist Gerome, with admirable illustrations in wood, etc., from his finer works. The installment of the Lincoln History treats of the Removal of McClellan, Financial Measures, and of the relations between Mr. Lincoln, Seward, and Chase. The new chapter on Exiles at Irkutsk adds to the terrible facts related in former papers concerning the condition of exiles in Siberia. Dr. Gladden makes some suggestions in regard to restrictions of the suffrage. Some beautiful views of English scenery light up the article on Spinning and Weaving in Westmoreland.

Quarterly Journal of Inebriety. January number a plump number, discussing recent facts and developments related to its important specialty. Dr. Crothers' earnestness makes of this an excellent publication—one of our best organs in the trend of true moral reform.

Brooklyn Medical Journal. Drs. Raymond, Hutchins, Hunt, etc., Editors. Organ of the Kings County Medical Society. February number has a practical article on dental surgery, besides other useful features of a nature more directly connected with medical affairs. Brooklyn, N. Y.

Harper's Magazine. The March number opens with a portrait of the Prime Minister of Canada. An elaborate article on The Institute of France follows, with upward of twenty illustrations and portraits; Wm. M. Chase, the artist, is illustrated, and from Austria we have the materials of an interesting description of the growth of Vienna. Prof. Lockyer gives an instructive paper on Meteorites, and Mr. Bjornsen is at home again in Norway and its People. New York.

The Northern Christian Advocate says, "Of the several minor magazines familiar to our table there are a number that merit a welcome in the homes of the people and that can teach even very intelligent persons something every month that is worth knowing. Here is the old *PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH*, not nowadays a hobbyist, but thoroughly devoted to the instruction of the people in matters pertaining to the care and education of children and the general conduct of life. It is at present running a fine series of illustrated sketches of prominent literary people; this month's subjects are Donald Grant Mitchell and the two literary women whose names are just now most conspicuously before the public by reason of notable work done, one in England and one in America. This magazine goes a good deal into the by-paths to bring to view the interesting and instructive of common observation."

Masterpieces.—The *Atta*, published in San Francisco, Cal., in speaking of Masterpieces, says: "Intellectual readers who have as yet omitted the perusal of these poetical selections from four of the most eminent English authors, have a tempting opportunity in this published combination of retrieving their loss, and becoming familiar with productions that have few rivals in literature. Pope's oft-quoted 'Essay on Man' has merits of style and thought that insure it immortal renown. 'Comus' betokens that a study of phrenological science was not unknown to the author of 'Paradise Lost.' His admirers can badly afford to lose reading this exquisite poem, which has many of the merits of his greater achievements, in sublime verse. 'The Ancient Mariner' should be familiar with all English readers; and, for sentiment and merits of style, nothing will probably appear for centuries to surpass 'The Deserted Village' of Goldsmith. The enduring favor with which the 'Fables' of the famous Greek sage, Æsop, have been preserved for 2,500 years, renders any explanation of their introduction among English masterpieces unnecessary. They are a combination of wit and wisdom in a form attractive to young and old. The excellent engravings which accompany them add much to the force of both fable and moral."

This beautiful work will be sent by mail, post-paid, on receipt of price, \$1.25.

An Invalid Head-Rest.—We would call the attention of our readers to "Fickett's adjustable Invalid Head-Rest" advertised in this number of the *JOURNAL*. It is the best appliance of this kind that has ever been presented to the public, and it answers every purpose for which it is designed. It should be in every household as it is seldom that there are not conditions when it might become very useful. We have arranged with Mr. Fickett, who is an old friend and agent for the *JOURNAL*, to offer this for sale, and would be pleased to supply it to any of our readers on receipt of price, \$3.50.

Something New. The Man Wonderful Manikin is the name given to something we have in preparation for early publication. This consists of a dissected chart, one-third full life-size, so arranged as to represent the exterior and interior muscles and skeleton, and all the internal parts of the human body, presenting some fifty views in all. For a more complete description, with illustrations, see full-page advertisement in this number. While this is adapted for school use, and should be in the hands of every teacher, it is also well adapted to, and will be found specially useful for private study and in families. Manikins of this kind, but of course larger, have been published and sold at from \$25 to \$50, while we have placed the price of this at \$4, believing that in so doing we can be sure of sufficient sales to justify printing very large editions, and so greatly reducing the cost; and as a farther incentive to increase the sale, we offer it at \$3 to any subscriber to the *PHRENOLOGICAL JOURNAL* who will send an order before the 20th of April, which is to be the date of publication. To those who are not subscribers we will send the Manikin and *JOURNAL* for one year for \$4. All orders should be sent at once, and will be entered in the order in which they are received.

A Bargain. We would like to call the attention of our readers to our "BARGAIN OFFERS" on another page of this *JOURNAL*. We find on our shelves remnants of editions, some books that are soiled, shelf-worn, and faded, some that have been sent out to booksellers and returned, all of them complete copies, but not in a perfect condition, which we are willing to sell at a great reduction in price, in order to make room for new books and new editions, and we propose to give our subscribers only the benefit of this reduction, and we refer our readers to the list, and call attention to the prices, which are less than wholesale. As will be seen, the time of this offer is limited to July 1st, or until the editions are sold. The only safe way is to order now.

Floral Novelties. The great advance that is being made in the matter of *FLORAL* culture by way of perfecting the old species and introducing new novelties is very interesting, and the public are greatly indebted to the enthusiasts who experiment and carry on this work. Among the most enterprising is the house of James Vick, the Seedsman, of Rochester, N. Y. He continually has something new to offer. He advertises in the *JOURNAL* "VICK'S CAPRICE," a new striped, hardy Rose. His *FLORAL GUIDE* should be considered indispensable to every lover of flowers, whether with a large garden or a few house plants. See advertisement, and note the conditions on which it can be obtained free.

A Dollar Saved to the Journal Readers. We would call the attention of our readers to the announcement elsewhere offering the "Man Wonderful Manikin," price \$4.00, to our subscribers who order in advance of publication, at \$3.00. Read the advertisement and have your name entered at once.

The Preservation of Health. We have just issued a new edition of a valuable work which has been out of print for some time, "The Principles of Physiology," applied to the preservation of health and to the improvement of the physical and mental education, by George Combe, M. D. This is one of the most important works on the subject, it goes to the root of the matter, and is a work which should be found in every family library. The importance of the subject cannot be over-estimated, and the author of this work may be considered competent authority. The new edition is printed on fine heavy paper, and will be sent by mail postpaid to any address on receipt of price, \$1.50.

Comparative Physiognomy. We are just going to press with a new edition of REDFIELD'S *COMPARATIVE PHYSIOGNOMY*, the only work devoted exclusively to this subject. It contains forty-seven portraits of prominent people, with as many or more comparative portraits of animals, together with a great many sketches, all of which are very interesting. The whole subject is carefully systematized, and no student of human nature can fail to be attracted by it. The work will be sent to any address on receipt of price, \$2.50.

The Temperance Hand-Book, for speakers and workers, has been brought out by Julia Coleman, room 47, Bible House, this city. It is, as the title indicates, designed expressly for temperance workers, and is an available hand-book for speakers, teachers, clergymen, Sunday school superintendents, and all classes of temperance workers. The first part contains ten Scripture lessons and Bible readings, then follows ten temperance discourses and outline sermons by various authors, ten scientific lectures, with full directions for their illustration with some chemical experiments or lessons, etc., prose and poetical quotations and proverbs, directions for the use of apparatus, list of temperance supplies, cultivation of the voice, and a proper presentation of the subject. A thick pamphlet of 178 pages, sold at 50 cents. We would like to send one from this office to every reader of the *PHRENOLOGICAL*.

The Health Food Company. Among the efforts to promote the healthful conditions of the public we should not overlook the work done by this company in providing better foods. There are many who were formerly invalids that owe their present health and strength to the use of food materials recommended or supplied by this concern, and their products have become a staple article of food in many households where sickness has not led to their introduction, but simply the desire to live for health and strength. In the interest of their business and the public they issue a quantity of printed matter descriptive of what is needed for certain conditions and what they have to sell, which will be sent free on application to the Health Food Company, 74 Fourth avenue, New York.

Clubbing for 1889.—For the accommodation of our readers and friends we have made arrangements for the combination of other publications with our popular and useful magazine as follows: The subscription price to the *PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH* is \$1.50; and any of the following may be included at the prices given.

Names sent for the *JOURNAL* with either of these will count on Premium List, and to agents the same as though sent singly.

Eclectic Magazine.....	\$4 25	Scottish Am.....	2 60
Atlantic Monthly.....	3 40	N.Y. Evang'list, new	2 00
Lippincott's Mag.....	2 50	The Treasury.....	1 85
Harper's Monthly.....	3 10	Homiletic Review..	2 10
Weekly.....	3 35	Am. Garden.....	1 60
Bazar.....	3 35	World Travel Gaz'te	75
Young People.....	1 70	The Fanny.....	85
The Century Mag.....	3 60	Baby Land.....	45
St. Nicholas.....	2 60	Peterson's Mag.....	1 60
Popular Sci. Mon.....	4 20	North Am. Review..	4 10
Godey's Lady's Book	1 70	Tribune, Weekly....	1 10
Arthur's Home Mag	1 60	Semi.....	2 25
Rural New Yorker..	1 85	Times, Weekly.....	90
Scribner's Mag.....	2 50	Sun.....	90
Cosmopolitan.....	2 50	World, ".....	90
Demorest's Mag.....	1 60	Country Gentleman	2 00
Home Journal.....	1 60	Herald, Weekly....	90
Am. Agriculturist..	1 10	Illus. Chris'n W'kly	2 20
Wide Awake.....	2 10	Weekly Witness....	90
Our Little Men and		Poultry World.....	90
Women.....	85	Gardeners' Monthly	1 50
Our Little Ones.....	1 25	Herald of Health..	80
Critic.....	2 50	N. E. Journal of Ed-	
American Mag.....	2 60	ucation.....	2 15
The Independent....	2 60	The School Journal.	2 60
Cassell's Fam. Mag.	1 25	Pop. Educator.....	1 75
Baby Hood.....	1 10	Christian Union....	2 60
Scientific Am.....	2 60	Christian at Work..	2 60
Phonographic Mag..	1 25	Laws of Life.....	1 35
The Forum.....	4 10	American Field....	4 50
Observer, new sub.	2 25	Good Housekeeping.	2 10
The Studio.....	2 00	Chic'go Inter-Ocean	
Galaxy of Music....	80	Weekly.....	85
The Esoteric.....	1 10	Chic'go Inter-Ocean	
Puck.....	4 00	Semi-weekly....	2 10
Judge.....	3 80	Mag. Am. History..	4 20
Modern Frisella....	40	The Old Homestead	35
The Home Maker....	1 60		

The only condition for obtaining the above reduction is that the person ordering shall subscribe for, or be a subscriber to the *PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH*, then any number of the above publications may be ordered. Chart and Bust premiums are offered to new subscribers to the *JOURNAL* as above. Make up your list and send on the amount, saving time, money, risk, and trouble. Agents can often offer the above combination to advantage. Address all orders to FOWLER & WELLS Co., Publishers, 775 Broadway, N. Y.

Tobacco.—Its Effects on the Human Constitution. By Dr. W. A. Alcott, with notes and additions by Nelson Sizer. New York, Fowler & Wells.

The Home Guardian says: This is one of the many and early books written by the prolific author of so many good books, not one having issued from his pen which was not truly valuable. It is sufficient to say of this that it treats definitely of the various phases of the curse. It treats the subject so generally, so much in detail, that it is all that can be reasonably desired as a text-book on tobacco. Sent by mail, on receipt of 25 cents.

How to Paint.—At this season of the year farmers, mechanics, and all owners of houses and out-buildings, wagons, farming utensils, etc., should see to it that they are well painted. It will be found poor economy to let them stand over, but it may be found good economy to know how to do all this work, or a part of it, yourself, and if you procure and read our hand-book "How to Paint," giving directions for the mixing of all kinds of paint and applying it to all purposes, you will save many times its cost. The suggestions given will enable you to judge intelligently of the work when done by others. It will be sent by mail, post-paid, on receipt of price, \$1.00.

Bound Volumes.—We have the bound volumes of the *Journal* for previous years, including last year, which we can send to our readers who wish to procure them in this way, from 1878 to the present time, price \$3.00 a year. Previous years at prices depending on how rare the volumes are, some being entirely out of print.

The Manifesto, that sturdy organ of the American Shakers, mentions the *PHRENOLOGICAL JOURNAL*, etc., in a recent notice, and adds: It is a long and honorable pilgrimage to make, with this incentive at heart; to have the family of man so interested in themselves that they may be able to live longer, happier, and better in this beautiful world. With its newly illustrated cover, the *JOURNAL* offers to us a very social and pleasant invitation to become acquainted. The body of the work, as usual, is filled with illustrated articles, and with interesting matter on the "Science of Life" which is calculated to win the attention of the reader.

From the Fort Wayne Watchman this is taken: Among our exchanges we are glad to number the *PHRENOLOGICAL JOURNAL*. This journal is one of valuable and profitable interest to the student, to the merchant, to the home circle, and to the general public.

We feel that we cannot say too much in its behalf, for each issue is replete with good common sense talk.

Thankful.—A correspondent writes from Gaylord, Mich.:—I wish to send thanks to the Editor of the *JOURNAL*, and its associate workers, for the good work they are doing in dispersing knowledge throughout this broad land of ours. The *JOURNAL*'s mission is as broad as its theories. Is it not a welcome visitor in our homes: lighting up the dark pathway of our lives, and instilling knowledge into our minds of the right sort?

Knowledge it brings which if heeded and applied to our own individual needs, must eventually raise us up to a higher plane of living, to a clearer estimate of what we now are and what we might become.

For several years it has made its way into our own humble home, and been ever a cheering light amid the dark clouds that beset our way.—Mrs. J. W. R.

The Washington Nurseries. These nurseries at the Nation's Capitol are a source from which many choice hot-house and garden plants are obtained. Too much cannot be said in favor of the great pains which they take in putting up orders which they fill, which secures their safe delivery and good condition, no matter what distance they have to be sent. See advertisement and send for catalogue.

Roses.—To those wishing roses we cordially recommend the old reliable house of The Dingee & Conard Co., West Grove, Pa. They are admitted to be the largest rose growers in America. Their New Guide, 110 pages, handsomely illustrated, describes and tells how to grow more than two thousand varieties of the newest and choicest roses, and is sent free to all who write for it. See advertisement in this paper, and address The Dingee & Conard Co., West Grove, Pa.

The Detroit Free Press says:—In going to New York to stay a day, a week, or month, you want moderate prices and central location. The Sturtevant House, Broadway, corner 29th, is all that can be desired and nearly 2,000 cars pass its doors daily.

BUSINESS CARDS.

The Hammam, a Family Hotel, with Turkish Baths, 81 and 83 Columbia Heights, Brooklyn, N. Y. Three minutes' walk from Fulton Ferry.

Susanna W. Dodds, M.D., and Mary Dodds, M.D., Hygienic Physicians, 2826 Washington Ave., St. Louis, Mo. All diseases, acute and chronic treated without medicine. Send for circular.

The New York Medical College and Hospital for Women, and Homeopathic Dispensary for Women and Children. 213 West 54th Street, New York.

Mrs. J. T. Campbell, M.D., 153 W. 128th St., New York.

OUR HEALTHFUL HOME is pleasantly located on Reading Heights. Send ten cents in stamps, for our Book Circular, with Portrait. Address, A. Smith, M.D., Reading, Pa.

Fowler & Wells Co., Phrenologists and Publishers, 775 Broadway, N. Y. Agents Wanted.

ADVERTISEMENTS.

SPECIAL NOTICE.—Readers will oblige the Publishers if they will state, when writing to any of our advertisers, that the advertisement was seen in the PHRENOLOGICAL JOURNAL.

EXPERIENCED PHYSICIAN
Wants position in Sanitarium as manager or assistant. References,
Dr. S., care Journal.

PHRENOLOGY.—THE AMERICAN INSTITUTE OF PHRENOLOGY will open its annual session for students September 3d, and continue six weeks. For circulars address Fowler & Wells Co., 775 Broadway, New York.



The only perfect Cracker made. A plain, whole wheat flour, water cracker made light, tender and crisp by manipulation only. Far better in every respect for every one than any Graham Cracker ever made. Children thrive on them and dyspeptics are cured by using them.

WHEATENA. The best Breakfast dish in the world. Cooked perfectly in two minutes. These and other products are manufactured from wheat from which the outer hull has been removed. Our complete circulars and price lists sent on application. Address, Health Food Co., 74 4th Ave., New York.

Wanted at a Sanitarium

near New York, a man competent to take charge of the out-door work. Must understand gardening, horses, and dairy management. Good habits indispensable and readiness to adapt himself to the conditions incident to a health institution, and to co-operate with the principal in promoting its success. Address, stating experience, wages required, references, and other particulars, Dr. Drayton, care Fowler & Wells Co., 775 Broadway, New York.



Miniature Selected from M. A. D. and D.

"BUILDING." An illustrated weekly devoted to Architecture and Decoration. Subscription, \$6.00 a year; 15 cents a copy.

MODERN ARCHITECTURAL DESIGNS AND DETAILS. A monthly publication devoted to designs and details (see cut) of houses of moderate cost. \$5.00 a year; 50 cents a copy.

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HOUSE PLANNING. 106 pages. 69 illustrations. A work full of suggestions as to planning and arrangement of rooms. One 12mo vol., cloth, price \$1.00.

ARCHITECTURAL IRON WORK. Illustrations, plates; 1 quarto vol. handsomely bound in cloth, \$5.00.

88 page catalogue of Architectural books and drawing Instrument catalogue free to any address.

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JAMES PYLE, New York.



Come, Fellow Farmers!

It is the good things and the new things you want. Here is a Catalogue full of them! Do you want tested seed, raised from stock selected with extra care, grown from the best strains, got from the originators? I aim to have mine just such. Do you want new varieties that are really good, and not merely novelties? I aim to have mine such. Do you want seed that the dealer himself has faith enough in to warrant? I warrant mine, as see Catalogue. Do you want an exceptionally large collection to select from? Mine is such. Do you want them directly from the grower? I grow a large portion of mine—few seedsmen grow any! My Vegetable and Flower Seed Catalogue for 1889 FREE to everybody. JAMES J. H. GREGORY, Marblehead, Mass.



CORSETS.

Boned with Featherbone, which is absolutely unbreakable.

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With DIXON'S SILICA-GRAPHITE paint. It will last 10 to 15 years. Water will run from it pure and clean, and it will give you better satisfaction than any other paint. Send for circulars.

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Pack Mixed Flower Seeds (500 kinds), Guano, and 100¢ Certificate for Seeds, your choice, all for 3 stamps (1¢). Flower lovers delighted. Tell all your friends. J. C. W. PARK, Fannettsburg, Pa. Send at once. This notice will not appear again.

JOHN SAUL'S WASHINGTON NURSERIES

Our Catalogue of New, Rare, and Beautiful Plants, for 1889, will be ready in February. It contains list of all the most Beautiful and Rare Greenhouse and Hothouse Plants in cultivation, as well as all Novelties of merit, well grown and at very low prices. Every plant lover should have a copy.

ORCHIDS.—A very large stock of choice East Indian, American, etc. Also catalogues of Roses, Orchids, Seeds, Trees, etc. All free to applicant.

JOHN SAUL, Washington, D. C.

C. F. WELLS, NELSON SIZER, H. S. DRAYTON, ALBERT TURNER,
President. Vice-President. Secretary. Treas. and Bus. Manager.

FOWLER & WELLS CO.

On February 29, 1884, the FOWLER & WELLS CO. was incorporated under the laws of the State of New York as a Joint Stock Company, for the prosecution of the business heretofore carried on by the firm of FOWLER & WELLS.

The change of name involves no change in the nature and object of the business, or in its general management. All remittances should be made payable to the order of

FOWLER & WELLS CO.

The Subscription Price of the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH is \$1.50 a year, payable in advance, or \$1.65 when premiums offered are sent to subscribers.

Money, when sent by mail, should be in the form of Money Orders, Postal Notes, Express Money Orders, Drafts on New York, or Registered Letters. All Postmasters are required to Register letters whenever requested to do so.

Silver or other coin should not be sent by mail, as it is almost sure to wear a hole in the envelope and be lost.

Postage-Stamps will be received for fractional parts of a dollar. The larger stamps are preferred; they should never be stuck to the letters, and should always be sent in sheets; that is, not torn apart.

Change of post-office address can be made by giving the old as well as the new address, but not without this information. Notice should be received the first of the preceding month.

Letters of Inquiry requesting an answer should inclose stamp for return postage, and be sure and give name and full address every time you write.

All Letters should be addressed to Fowler & Wells Co., and not to any person connected with the office. In this way only can prompt and careful attention be secured.

Any Book, Periodical, Chart, etc., may be ordered from this office at Publishers' prices.

Agents Wanted for the PHRENOLOGICAL JOURNAL and our Book Publications, to whom liberal terms will be given.

Our premium List, giving complete descriptions of the Premiums offered to subscribers, sent on application.

Our Descriptive Catalogues or our new List of "Books for Women" will be sent to any address on receipt of stamps for postage.

OUR REDUCED TERMS.

We have decided on a reduction in the price of the PHRENOLOGICAL JOURNAL from \$2.00 to \$1.50 a year, in consideration of the fact that it is our desire to secure as large a circulation of it as possible, and also of the fact that the larger the number printed the less is the cost for each. In doing this the size of the JOURNAL will not be materially changed, and it is our purpose to improve the quality in every way possible. The new price should certainly place it within the reach of all who would like to read it, and we will be disappointed if this change does not result in a largely increased subscription list. We shall continue the offer of the Bust or Chart premium to new subscribers as before, that is, to all who will send 15 cents extra with each subscription for boxing and packing the large bust, which is sent by express at the expense of the subscriber, or for postage on the chart or small bust, which is sent prepaid.

A Call For Help.—We feel justified in calling upon the friends of Phrenology and friends of the PHRENOLOGICAL JOURNAL to render us a little assistance at the present time. We have reduced the price of the JOURNAL for the purposes of increasing its circulation, and in this way a knowledge of Phrenology. We can not of course present the JOURNAL and its claims to every one, we shall advertise it largely and send out a great many specimen copies, but this is not likely to be sufficient to accomplish our purpose fully, and for this reason we take the liberty of calling upon our friends for their co-operation. At \$1 a year—and this is our club rate—we believe a club can be made up in every neighborhood by a person sufficiently interested to introduce the JOURNAL, and in towns and cities, of course many clubs could be made, one by almost every person who would try, and will not our friends make a timely effort and give the JOURNAL a new start with the new year?

CURRENT EXCHANGES.

America. A journal of to-day. Weekly. Slason, Thompson & Co., Chicago.

The Western Rural and American Stockman. For the farm, field, and fireside. Milton George, Chicago.

The Medical Summary. Devoted to practical medicine, new preparations, etc. Brief and available. Monthly. R. H. Andrews, M. D., Philadelphia.

The Homiletic Review. An international monthly magazine of religious thought, sermonic literature, and discussion of practical issues. Monthly. Funk & Wagnalls, New York.

Le Progres Medical. A journal of medicine, surgery, and related science. Weekly. Bournville editor in chief, Paris.

Illustrated Catholic American. Recreation for the people. Weekly. Catholic American Company, New York.

World Travel Gazette. Devoted to interest of travelers in all lands. Quarterly. Very complete. Charles H. Orr, New York.

New York Weekly Tribune.

Brooklyn Medical Journal. Monthly. Organ of the Medical Society of the County of Kings, Brooklyn, N. Y.

Medical Analectic. An epitome of progress in all divisions of medico-surgical practice. Weekly. R. W. Amidon, M. D., Editor, New York.

Woman's Magazine. Art, literature, biography, home science and woman's work. Monthly. Frank E. House & Co., Brattleboro, Vt.

Phrenological Magazine. A journal of education and self-culture, on a true basis of mental development; Monthly. L. N. Fowler, London.

American Art Journal. Represents music, art, and the music trades. Weekly. William M. Thomas, New York.

Annals of Surgery. A review of surgical science and practice. Foreign and home progress carefully noted. Monthly. L. S. Pilcher, A. M., M. D., Brooklyn; and C. B. Keetley, F.R.C.S., London.

Ohio Journal of Dental Science. Monthly. Ransom & Randolph, Toledo, O.

American Law Register. One of the very few good legal periodicals in the country. Monthly. D. B. Canfield & Co., Philadelphia.

Harper's Weekly. Illustrated, yet something more than a picture paper. Harper & Brothers, New York.

Voice Magazine. A journal of expression, vocal and physical. Not to be confounded with the temperance paper called *Voice*. Monthly. Edgar S. Werner, New York.

Vick's Illustrated Monthly Magazine. Now is the time to get the garden ready. James Vick, seedsman, Rochester, N. Y.

Youths' Companion. Weekly. Perry, Mason & Co.

The Homiletic Review for April gives considerable space to review articles, among them *The Poetry of Modern Skepticism*, *Preacher and Orator*, *Beauty as a Middle Term*. The Sermonic section is well filled up, and Dr. Cuyler tells how he became successful as a preacher, giving not a little encouragement to the young cleric. Funk & Wagnalls, New York.

Popular Science. Monthly. April number treats of the Psychology of Spiritualism; Agnosticism,

a paper by Prof. Huxley; Zoological Gardens; the Derivative Origin of the Human Mind; Science and Christian Science; Plants in Witchcraft; a Portrait and Sketch of James P. Espy, and other readable topics. D. Appleton & Co., New York.

Harper's New Monthly for April is a Washington number, so rich is it with "stuff" relating to the first President; Parisian Cafes; Tangiers and Morocco; Gables of Abbotsford; Child Mihu, a ballad of Rumania; Flying Under Water; Norway and Its People, are elaborately illustrated, and otherwise interesting. The Washington department gives a historical character to the number. Harper & Brother, New York.

Christian Thought for April discusses Christianity as logically defined; Nirvana, Science and Religion, and other topics coming within its range. William B. Ketchum, New York.

Good Health.—There is now but little doubt, that our healthful conditions depend very largely if not wholly, upon the proper understanding and obeying of the Laws of Life and Health and maintaining our proper relation to Food, Exercise, Rest, Recreation, Pure Air, etc., and it is therefore very essential that the people should have a proper understanding of the subject. To this end books are published, written by men who have made this a special study, and who are prepared from wide experience and knowledge to give advice, and suggestions which will, if followed do much to promote health and strength. In this connection we would call the attention of our readers to our catalogue of health books, works written by Trail, Fowler, Graham, Shew, Page, Oswald, and others, and all in this line. Some, if not all of these should be read by every intelligent person who wishes to know how to live. Our complete descriptive catalogue will be sent to any of our readers on application.

The Commercial Traveler.—The selling of goods by traveling with samples has come to be as much a business or trade as the work of a mechanic, teacher, or the professional man. The time was, when merchants who wished to purchase goods made trips annually, semi-annually, or quarterly as the case might be to large cities and trade centers. Now they have ample opportunities for replenishing their stock by samples which are presented for consideration daily by men on the road, sometimes called drummers. As showing how to succeed in this pursuit, we have published "How to be Successful on the Road as a Commercial Traveler, by an Old Drummer." This gives many suggestions and presents many phases in the study character and as a successful business man said recently: "I think it an excellently well written book, and I am thoroughly convinced that the writer was a successful traveler, to be able to give such an exact detail of both salesman and buyer." It will be found of interest not only to the traveler, but to the merchant at home, not only to the merchant but to the people, to every one as showing how goods are sold, the methods resorted to to create a demand, and secure the supplying of it. It is a well printed work, bound in paper and sells at 20 cents by mail, postpaid.

Every-Day Biography.—We have just published a work which will be of especial interest to readers of the *PHRENOLOGICAL JOURNAL*, a volume containing nearly 1,500 Brief Biographies arranged for every day in the year by Miss Amelia J. Claver, an intelligent teacher of many years experience, who first commenced the collection of these for her own use. It will be found interesting and useful to all and especially so to teachers. To show something of the plan of the work we give below a sample day. **April 16.**

—**William of Nassau, Prince of Orange**, "William the Silent," the illustrious founder of the Dutch Republic, born at Dillenburg, in Nassau, April 16, 1533. He was assassinated by Balthazer Gerard, a fanatical Catholic, in 1584. Motley says he earned the name of "The Silent" not from being taciturn, but from the instance of his silently receiving communications from Henry II. of France, in regard to plots laid against the Protestants, without revealing to the monarch, by word or look, that he was a Protestant and a great blunder had been committed. To William the Silent is due the honor of being the first among the European states, to practically apply the principles of religious toleration.

EDWARD RAWSON, an early colonial author, born in Gillingham, Dorsetshire, Eng., April 16, 1615. Died at Boston, Aug., 1693. He was one of the first secretaries of the General Court of Massachusetts Colony. His daughter Rebecca was the heroine of one of Whittier's romantic episodes.

SIR JOHN FRANKLIN, F.R.S., the lost Arctic explorer, born at Spilsby, Lincolnshire, Eng., April 16, 1786. He was governor of Tasmania for several years, and in 1845 started on his last polar expedition, in command of the *Erebus* and *Terror*. It is believed by all conclusive evidence that he died near Lancaster Sound, June, 1847.

LOUIS ADOLPHE THIERS, an eminent French historian and statesman, born at Marseilles, April 16, 1797. Died September 3, 1877. His "History of the French Revolution" is one of the greatest historical works of the age. After the capitulation of Paris in 1870, he was chosen by the Assembly to be head of the Provisional Government. In 1871, having crushed the Commune and restored order, he became "President of the French Republic," which office he held until 1873, when he resigned to give place to Marshal MacMahon.

It can readily be seen what a source of information this must be; not only the dead but the living are chronicled—those we want to know about in our daily reading and conversation. The work contains nearly 400 pages, is handsomely bound in cloth, with gold and ink; price, \$1.50, by mail, postpaid. Address this office.

Temperance Literature.—Miss Julia Colman, room 47 Bible House, New York, has issued an "Eclectic Temperance Guide," containing a catalogue of books on all kinds of Temperance Supplies, including tracts, cards, etc. Miss Colman will send this guide free to any of our readers who will send address on postal.

"Ready for Business, or Choice of Occupation" is a title of a work we have now on press, by Mr. Geo. J. Manson, a popular journalist and writer of this city. We are now publishing in book form a series of papers which first appeared in one of the popular magazines. The author considers the opportunities afforded by the various trades and professions, says what is to be done in order to acquire a knowledge of them, how much education is necessary, and how it can be obtained, the opportunities for employment and the chances for success. It is just what parents need that they may be able to decide intelligently for their sons as to what shall be their life-work, and every young man should read and study it carefully. The following are some of the important subjects considered, "The Electrical Engineer, the Architect, Commercial Traveler, Banker and Broker, House Builder, Boat Builder, a Sea Captain, Practical Chemist, Journalist, Druggists, etc., and the learned professions, Medicine, Law and Divinity. The author does not attempt to indicate what is the best line to follow, but rather to show what is to be done and how to do it. To enter upon any one life pursuit so that when a young man has the matter under consideration he may know what he has to contend with, or to do in order to succeed in that to which he feels he is the best adapted after studying himself and the various pursuits of life carefully. It will be published in the form of a manual at 60 cents and advance orders of subscribers to the *PHRENOLOGICAL JOURNAL* will be filled at 50 cents a copy.

Human Magnetism.—We have in preparation to be published May 10th, a new work, "Human Magnetism, What it is and How to Use it, including its Physiological application to Medicine, Mind-reading, and to Moral and Intellectual Improvement," by Dr. Drayton, the editor of the *PHRENOLOGICAL JOURNAL*. This work will bring the subject up to the present time including the results of all recent investigations and experiments and will give more practical information than has yet been published, including a very interesting chapter on Phreno-Magnetism in which further interesting and valuable experiments are given. It will be illustrated, handsomely published and bound in cloth, price 75 cents. To subscribers of the *JOURNAL* who order it in advance of publication it will be sent at 60 cents. Address this office.

A Dollar Saved to the Journal Readers. We would call the attention of our readers to the announcement elsewhere offering the "Man Wonderful Manikin," price \$4.00, to our subscribers who order in advance of publication, at \$3.00. Read the advertisement and have your name entered at once.

Near the L Road.—There can be no pleasanter place to stop in New York than at the well known Sturtevant House 29th and Broadway, New York. It is centrally located and is conducted on both the American and European plans at moderate prices.—*Times Democrat*.

Something New.—The Man Wonderful Manikin is the name given to something we have in preparation for early publication. This consists of a dissected chart, one-third full life-size, so arranged as to represent the exterior and interior muscles and skeleton, and all the internal parts of the human body, presenting some fifty views in all. For a more complete description, with illustrations, see full-page advertisement in this number. While this is adapted for school use, and should be in the hands of every teacher, it is also well adapted to, and will be found specially useful for private study and in families. Manikins of this kind, but of course larger, have been published and sold at from \$25 to \$50, while we have placed the price of this at \$4, believing that in so doing we can be sure of sufficient sales to justify printing very large editions, and so greatly reducing the cost; and as a farther incentive to increase the sale, we offer it at \$3 to any subscriber to the PHRENOLOGICAL JOURNAL who will send an order before the 10th of May, which is now to be the date of publication. To those who are not subscribers we will send the Manikin and JOURNAL for one year for \$4. All orders should be sent at once, and will be entered in the order in which they are received.

BUSINESS CARDS.

The Hamman, a Family Hotel, with Turkish Baths, 81 and 83 Columbia Heights, Brooklyn, N. Y. Three minutes' walk from Fulton Ferry.

Susanna W. Dodds, M.D., and Mary Dodds, M.D., Hygienic Physicians, 2826 Washington Ave., St. Louis, Mo. All diseases, acute and chronic treated without medicine. Send for circular.

The New York Medical College and Hospital FOR WOMEN, and Homeopathic Dispensary for Women and Children. 213 West 54th Street, New York.

Mrs. J. T. Campbell, M.D., 153 W. 128th St., New York.

OUR HEALTHFUL HOME is pleasantly located on Reading Heights. Send ten cents in stamps, for our Book Circular, with Portrait. Address, A. Smith, M.D., Reading, Pa.

Fowler & Wells Co., Phrenologists and Publishers, 775 Broadway, N. Y. Agents Wanted.

ADVERTISEMENTS.

SPECIAL NOTICE.—Readers will oblige the Publishers if they will state, when writing to any of our advertisers, that the advertisement was seen in the PHRENOLOGICAL JOURNAL.

EXPERIENCED PHYSICIAN

Wants position in Sanitarium as manager or assistant. References.

Dr. S., care Journal.

PHRENOLOGY.—THE AMERICAN INSTITUTE OF PHRENOLOGY will open its annual session for students September 3d, and continue six weeks. For circulars address Fowler & Wells Co., 775 Broadway, New York.

NATURAL WHEAT TRADE MARK PEELED WHEAT Peeled WHEAT CRACKERS.

The only perfect Cracker made. A plain, whole wheat flour, water cracker made light, tender and crisp by manipulation only. Far better in every respect for every one than any Graham Cracker ever made. Children thrive on them and dyspeptics are cured by using them.

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Containing Pope's "Essay on Man," Æsop's Fables, Coleridge's "Ancient Mariner," Goldsmith's "Deserted Village," "The Traveller," "The Hermit," Milton's "Comus." All illustrated, in one volume, fine cloth. Price, \$1.00.

This work will be found of great interest to young and old. Sent by mail, postpaid, on receipt of price. Address, FOWLER & WELLS Co., Pubs., 775 Broadway, New York.

SCIENTIFIC AMERICAN ESTABLISHED 1845.

Is the oldest and most popular scientific and mechanical paper published and has the largest circulation of any paper of its class in the world. Fully illustrated. Best class of Wood Engravings. Published weekly. Send for specimen copy. Price \$3 a year, four months' trial, \$1. MUNN & CO., PUBLISHERS, 361 Broadway, N. Y.

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A great success. Each issue contains colored lithographic plates of country and city residences or public buildings. Numerous engravings and full plans and specifications for the use of such as contemplate building. Price \$2.50 a year, 25 cts. a copy. MUNN & CO., PUBLISHERS.

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The Mother's Hygienic Hand-Book for the Normal Development and Training of Women and Children, and the Treatment of their Diseases with Hygienic Agencies. 12 mo., cloth, \$1.00.

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On February 29, 1884, the FOWLER & WELLS CO. was incorporated under the laws of the State of New York as a Joint Stock Company, for the prosecution of the business heretofore carried on by the firm of FOWLER & WELLS.

The change of name involves no change in the nature and object of the business, or in its general management. All remittances should be made payable to the order of
FOWLER & WELLS CO.

The Subscription Price of the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH is \$1.50 a year, payable in advance, or \$1.65 when premiums offered are sent to subscribers.

Money, when sent by mail, should be in the form of Money Orders, Postal Notes, Express Money Orders, Drafts on New York, or Registered Letters. All Postmasters are required to Register letters whenever requested to do so.

Silver or other coin should not be sent by mail, as it is almost sure to wear a hole in the envelope and be lost.

Postage-Stamps will be received for fractional parts of a dollar. The larger stamps are preferred; they should never be stuck to the letters, and should always be sent in sheets; that is, not torn apart.

Change of post-office address can be made by giving the old as well as the new address, but not without this information. Notice should be received the first of the preceding month.

Letters of Inquiry requesting an answer should inclose stamp for return postage, and be sure and give name and full address every time you write.

All Letters should be addressed to Fowler & Wells Co., and not to any person connected with the office. In this way only can prompt and careful attention be secured.

Any Book, Periodical, Chart, etc., may be ordered from this office at Publishers' prices.

Agents Wanted for the PHRENOLOGICAL JOURNAL and our Book Publications, to whom liberal terms will be given.

Our premium List, giving complete descriptions of the Premiums offered to subscribers, sent on application.

Our Descriptive Catalogues or our new List of "Books for Women" will be sent to any address on receipt of stamps for postage.

OUR REDUCED TERMS.

We have decided on a reduction in the price of the PHRENOLOGICAL JOURNAL from \$2.00 to \$1.50 a year, in consideration of the fact that it is our desire to secure as large a circulation of it as possible, and also of the fact that the larger the number printed the less is the cost for each. In doing this the size of the JOURNAL will not be materially changed, and it is our purpose to improve the quality in every way possible. The new price should certainly place it within the reach of all who would like to read it, and we will be disappointed if this change does not result in a largely increased subscription list. We shall continue the offer of the Bust or Chart premium to new subscribers as before, that is, to all who will send 15 cents extra with each subscription for boxing and packing the large bust, which is sent by express at the expense of the subscriber, or for postage on the chart or small bust, which is sent prepaid.

A Call For Help.—We feel justified in calling upon the friends of Phrenology and friends of the PHRENOLOGICAL JOURNAL to render us a little assistance at the present time. We have reduced the price of the JOURNAL for the purpose of increasing its circulation, and in this way a knowledge of Phrenology. We can not of course present the JOURNAL and its claims to every one, we shall advertise it largely and send out a great many specimen copies, but this is not likely to be sufficient to accomplish our purpose fully, and for this reason we take the liberty of calling upon our friends for their co-operation. At \$1 a year—and this is our club rate—we believe a club can be made up in every neighborhood by a person sufficiently interested to introduce the JOURNAL, and in towns and cities, of course many clubs could be made, one by almost every person who would try, and will not our friends make a timely effort and give the JOURNAL a new start?

Human Nature Library.—We wish to call the attention to the publication of this serial, No. 10, which is now ready for mailing, and No. 11 is ready for the printer. It is safe to say that the same amount of reading matter has never been offered at so low a price as in these serials. No. 1 relating to SELF-RELIANCE, or Self-Esteem as an Element of Human Character, by Prof. Sizer, has had a large sale and it should be read by every one. It shows how to cultivate this important element of character when it needs cultivation, and how to restrain when it is found in excess, and the proper use of it, and shows how it contributes to success in life. Parents should read it in relation to the training of their children, and young people should feel that they will be made better by a better understanding of themselves. No. 2, PHRENOLOGY, ITS PRINCIPLES AND PROOFS, is an excellent document for distribution among those who are not familiar with the subject. If you want something to give out among those who would be likely to be interested, send for copies of this. No. 3, PHYSICAL FACTORS IN CHARACTER, by Dr. Drayton, discusses the influences of the Temperaments. No. 4, ON A CHOICE OF OCCUPATION, by Prof. Sizer, has had an immense circulation, we having printed more than 100,000 copies of it already; every young man and woman should read it. No. 5, THE SERVANT QUESTION, by Dr. Drayton, offers many new suggestions to those who have the management of household affairs. No. 6, INVENTIVE GENIUS, considers the relation of Constructiveness to Progress. In No. 7 Dr. Drayton discusses the faculty of CONSCIENTIOUSNESS. No. 8 shows WHO SHOULD MARRY, or the Right Selection in Wedlock, by Prof. Sizer. This is being read widely, as it should be.

It will do away with the question sometimes considered, "Is Marriage a Failure?" if the suggestions given by Prof. Sizer were carefully followed. No. 9, THE DEBATE AMONG THE MENTAL FACULTIES, by Prof. Sizer, will give a new interest to the subject wherever it is read. No. 10, THE WILL, considers this subject in a scholarly manner. No. 11, now in press, considers AMBITION, or Approbateness as a factor of Human Character, by Prof. Sizer.

When it is remembered that each of these numbers contain 32 closely printed pages and that they are sold at 10 cents each, or any four of the numbers for 30 cents, it will be appreciated what a good thing we are doing in the publication of this series. It is hoped every reader of the PHRENOLOGICAL JOURNAL will secure an entire set. As an incentive to order, we will send any eight numbers to the reader of the JOURNAL only for 50 cts.

Removal.—Mrs. A. Fletcher, whose business has been for many years at No. 6 E. 14th St., has moved to No. 19 W. 42d St., where the business will be continued. Our readers will note the change in address and should send for new catalogues of Dress Reform Goods, for which this house has done so much. We take pleasure in calling attention to this.

The End of the Volume.—The present number closes the eighty-seventh Volume of the

PHRENOLOGICAL JOURNAL, and with this number is published the Table of Contents for the past six months. We feel justified in claiming that the JOURNAL has held its own in character and variety of contents during the past six months, and we are glad to say that this has been appreciated by the public, and that we can announce an increased list of subscribers.

A Good Time.—The next number of the PHRENOLOGICAL JOURNAL begins the eighty-eighth Volume, and now is a good time to subscribe, and a good time for our friends to make an effort to increase the circulation of the JOURNAL. To facilitate this, we will accept subscriptions for the balance of the year—six months—at the yearly rate; that is, for 75 cents we will send the JOURNAL to Jan. 1890, and two six months' subscriptions will count the same as one yearly subscription on a club. Will not our readers call the attention of their friends to this?

A Special Offer.—We wish to make a special effort to increase the circulation of the JOURNAL during the summer months, and therefore we propose to furnish the JOURNAL in clubs of ten for six months at 50 cents each, and will give an extra copy to the person making up the club. Surely in any neighborhood, a little well directed effort would result in a list of ten subscribers. This is only for a "Trial Trip," and the offer is made believing that when the JOURNAL is read for six months we may count with a good deal of certainty on renewals of subscriptions.

A Fraud?—We have received inquiries personally and by letter in regard to one "Prof. Riley," who among other things professes to be the only person who ever received instructions from the late Prof. O. S. Fowler, and to have taken his place at this office, as the principal if not the only examiner. He has been in Pittsburg charging large prices for phrenological examinations, and an additional amount for written descriptions which were to be forwarded from this office as soon as he returned. Now this person never received instruction at this office; so far as we know he has never crossed the threshold, and certainly has no professional relations with it, and is simply another person who is bringing the subject into disrepute. If what we have heard is true, he is making himself subject to imprisonment on account of obtaining money under false representation. We might state again, that the names of all the graduates who have received instruction at the American Institute of Phrenology are published in the institute extra, and if our readers wish to know whether these claims are true or not, they should consult the list.

Water Cure.—On another page will be found the Table of Contents of Water Cure in Chronic Diseases, of which we have just published a new edition. This is a seasonable work and likely to have a large sale.

"PRACTICAL TYPEWRITING."

BY BATES TORREY.

We wish to announce the early publication of a manual entitled as above, which is designed to provide for learners and teachers systematic and complete instruction with reference to the correct manipulation of the writing machine; also give directions in detail for the proper care of the typewriter, as well as point out and explain the application of machine writing to the varied growing interests requiring it.

At the outset we would state that the "Practical Typewriting" has been prepared by a gentleman who has transferred to the work the essence of years of practice, and has been prompted thereto because it would seem there was no instructor in the market that does justice to the subject. One manual may give fairly good directions as to fingering, but is deficient in information concerning the machine—its capacity and its care; another is hopelessly impracticable in its finger method, but furnishes an opulence of models for lettering, reports or trials, and other matter more attractive to the shorthand student. No work that we know of adequately covers the whole scope of the subject, and at the same time furnishes a consistent and practical scheme of instruction.

There is a "simplicity sublime" attached to those ideas which prove most tangible and lasting. The thing practical is always so delightfully simple, that we at once say—Why didn't I think of that? Well, much the same may be said of the "All-Finger" method of typewriting; and more particular of the development from that method of the ability to write by "touch," or without seeing the keys.

In isolated cases a few persons have in recent years adapted the piano style of using the fingers to typewriting, although it has occurred to but very few to develop from this the ability to write by "touch." It has been perfectly natural progression, however, and many advantages; we cite below a few of the more obvious:

1. It is easy of attainment.
2. The operation is more graceful.
3. The speed is increased.
4. The eyesight is saved.

5. It lessens the liability to make errors (*i. e.*, All-finger method).

6. The scope of the machine is widened, and greater profit results.

Never since the typewriter first appeared has due attention been generally given to the proper management and correct fingering of the machine. The instrument has commonly been inspected—then purchased—then pounded; the fashion being to extract from it visible writing without much idea of a method. The fact that passably good results (satisfactory to the uncritical) could be secured without method has always made suggestions about a system of procedure to be coldly received. Those who ignore system say that Miss So-and-So has attained a terrific speed striking the keys with one finger of each hand; that Mr. So-and-So has accomplished wonders by attacking the key-board with every finger, and this query is propounded—Why the need of method if no method is productive of agreeable results?

We make partial answer: One individual in one hundred, possessed of extraordinary dexterity, may be able to perform remarkable feats on typewriter keys with one finger of each hand; one in fifty may be able to write readily with two fingers, but exceptional cases prove nothing.

We have heard of one-legged dancers, but the act could not have been surpassingly graceful. We positively know that writing the typewriter with one or two fingers is distressingly awkward as compared with the better way. And again, while expert operators by the old way are rare, and skill is attained laboriously, it is a patent fact that *everyone* can not only typewrite rapidly, gracefully, and accurately by the All-finger method, but the ability is acquired in a surprisingly brief time. The logic of this lies in the very statement of the fact; it requires almost no argument.

The "Practical Typewriting" we call to your attention is intended to be a comprehensive manual of typewriters and typewriting, inasmuch as it deals with the minutiae of the business.

It would not be a misnomer to term it "The All-finger Method Exemplified," as it explains that method in an ingenious, progressive, and interesting manner. It might

aply be styled; "An Expose of the Secret of Writing by Touch," for it illustrates fully the development of that faculty from the All-finger system. It might properly be entitled, "500 Suggestions on Typewriters and Typewriting," or "Hints to Lawyers, Business and Literary men on the Use of the Typewriter in their respective callings." In short, it is a complete elucidation of the subject, clothing the matter in such guise as to make the book indispensable to the learner—valuable to the teacher—suggestive to the profession—and attractive to everyone.

If the reader of this has just purchased a typewriter, he needs to know how to begin to use it without waste of time or energy. If a teacher he knows now far short of his ideal the average textbook on typewriting falls. If a business man, he can remember occasions when he would like to have placed in the hands of his office amanuensis a book pregnant with hints. If a lawyer, he will wish his typewriter assistant to be acquainted with the forms and procedure incident to the profession. If the reader is bent on literary work he may be still unaware of the exceeding utility of this machine; and if possessed of one, we venture to say little is known of its mechanism, and there is never time to discover just what this little book can impart. If you are nothing in particular (?), but desire with the assistance of this writing instrument to attain something profitable—why you will find in Practical Typewriting what you need to know.

We trust you will be on the *qui vive* for the appearance of this manual, and favor us with your order. Price in cloth, 50 cents.

Vegetarianism.—The subject of a Vegetarian Diet is properly attracting a great deal of attention, more perhaps in England, where there are a large number of vegetarian restaurants, than in this country, and in view of the importance of the subject we have issued a new edition of *The Scientific Basis of Vegetarianism*, by Dr. Trall. This undoubtedly is the best presentation of the subject ever made, and it furnishes arguments that seem to be almost unanswerable in favor of the non-use of meat, and this should result in inducing many to use less meat, and undoubtedly secure what is to their own advantage both pecuniarily and in a healthful point of view. It is just off the press and will be sent to any address on receipt of price, 25 cents.

"Memory."—We wish to call the attention of our readers to Shedd's Natural Memory Method, found in the advertising page of the JOURNAL. This is the only system that we have ever advertised, and the only one we have been willing to endorse. We have looked into this carefully, and believe it is what it is claimed to be, a Natural Method and one which any intelligent person is capable of applying it to very great advantage to the every day affairs of life as well as in special studies. A descriptive pamphlet will be sent to any of our readers who will mention the JOURNAL and address the School of Memory, 4 West 14th street, this city, which will be found of interest as well as for giving information in regard to this special system.

Agents Wanted.—We are desirous of securing the services of agents to introduce our Publications during the summer months. We would call especial attention to the selling of Heads and Faces, which can be done readily at all times and under almost any circumstances. Especially will agents find a demand for it at Watering places, Camp meetings, Fairs, Summer-schools, and where people are congregated together. It sells on sight, and we make specially liberal terms to those who wish to take hold of it, which will be sent on application.

Dr. A. Wallace Mason, of the class of '74, has moved from Toronto, Canada, to 1129 Case Avenue, Cleveland, Ohio, where he has added the treatment of Diseases by Hygienic Agencies to his Phrenological Work.

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The Hammam, a Family Hotel, with Turkish Baths, 81 and 83 Columbia Heights, Brooklyn, N. Y. Three minutes' walk from Fulton Ferry.

Susanna W. Dodds, M.D., and Mary Dodds, M.D., Hygienic Physicians, 2326 Washington Ave., St. Louis, Mo. All diseases, acute and chronic treated without medicine. Send for circular.

The New York Medical College and Hospital for Women, and Homeopathic Dispensary for Women and Children. 213 West 54th Street, New York.

Mrs. J. T. Campbell, M.D., 153 W. 128th St., New York.

OUR HEALTHFUL HOME is pleasantly located on Reading Heights. Send ten cents in stamps, for our Book Circular, with Portrait. Address, A. Smith, M.D., Reading, Pa.

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SPECIAL NOTICE.—Readers will oblige the Publishers if they will state, when writing to any of our advertisers, that the advertisement was seen in the PHRENOLOGICAL JOURNAL.

AMERICAN INSTITUTE OF PHRENOLOGY.

The increasing demand among the American people for correct information in regard to Phrenology, physiognomy and the proper means of maintaining health and vigor both of mind and body, calls for all the culture and talent which can be brought to bear in the dissemination of this knowledge.

It is not to be supposed that every person who is graduated from the American Institute of Phrenology should have all the talent and intellectual culture which might be desired, but we have never heard of one student of ours who has failed to give correct examinations. If the markings of fifty charts could be sent us without the names of the examiners, ten of which were marked by those who had not received instruction in the Institute, we could tell instantly which ones were the work of the outsiders.

The public desires good lecturers and correct examiners, and if a thousand first-rate phrenologists could be supplied to them the people of the United States would give them ample support. If a good man were to confine himself to the smallest State in the Union, he could work profitably in it for ten years.

The trouble with traveling lecturers is that they make such wide jumps from place to place that nobody has heard of them save in these widely-separated towns, and thus nine-tenths of the ground is left uncultured.

Some of our students have located for brief periods in different towns, and have occupied themselves solely with making examinations and have made it pay. Going from town to town five or ten miles apart serves to prepare the people in neighboring towns gladly to receive and to patronize the phrenologist.

Some lecturers who have studied less than they ought, think, as they are fluent talkers and are able to make a fair examination, not really knowing what a good one is, that they do not need instruction. One of the most successful of our students in the field to-day, was a lecturer before he came to us; for three years he had secured success in it, at least financially. He took a course of instruction in the Institute, got his diploma and went back to the same region among similar people, and instantly doubled his income. Six years later he took another course of instruction, and again he broadened his power and his profit. The second course re-impresses the knowledge gained in the first, besides widening a man's specific knowledge as to the practical part of the subject.

As the years advance and the public has the opportunity of listening to those who have received instruction, the demand will be made of all who offer their services as teachers, and they not only understand the subject, but that they have had opportunity for the best instruction. Teachers are required in the public schools to have the culture which will enable them to pass examination, and the best culture which students of phrenology can have will serve them as successfully as the Normal school instruction will aid the teacher.

That the American Institute of Phrenology is known, talked about, and has a favorable influence on the public mind, is shown by the fact that some lecturers whom we never have seen, claim to be graduates of the American Institute of Phrenology, showing that they believe the public is interested in it, and think the students graduating from it have more of the confidence of the public because of that fact, otherwise these men would not be anxious to profess themselves graduates.

The phrenologist needs all the information he can get on the subject, and the Institute presents the opportunity for obtaining the ideas, and the results of the experience and the practical knowledge of those who have been longest in the field, and have done, perhaps, ten times as much work in the field as any others now living.

One student who was in an agency line of business and in which he could exactly measure his power for success, increased his facility as a salesman 125 per cent. on taking the course, and in six months' time besides the six weeks' term of tuition, he had made more money, besides paying for his tuition and the loss of time, than he had ever before made in six months; and if so much aid were given to the business man, what might not the lecturer or the examiner expect, the instruction being exactly in a line with his professional work?

There is, then, a great want for good lecturers and examiners, and the Institute opens its doors for the instruction of those who are in the field or who wish to enter the field. Those who are interested in the Institute, and who give the instruction, are not, and are not likely to be traveling in the lecture field, but they greatly desire that competent lecturers and examiners should be sufficiently numerous to fill all the present wants of the public, while new students, it is hoped, will become interested in sufficient numbers to keep pace with the normal growth of the country and its population.

Let the friends of Phrenology encourage young men and women to adopt this profession, and also encourage those who expect to preach, teach, or practice law, or follow ordinary business, to avail themselves of the aid which Phrenology gives in every department of life and duty.

For terms and full particulars as to board and other expenses, send for Institute Circulars.

Address, **FOWLER & WELLS CO., Publishers,**

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HUGH O. PENTECOST, Editor,

And Speaker at Masonic Temple, New York, Sunday mornings, at 11 o'clock; Criterion Theatre, Brooklyn, Sunday afternoons, at 3.30 o'clock; Belleville Avenue Rink, Newark, N. J., Sunday evenings, at 7.45 o'clock.

Each Number contains the Address of the preceding Sunday.

The following are some of its able contributors, in alphabetical order:

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One copy, one year..... \$1.00 Single copies..... 5 cents.

To all countries in the Postal Union, add 52 cents postage.

PREMIUM.—Each subscriber will receive a copy of Mr. Pentecost's book, "What I Believe."

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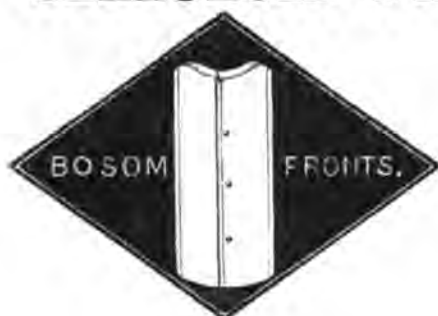
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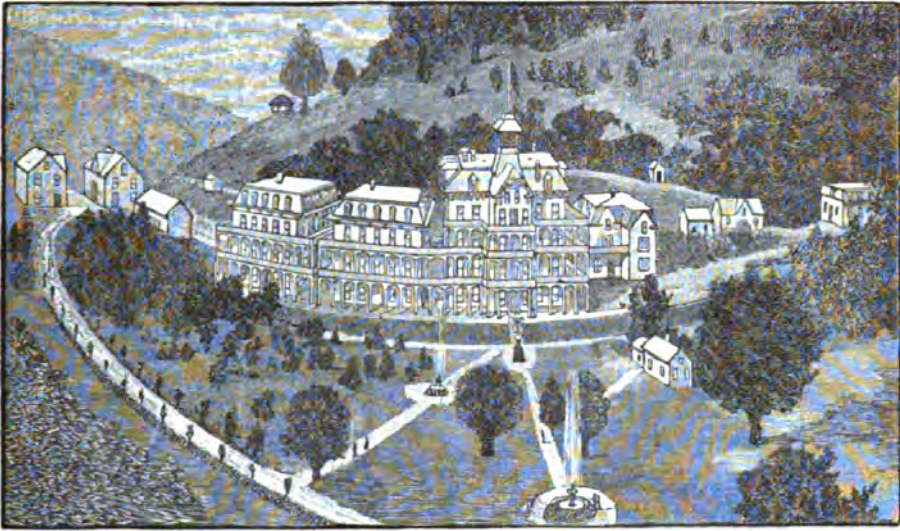
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case, at, soak, mice, sown.

READ:

WRITE:

Toe, know, oak, ape, ate, same, sake, sane, sty, signs.

DIRECTIONS. Be careful to make P, T, K, M, and N, all the same length, rather small, and LIGHT as possible, not SHADED. O is a short, heavy dash, so written as to point directly towards the mark near which it is placed. Words are written BY SOUND, that is, THE EASIEST WAY POSSIBLE: Thus: NI for night; MO for mow; PI for pie, etc. The pupil will easily learn this short method by writing the words over and over many times.

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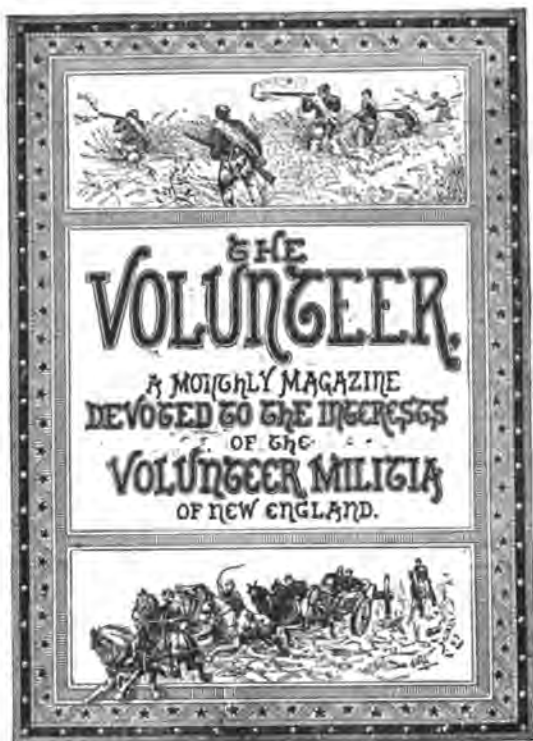
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FIG. 1.

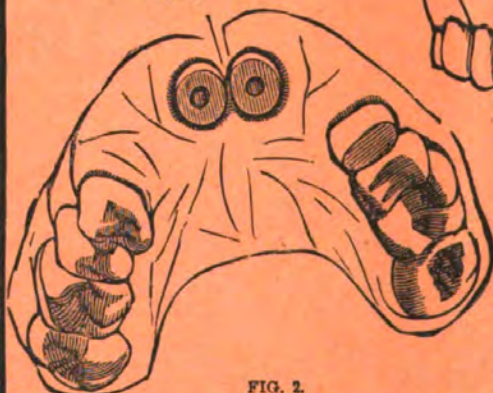


FIG. 2.



FIG. 4.



FIG. 3.

FIG. 1 REPRESENTS A SINGLE CROWN AND ROOT IN LONGITUDINAL SECTION, SHOWING THE RELATION OF THE CROWN TO ROOT. THE ACCURATE FITTING BAND INCASING THE ROOT PREVENTS DECAY OR FRACTURE. FIG. 2 REPRESENTS THE TWO FRONT ROOTS AND ONE SIDE TOOTH PREPARED FOR THE CROWNS AND BRIDGE, WHICH IS SHOWN IN FIG. 3. FIG. 4 REPRESENTS THE JAW WITH THE TEETH STRONGLY AND PERMANENTLY CEMENTED IN POSITION.

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144,182,	Nov. 4, 1873	277,937,	May 22, 1883	277,943,	May 22, 1883	330,431,	Nov. 17, 1885
238,940,	March 15, 1881	277,938,	" " "	277,933,	" " "	352,784,	" 16, 1886
245,782,	Aug. 16, 1881	277,939,	" " "	282,119,	July 31, 1883	352,785,	" " "
224,355,	Feb. 10, 1880	277,940,	" " "	318,581,	May 26, 1885	354,356,	Dec. 14, 1886
277,934,	May 22, 1883	277,941,	" " "	318,579,	" " "	354,357,	" " "
277,935,	" " "	277,942,	" " "	318,580,	" " "	357,044,	Feb. 1, 1887
277,936,	" " "						

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ANNOUNCEMENT.

In the August number the reader may expect to see the portrait and account of Gen. Abraham Dally, the 1812-er, and the poem "With Saidi in the Garden," which was omitted from the contents of the present number because of the absence of the contributor from home; a recent accession to the ranks of French women physicians, Dr. Caroline Schultza, will have a place in the number; Our Cakes is the title of a quaint essay that will be appreciated; The Size Family; Teaching Vocal Music in the Public Schools; A Further Discussion of Dreams, and other good things will appear.

The Phrenological Journal is published monthly at \$1.50 a year, or 15c. a number. To each new yearly subscriber is given either the Plaster Paris Phrenological Bust or New Lithography Phrenological CHART Premium, a new plate, 19 x 24 in., with ring for hanging. When the Premium is wanted, 15c. extra must be received with the subscription to pay postage on the JOURNAL and the expense of boxing and packing the Bust, which will be sent by express, at expense of the subscriber; or No. 2, a smaller size, or the Chart Premium, will be sent by mail, postpaid.

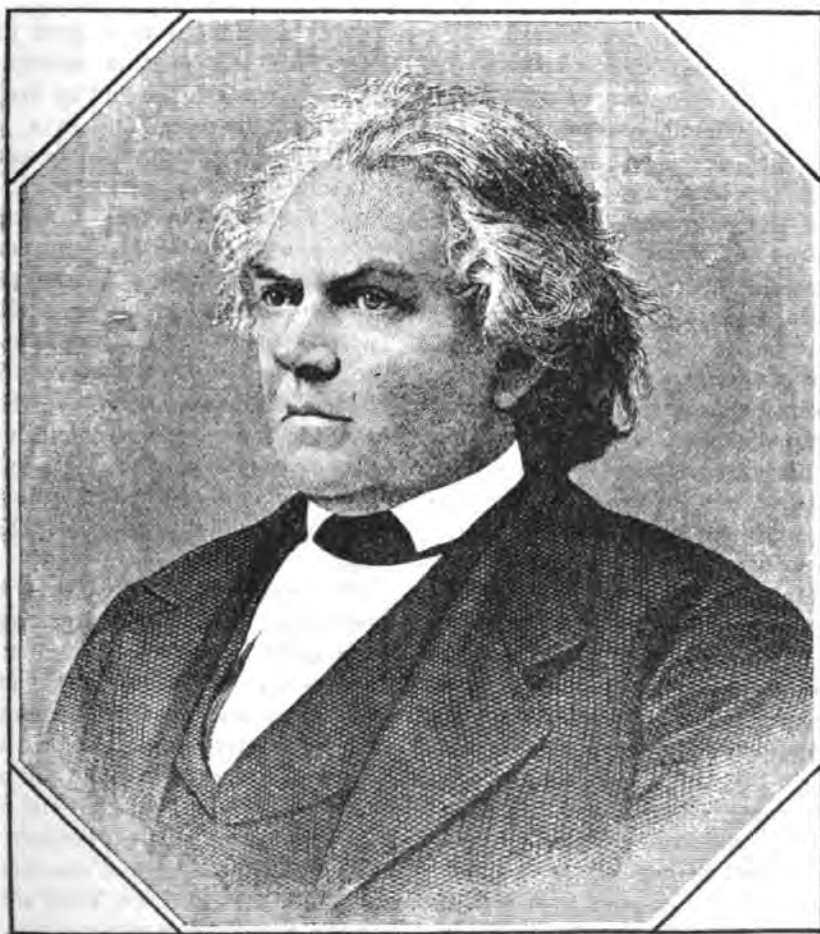
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THE
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NUMBER 1.]

JULY, 1889.

[WHOLE NO. 607



JOHN STEPHENSON.

NOTABLE PEOPLE OF THE DAY.—No. 21.

JOHN STEPHENSON.

The Car Builder.

THIS face has the mixed elements of an organization in which the parentage on both sides are indicated. A Scottish origin could be inferred from the outlines of the upper part of the head, while centrally the expression appears to be of English type. Not that strain of English in which the Norman appears, but the Saxon—with its strong angles and bold ridges. Mr. Stephenson has always been a keen observer, a man of facts, a dealer in the substantial verities of things tangible, not a theorist, or speculator. In every thought and purpose he has been practical, and inclined to trust only solid, real things. Few men show the regard for method that he shows, and few men have his ability to master details and marshal them in their proper places and relations. The vigorous body and active temperament of the man have given him the disposition to employment that call into exercise those mental forces that deal with physical agencies. A natural constructor, he would use his brain and hand in company, and work out results of a useful character. He has always sympathized with what exemplified power and progress, and his ambition has inspired him to reach forward and lead in whatever line of effort his judgment approved fitting for his participation. Rare strength of will, rare energy, and a rare endowment of practical discernment with constructive gifts of no mean order, have constituted Mr. Stephenson a marked man from the beginning of his career. Obeying the impulse of nature he struck, as a young man, into his proper channel, and followed it to the achievement of eminent success.

John Stephenson, whose name is known the world over as a master car builder, was born in the North of Ireland, July 4, 1809, of parents on one side English, on the other Scotch.

When he was about two years old they came to America, and settled in New York city. Here the boy received a good education, and was designed by his father to enter a mercantile life, but the basis of his mind was in the direction of mechanics, and nothing could persuade him from following what he felt to be his proper field of action. He was an apprentice to a coach maker, and in 1831, after attaining his majority, set up in business for himself, as a maker of omnibusses, then a new business in the city. In 1831 he designed and constructed the first omnibus built in New York. In less than a year after the commencement of this enterprise his property was swept away by fire, but he made another start, and in a year he built his first street railway car. The introduction of a street railway into New York city in 1831-2, created not only much excitement and comment, but also a new industry—the manufacture of vehicles for use on such roads. In this business John Stephenson was the pioneer. From the New York & Harlem Railroad Company, the order came for the car above mentioned, and he constructed it after a design of his own, and named it "John Mason," in honor of the first president of that company.

This was the first street railway car ever built. It was made to carry thirty passengers, in three compartments. The driver's seat was on the roof, and it had passengers' seats on the roof, which were reached by steps at each end of the car. This was first run on the road between Prince and Fourteenth streets, on Nov. 26, 1832, carrying the president of the road, and the mayor and common council of the city of New York. For this car Mr. Stephenson was awarded a patent. Other orders from the same company soon followed, and before long

Mr. Stephenson found his reputation and business extend so that he was employed in building passenger cars for railways, as they increased in number throughout the country.

Mr. George Francis Train, in his days of business activity, introduced a street railway into Birkenhead, England, in

Mr. Stephenson has found leisure for activity in other lines; in church and society he has taken part, music especially attracting his interest. As a rule, the skillful mechanic inclines to be musical, and Mr. Stephenson is no exception, as for forty years he was active as a choir singer or leader, and it is said that he



BERNARD HAMMER.

1860, and also commenced one in London, but it bred a riot, and a mob tore up the rails. They are now seen, it is needless to say, in all civilized countries, and the John Stephenson Company, Limited, manufactures street railway cars for North and South America, for Europe, Asia, Africa, and Australia.

possesses an extraordinary library of musical compositions and works on music.

EDITOR.

BERNARD HAMMER.

President of Switzerland.

WE never turn our thought toward Switzerland without feeling a thrill of

admiration for the noble place in history won by the patriot mountaineers of that grand country. Small in extent, yet free among the jarring, jealous, contentious monarchies that surround her snow-crowned peaks, the Swiss Republic must command the hearty respect of every man who loves country and home. As a boy at school we read of Tell, Stenon, Winkelried, and other heroes in the semi-romantic annals of that invincible people, and felt that if we did not some day visit Switzerland and pay our homage at the shrines of those devoted souls who would sooner die than yield to any invader, we should not have filled out the measure of life's purpose. When it came our fortune in after years to climb the mountain passes and cross the living glaciers of Switzerland, I wandered with a glowing interest among the fascinating scenery of Uri and Luzerne, of Pilatus, Brunnen and Alp-nacht, Fluellen, Tell's Rock, and Schwartz, and wondered not that those great rough souls of the centuries gone should so love their country.

Of President Hammer our portrait is not a faithful one, but there is enough in it to indicate a man of strong qualities. He is no passive routinist, no time server or political headpiece, but a firm, spirited man with his own opinions and methods of action. He has the air of one accustomed to authority, and confident of his ability to carry through whatever he attempts.

The changes of government in Switzerland usually take place very quietly, and foreign nations as a rule take little notice of it, as the Swiss Confederacy is considered so small a power as scarcely able to disturb the political equilibrium of Europe. Last December the President of the League, Hertenstein, died, and he was succeeded in the president's chair by the former Vice-President, Bernard Hammer, without causing the least agitation. How unlike the movement in the neighboring monarchies!

Born in Olton, in the year 1822, the new president of the confederacy attended the gymnasium at Solothurn, studied law at the academy at Genf, and at the universities Freiburg, Breisgau, Berlin, and Zurich, then settling down as lawyer in Solothurn; in the year 1850 he became State-Attorney; three years after President of the Court, and in 1856 a member of the Constitution and Canton-counsel. Besides this he devoted himself with the greatest zeal to the Swiss military system, took part in 1847 as artillery officer in the Sonderbund war, and rose in 1862 to the rank of Colonel and head inspector of the artillery. From the year 1868 until 1875 he occupied in Berlin the post of Swiss Ambassador, first to the German League and afterward to the German Empire. After seven years of activity in the German capital, he was called back to his home, and subsequently exercised as a member of the Confederacy, the highest authority or jurisdiction in Switzerland, principally over the financial and custom systems, and in 1879 also the political department. Furthermore, he took part as representative of Switzerland, in the Brussels conference about International Council of War, as also at the St. Petersburg Telegraph Conference.

Bernard Hammer has earned high merit in the service of his country. All who are in close relation with the President of the Confederacy have the utmost confidence in his capacity to discharge his various and difficult duties with strict conscientiousness and success.

A TRUE portrait is an incorrigible page of history which neither justice nor mercy invalidates. It is the dead-level of men 'mid fluctuating fashion and fickle opinion. Our national portraiture, though likely to be hung for a while in the Rogues' Gallery, is incorruptible history, every face proclaiming, "Know all men by these presents," as unlying as light itself.

PHRENOLOGY IN THE MORAL AND SOCIAL WORLD.

PHRENOLOGY as a science is not wholly confined to heads and faces, but asserts itself among the moral and social forces which operate the world. As upon an empire man often stamps law and civilization, so upon society man photographs his dominant impulses. The thought of the Bible, which all history has emphasized, that the sins of our parents are visited upon us even "unto the third and fourth generations," is the law of the universe. As the oak tree can not rise to a greater height, a sturdier growth or a grander beauty than the seed allows, neither can man reach beyond his limitations. There are natural and artificial conditions which limit a man's possibilities—those growing out of natural law, and those which bear the impress of human thought and origin. For instance, the natural conditions of life are light, air, heat, etc.; while the artificial conditions may be social precedents, traditions, laws, political and religious government or cults. The one is as needful as the other to human welfare, but the abnormal developments of the one are as disastrous to human welfare as the imperfections of the other. The fact is, that social, religious, and political law are, after all, but the incarnation of man's nature, that form the face upon which reflect the heart and mind of humanity. What we are individually, or what we are collectively, artificial conditions illustrate. The objection will be raised that government as in Russia, for example, does not picture the aspiration of the masses for liberty; that society as in the United States does not reflect the democratic principles of a free country. It must not be denied that such objections are unsound. Hence they are not damaging to the general argument. In the one case the Russian masses do not aspire for liberty, or they could have it, and in the other, aristocracy, caste, class, etc., are perpetuated in our midst by and through popular suffrage. So that if these artificial conditions prevail and

affect civilization, it is chiefly because we refuse to strike a blow at the wrong and work toward liberty and democracy. But these conditions exist, and this is the point that we insist upon making. Now, as long as they exist, so long will man be limited by them. The thick skull and the small brain condemn men at once to positions by no means on a parallel with those gained by men who possess their opposites. But the thick skulls and small brains are as much the product of the bad, pernicious, and artificial conditions of human life as are those fine brains which, in spite of external hindrances, develop among some into the successful men of the times. In other words, the artificial conditions which make a Beecher or an Emerson, make also a Tweed and a Guiteau. The artificial conditions which originate the classes, develop also the masses. The artificial conditions which fill the churches with a worshipful congregation on Sunday, fill the saloons, the prisons, the lunatic and inebriate asylums every day of the week. The artificial conditions which make some men rich, make many men poor. I shall be criticised by some for tracing much of the cause of crime, idiocy, prostitution, mendicancy, lunacy, intemperance, and poverty to the bad social laws of our country. I am aware of the number of those who, in the midst of plenty, elect poverty; who, in the midst of holy influences, choose the way of hell, and who, in the midst of health, violate God's law by open wantonness. Yet who would argue that the church and the penitentiary are necessities, or that more men are born than are made criminals?

In this particular the science of Phrenology, by assuming a knowledge of the great problem of our age and civilization, would advise men not only to be holy in spite of all obstacles, but to make holiness easy by correcting artificial conditions, and by making human law express the will of God. It would seek not

only to raise man above his surroundings by urging him to look well to personal education and a discipline of his heart, but to labor in the direction of a reform, whereby human law and divine law would be synonymous, so that all men could easily be what their Creator

had designed. We are not to care for the head and brain less, but rather more, by making good heads and good brains not the exception, but the rule. For this end we may well labor and pray.

J. C. F. GRUMBINE.

LAURA D. BRIDGMAN.

On the 24th of May there died in South Boston a woman who for over forty years had been one of the most conspicuous persons in American life. Laura Bridgman, deaf, dumb, and blind, had become famous through the attainment of powers and capabilities that were previously supposed to be entirely denied to one so bereft of common instrumentalities of intellectual development. Her life history is as familiar to the intelligent American as a "twice told tale," yet the interest that the educated world has taken in her wonderful emergence from childhood darkness to a high order of mental life has never flagged.

She was born in Hanover, N. H., December 21, 1829, and, although subject to fits in infancy, was an intelligent and healthy child, with all normal faculties, at two years old. At that time she was prostrated by a fever, which raged for seven weeks, destroying sight and hearing, and blunting the senses of taste and smell. She did not recover her health for two or three years, and was cut off, necessarily, from all ordinary human communication, although she exhibited signs of intelligence and proved her recognition of different members of her family by certain motions which she herself invented. At seven years old she came under the control of Dr. Samuel G. Howe in the Perkins Institution for the Blind, where she remained an inmate for many years, and where she died from an attack of erysipelas.

It is proper to state that Dr. Howe, deriving his inspiration largely from his study of the philosophy of Spurzheim, who had won his esteem a few years be-

fore, believed that it was possible to educate the unfortunate little girl from an inspection of her head, and under his direction her education was undertaken. The method, in brief, was as follows:

The first lessons were given by taking small articles, such as a key, a pen, etc., having labels pasted upon them with their names in raised letters, and allowing her to feel these over and over again, until she came to associate the printed word with the article itself; and when shown the name apart from the object, would bring the object for which the name called. In order to teach her the value of individual letters, short, one-syllabled words were selected, such as pin and pen; and by repeatedly examining these, she came to perceive that they consisted of separate signs or characters, and that the middle sign of one differed from the middle sign of the other. The task of teaching these early lessons was a very slow one; but Laura was a willing and patient pupil before she had any conception of the object of these lessons; but when some idea of their signification dawned upon her, her delight was so unmistakably manifested, and her zeal and interest became so great, that the slow process became a pleasant work to her teacher. After learning to associate the printed names upon the labels with the articles, the letters were given her on detached pieces of paper, and she was taught to arrange them so as to spell the words which she had already learned. She was next supplied with a set of metal types with the letters of the alphabet cast upon their ends, and a board containing square

holes, into which the types could be set, and with these she soon learned to spell the words which she knew, as she had with the paper slips. After several weeks of this practice she was taught to make the different letters by the position of her fingers and thus dispense with the board and types. She was so eager to learn the name of every object with which she came in contact that much time was spent in teaching her these. Next came words expressing positive qualities; then the use of prepositions; and she easily acquired the use of some active verbs, such as to walk, to run, sew, etc., although the distinctions of mood and tense, of course, came later. The process of teaching was necessarily so slow that, notwithstanding her unusual quickness of apprehension and eagerness to learn, she had attained only about the same command of language as that possessed by ordinary children at three years of age when she had been under instruction twenty-six months and was ten years old. But as she now possessed the means for the acquirement of knowledge, and she became capable of expressing her own thoughts, feelings, and impressions, her progress was very rapid.

In the course of a few years she acquired a good general education, reading all kinds of books printed in the raised letters for the blind, and manifesting the greatest interest in all contemporary matters which came within the limits of her experiences. She became an adept in needlework, and was able to attend with ease to simple domestic duties. Her great delight was in helping to teach persons afflicted in a manner similar to herself, and this she began to do while yet a girl in her teens. The illustration, taken from a publication forty years old, represents her instructing a boy, like herself deprived of three senses.

Down to the time of her death Miss Bridgman was the most interesting of the inmates of the Perkins Institution,

although other pupils have been in its charge who, like little Helen Keller, have excited not a little wonder in the scientific world. Her disposition was gentle and sweet, and she exhibited the warmest affection toward her benefactors. When Dr. Howe died, her grief was most pathetic. In recent years she paid regular visits to her aged mother, who survives her, and other relatives. Her existence was placid and even happy, and she rarely betrayed in her manner any sense of the hardness of her lot, but appeared contented and happy.

Her organization in itself exhibited uncommon symmetry. The brain was



LAURA D. BRIDGMAN.

of full size, but above the average development in the intellectual and moral regions. Prof. L. N. Fowler, who examined her while a girl on different occasions, speaks of the changes of the head that were noticeable in accompaniment with her advance in knowledge and experience. He regarded Laura as one of the best of living object lessons in practical phrenology, and Dr. Howe in his early reports refers to the evident growth of her head in the course of a few years while under training. George Combe, when in the United States, visited the institution twice, and showed a warm interest in the young girl. D.

DELSARTISM.

SINCE the return of Mr. Edmund Russell—whose portrait is given—to this country, much inquiry has been made with regard to the nature of the Delsartian system of expression and gymnastics. Mr. Russell is one of the best teachers we know in this special line, and having been one of the audience at a lecture recently delivered by him, we are enabled to give the following outline of the subject :

Francois Delsarte was born in Solismes, a village in France, near the beginning of the present century. After a youth of great poverty and privation he was graduated from the Paris Conservatoire, and possessing a beautiful voice and great dramatic talent, for some years remained on the operatic stage. His voice failing him, he retired to private life and gave himself to the study of the laws which underlie human expression.

His work includes the observation of the laws of motion, the laws of gesture, the laws of expression; the roles played in gesture by the special organs of the body, the laws of universal expression, and the analysis of individual deviations from these laws.

Regarding man's nature as a trinity, he believed that one should educate the mental, moral, and physical at the same time and in perfect relation to each other, beginning with training the physical agents of expression, then developing mind and heart. A trinity is inseparable; separation means death and the final loss of the power to unite and form a perfect harmony. Our modern education is too much of a mental strain, a desire for abnormal development in special directions. It ignores all the laws of real growth. Education should fit a man for the life he is to lead; should preserve and develop his personality, and strengthen all his powers of relating himself to and understanding others.

Our men either belong to the crude, brutish, low physical type, or to the

over-strained, nervous, short breasted, broken-down mental, which is especially common in America. A man with harmonious balance of power or interrelation of his mental, moral, and physical nature, is rare.

The soul struggles to speak through an imperfect instrument; sometimes it ceases to struggle, and finally has nothing to say.

Mr. Russell, for a concise definition of Delsartism, compares it to "tuning the piano." One is asked to play; a string is broken; a note refuses to sound. Will you say "it will not seem like my piano if it is not out of tune?" No, the whole instrument must be tuned to perfect relation or harmony, perfect co-operation of all the parts with the whole.

For the expression of his triune nature man has three languages—the word, the tone, the gesture. Primarily speaking, tones express bodily condition, physical pleasure, pain, etc.; words are arbitrary mental symbols, and interpret thoughts and ideas—they describe and limit. Gestures relate us to other beings, expressing our emotions and feelings. We study all the words that have ever been thought or said or written, in all lands and all ages; tones are mostly left to singers, and gestures to accident, and there are not many "accidents." "Tailor-made," is a good description of most society expression.

Ordinary labor, a blow, a simple motion, require the use of but a few muscles and joints; noble feelings and elegant manners require the whole body to respond without tension or effort. In labor the brain commands special muscles to do a special work, but when the man does not move, but is moved, a wave of feeling passes over and his whole body becomes eloquent.

A quick jerk of the head says to a passing acquaintance, "I know you," but to express reverence and love (possibly some will argue that we do not need to express these feelings in such ad-

vanced civilization. What does Mr. Ruskin say of its failure, if it can't make a civil man?) the whole body speaks in unconscious rhythm.

It is the work of Delsartism to teach not how to come into a room and how to go out, how to stand and how to bow, but to train the body until it is by habit

row, hard, constrained nature, as a coarse, free, open one, and either may lie, being only the result of circumstance, the building up of years of constraint or ignorance; and the real self may struggle in vain for expression through the one body, which labor has narrowed down to a machine which



EDMUND RUSSELL.

unconsciously flexible, and feels not self-conscious but self-possessed for the expression of the moment.

The vulgar nature makes crude, animal-like gestures; so the refined shrinks back into itself, stiffens its spine and says, "gesture is vulgar." So it is, when it is in the wrong place, but it is just as bad to express, or seem to express a nar-

only speaks of labor; or the other, which respectability has stiffened up, till it can only express respectability. It is a law of expression—the old law of economy, "just as much as is needed for the occasion; no more, no less."

Mr. Russell speaks of the graceful bow of the Queen of Italy, so beloved by her subjects. While he was in Rome, she

was visited by a cousin who sat up in the carriage with high collar, rigid spine, and angular arms. She bowed to the people with a jerk of the head, in quick, comedy time—a straight line in space and moving only one point of the neck. The queen bowed like a caress, in complex rhythmic time, in a spiral line, bending every joint of her body. The Italians all thought the cousin haughty and disagreeable.

While analyzing the meaning of different bows one day, in the presence of a lady of the court who was his pupil, Mr. Russell illustrated the two manners just described. She said, "How strange! Only yesterday, in the carriage, the princess said to the Queen, 'How I envy you your bow; I love my people, but I cannot express it.'" And why? Did not her body fit her soul? Was it because the refined nature could not control a clumsy bodily mechanism? She *loved her people*, but they never knew it; they never got it—the notes would not sound. The instrument could not speak in harmony. It might have been caused by embarrassment, or the fatigues of illness, or always wearing tight clothing, or from her mother who always said, "Don't do that, my daughter; it is not proper for one in your position," and never told her what she should do. Who knows? Control at the center, freedom at the extremities, is a fundamental law of expression.

Once in Paris Mrs. Russell (who was a pupil and associate teacher with Gustave Delsarte, the son) was reminded that Delsarte was a descendant of Del Sarto (the tailor). "Yes," she said, "he fits men's bodies to their souls."

This new "art of expression" is largely studied by orators, actors, clergymen, painters, sculptors, and all scholars and artists who wish to get further knowledge of human nature. A leading physician in London studied two years with Mr. Russell, to understand motion in relation to nervous disease. The London *Homeopathic World*, says: "Mr. Russell is the apostle of Delsartean philos-

ophy, which takes for its basis the triple nature of man—moral, mental, and physical—and asks the question in every department of nature, art, and life, how it stands related to man in respect to these three divisions of his being. It thus affords an analysis of an immense practical importance, that is capable of being brought to bear on questions of the most varied character. We emphatically commend the Delsartean exercises in schools. We have seen the very greatest benefits ensue from their use. Compared with Ling's exercises we think they are more philosophical, more fundamental, and more interesting."

Mr. Gladstone declared after hearing a lecture by Mrs. Russell, that this art should be taught in every school in England, while Dr. Richter, the Wagnerian authority, said to her: "Every actor should study it, but only the greatest will understand its need and value."

Delsarte's work has given a scientific basis for art criticism, for we find the laws of motion, color, sound, and form in perfect relation. The knowledge this affords is invaluable to the art-student, for with its aid he begins to understand nature instead of merely imitating her.

The aim of the Delsartean gymnastics is to give symmetrical physical development, and to take out the angles and discords, the left over pieces of past worries and sorrows, to reduce the body to a natural, passive state, and from that point to train it to move in harmony with nature's laws. The movements are without nervous tension, and all feats and exertions are discouraged. The practical eye of the teacher quickly sees if a joint is stiffened, or if a motion is made in nervous rhythm, and a special gymnastic is given until the whole body works together, and as an instrument is in tune. This usually takes long and patient practice, and when the normal ease and control are attained, the pupil is only on the threshold of his real study of Art.

As the system deals especially with physical reform, it can never be written in a book, for individual peculiarities need the personal criticism of a teacher, and the higher philosophy of the art is not given until the first steps have been mastered, and the individual is under control, but important works on art subjects might be written by its exponents from the knowledge gained by it.

Many of our schools and colleges use Delsarte's works in some degree—Harvard, Vassar, Wellesley, Tuft's, Princeton, Cornell, Oberlin, and others, but Mr. and Mrs. Russell found it quite unknown in London; meeting only Lord Lytton (Owen Meredith), Sir Frederick Leighton, and the elder Garcia, who knew of Delsarte, and singularly they all had been his personal friends, and

spoke in the highest praise of him as a man, and as an artist. Of his writing, but a few fragments remain. He left his work mostly in the form of charts, and epigrammatic sentences. From them we take some interesting definitions:

"Art is feeling passed through thought and fixed in form."

"Art is the idealization of the real, and the realization of the ideal."

"Art is nature with the non-essentials left out."

"Art is at once the possession and the free direction of the agents by virtue of which are revealed the life, soul, and mind. It is the appropriation of the sign to the thing. It is the relation of the beauties scattered through nature, to a superior type. It is not, therefore, the mere imitation of nature." w.

FROM A LETTER OF GEORGE COMBE.

(The following extract is from a letter written by George Combe to the Editor of the *Edinburgh Phrenological Journal*.)

VIENNA, 23d July, 1837.

SIR:—I wrote to you on the 20th July, that no phrenologist could be found in Vienna; but I have now to report that "nothing is denied to well directed industry." I continued my researches, and at last was introduced by Herr Wolfe, of the Imperial Library, to Baron Hammer Purgstall. This gentleman had studied under Dr. Gall, and been satisfied that his doctrine is true, and he therefore entertains a respect for it and knew me by reputation, although he has not seen my books. . . . He placed me in a train by which I at last discovered Madame Becker, the daughter of the brother of Dr. Gall's first wife, and shall now proceed to give you a detail of some of the facts which I learned from her.

Dr. Gall's first wife was named Catherine Leissler. Her father was Chirurgien Major in the French army at Strassburg, of which he was a native; and she herself was educated in a boarding school at Metz. . . .

Madame Becker mentioned that Dr. Gall resided in Vienna upward of thirty years, and was recognized as an able physician. He was the friend of Dr. Stoerck, physician to Maria-Theresa, the Emperor Joseph, and also to Francis I. at the commencement of his reign. . .

Prince Metternich was a pupil of Dr. Gall. He was then Count Clement, and not powerful. Madame Becker recollects that often when she wished to speak with Dr. Gall she was told that he was engaged with Count Clement. The Prince renewed his acquaintanceship with Dr. Gall in Paris, and when he resided there as Ambassador to Napoleon, he sent letters and small packets to and from Vienna, to accommodate Dr. Gall and his friends, in his official bag.

In 1814-15, the Emperor of Austria saw Dr. Gall at Paris after the Peace, and asked him to return to Vienna. He declined to do so, and assigned as his reason that he was now established in Paris, and would be forced to begin the world again if he removed to Vienna. He wrote this fact to Madame Becker from Paris, and she knows it to be authentic.

Madame Becker possesses an original portrait of Dr. Gall, painted when he was 49 years of age, and a bust of him in wax, miniature size, modeled in Berlin in 1806 or 1807.

In 1824 or 1825, she, by desire of Dr. Gall, presented to Dr. Rollett of Baden, near Vienna, that part of his collection of skulls and casts which he left here. Dr. Rollett lives still, and continues to take an interest in the science. I regretted that I did not discover this fact until after my visit to Baden, and when it was impossible for me to return to it.

Madame Becker described Dr. Gall as having been gay, simple and good-na-

tured in his domestic manners, and totally without pretension. She showed me some kind letters written by him to her in 1826 and 1827. He died in 1828. She possesses an excellent Parisian medal of him.

I am, yours, etc ,

GEORGE COMBE.

[This letter, for a copy of which we are indebted to Mr. Hollander, of London, is interesting to the reader especially in connection with the article that appeared in the April number, describing the Gall collection of cranial casts, etc., now preserved at Baden.

ED. P. J.]

FAITH AND PROVIDENCE.

UNDER the above title the March JOURNAL contains an article to which I desire to make a further reply than that contained in the brief but worthy remarks of M. F. B. in the May JOURNAL.

M. F. B. has well answered the statement concerning the blindness of spirituality; and, in saying "Trained reason works in its own order, but who can prove that it is any more trustworthy than illumined spirituality?" a suggestion is offered which Mr. Shull may profitably consider. In this connection let us place two of Mr. Shull's remarks together and observe their effect. "Faith transcends reason, holding truths which reason can not grasp for lack of data." "But if those things which we hold through faith be true, they must receive the sanction of reason, and reason becomes the only test of credibility,"—the first remark is true, but what of the second? "What can we reason but from what we know?" and if reason finds no data for or against certain "truths" which faith holds, how is it to "test" the credibility of those truths? It may be said, however, that so far as reason goes it is the test of credibility, and true faith can not hold anything which true reason proves to be unmis-

takably false. Thus reason is a limited test of faith. Outside the realms of reason faith may hold either truth or error so far as reason is concerned. True reason and true faith are not antagonistic. They are sisters that travel hand in hand in perfect harmony, as far as reason feels the solid ground beneath her feet; but when Reason falters and stops, the wings of Faith enable her to soar above and beyond her plodding sister's reach.

"Knowing that mankind has experienced a rapid elevation from superstition, it is only fair to admit that true faith is not yet perfectly attained." Knowing that the teachings of Christ and the apostles—though given so long ago—have never been in the least improved upon, the above quotation is manifestly false. That individuals and nations have "experienced a rapid elevation from superstition" is certain, but wherever this elevation has reached its highest plane it has been accomplished by the "Old, old, Story," and their enlightened minds and souls give full allegiance to that same old story as the exponent of truest faith. That the mass of mankind has not learned of the "true faith," and that many of the more advanced have not "perfectly attained"

it is self-evident; but that "the true faith is not yet perfectly attained" seems to me an unwarranted assertion, and whether the above quotation be admitted or not, "no one need fear to test his faith by rational inquiry." Christianity does not shrink from such inquiry, but has ever met philosophical criticism on its own ground, and has ever been proof against its thrusts. Time has crowned her victor, and she bears the palm to-day.

Indeed the "marked increase in intellectuality" is immediately *after* or coincident with the attainment of a better faith; for neither individuals nor nations ever rise above their gods. Old faiths ever give way to better ones, and mental elevation follows as a natural consequence. Seldom, if ever, has mental elevation preceded spiritual elevation. They go near together, and are mutually helpful, but history and observation show that the greater debt is on the side of the former.

If the "visible creation" declares God's will as clearly and even more eloquently than "the mystic and symbolic pages of Revelation," why do not individuals and nations progress as rapidly in morals and intelligence without as with those pages? Is the visible creation, with all its wonderful lessons, hid from them? or do they need the written Word to enable them to understand the lesson of the visible creation? True, "the heavens declare the glory of God, and the firmament showeth His handiwork. Day unto day uttereth speech, and night unto night showeth knowledge." These lessons are from what Bishop W'm. Taylor calls God's Primary School, and this school is of great advantage to men; but it is only from the written Word—God's High School—that one may become wise unto salvation. By the help of these two schools there is no limit to the possible moral and intellectual development of mankind.

Many have been misled through misinterpretation of the Book purporting

to be divine authority, but this is no argument against the Book. I do not doubt that a misinterpreted doctor's prescription might do more than *mislead* a person, yet no sensible one would call in question the value of the prescription. I wonder if the teachings of the visible creation are never misinterpreted? Answer, all ye worshipers of sun, moon, stars, animals, rivers, and images! Answer, all ye who through misinterpretation of nature's laws bring upon yourselves an endless chain of moral, mental, and physical evils!

Mr. Shull appears to found his opposition to the doctrine of providence chiefly upon the idea that the law has in itself the power to enforce itself. He says: "If the laws which were established in creation are not sufficient to attain His (God's) ends, without His present intervention or superintendence they are imperfect, and the Giver shares in their imperfection." But is not a law simply a rule of action, merely a plan according to which something is to be done? In itself it is nothing. It is dead and useless alone. There must be a power behind the law to enforce it, and that power must remain in continuous action if the law is constantly enforced. The law of gravitation is the principle according to which the power of gravitation operates. The law of the State of New York is the code of rules according to which the power of the State is used. Likewise the laws of God are simply the rules by which he upholds and governs the universe. As the law of gravitation and of the State of New York are dead and useless without an ever-acting power to enforce them, so are the laws of God without the continuous exercise of His power. The best laws are not intelligent, self-acting things, and can do nothing of themselves; then shall we say that God and His laws are imperfect because His presence and power are required to enforce them? Nonsense. If God's laws are capable of self enforcement, He

might as well cease to exist ; for in such a case all the universe could get along quite as well without Him.

Another mistake is apparent in the idea that the law is greater than the Lawmaker—i. e., that God can not change or temporarily set aside his own laws. If Mr. Shull would acknowledge the validity of Scripture proof, it were easy to show instances where God's laws have been revoked—as in the abolishment of Ceremonial laws—and temporarily overcome—as in the parting of Jordan, the lengthening of Joshua's battle day, and the raising of the dead. God's attributes and purposes are unalterable. His *modus operandi* is not. He *uses* laws, but is not *enslaved* by them. No general law is just the thing for every circumstance. Special movements of the divine will, and special exercise of Divine power, are necessary to the welfare of God's creatures. He who sees every sparrow fall, and numbers the hairs of our heads, is not so bound by inexorable law that He can not reach out a hand to help in any time of special need.

To convince humanity of the non-intervention and non-superintendence of God, and to exalt natural law as Mr. Shull desires, would destroy true faith and convert men to mere nature worshippers. Under such instruction we would not seek after God at all, for why should we seek one who by His own laws is made so helpless in our behalf ? Let me rather believe that He is "a very present help in every time of need !"

Yea, "If reason demonstrates the falsity of a belief in 'Providence' it is degrading 'to any one' to believe in it"; but if history, observation, experience, and reason all demonstrate the truth of this doctrine—which they do—it is ennobling to believe in it. Who are most intelligent, holy, and useful in the world to-day ? and who have been in the ages past (either among God-fearing or heathen nations), those who renounce, or those who defend this doctrine ? I

appeal to history and observation for my answer, and upon that answer I am willing to rest the question of the depreciation of a belief in Providence.

The fact, however, is plain. Many people misinterpret the natural results of their own sin and folly as a manifestation of God's providence. They need to be taught the difference between law and providence, and their relation to each other, as well as their own relation to them. It is somewhat amusing to hear in this connection of the "exactitude of science." Perhaps the exactitude of (?) the sciences of Medicine and Phrenology are referred to. The idea of the exactitude of science being offered to refute the doctrine of the providence of God ! Sciences seek to discover, classify, and profit by the laws of God as seen in nature ; they do not deal with providence, much less disprove them. But perhaps Mr. Shull claims that the exactitude of science has mastered all the phenomena in matter, mind, and spirit, and is prepared, therefore, to annihilate the doctrine of Divine providence !

EDWARD E. CARR.

FACES.

SOME faces are supremely fair,
Some sparkling in their splendor,
Some are demure and debonair,
And some divinely tender.

Some win us with one fatal glance
From eyes too brightly beaming ;
Some smile the smile that brings a trance,
Till life is lost in dreaming.

Some flit before us, sweet and gay,
To fill our hearts with laughter ;
Then fade, as fancies fade away,
And leave no aching after.

And some—some faces sorrow-kissed,
Where holiest thoughts are thronging—
Come back, come always in the mist
Of everlasting longing.

So faces come and faces go ;
Some make existence sweeter,
And some, they make life sad, we know,
Yet, being sad, completer.

TWO EVOLUTIONS.

Human nature has many traits of brute nature, and besides we feel a sublime knowledge—a touch of an invisible life that is above the beast life, and that which modifies the animal in us. This fact has led to much disputation on evolution. There are two evolutions, indeed, *one* from the animal. This I think is proved because we have a similar base of head with the three fundamental faculties or instincts—Vitativeness, Perception, and Amativeness, each with its circle of development. Vitativeness as an instance. Out of love of life sprang the desire to protect it—to eat, or Alimentiveness. Then wish to get, through Energy, Secretiveness, Acquisitiveness, Constructiveness: all these grew to protect life. This circle of growths meets the circles of Amativeness and Perception, as may be seen in a cat's head. But whence came the top head? There is no trace in the animal—beast, therefore it could not have come from the beast. We say the animal is not spiritual, and man is spiritual: then the man is more than the beast, but he is *also* an animal, since he has the same protective, perceptive, and procreative faculties. It was a new, implanted instinct that made man rise with his head toward heaven, symbolical of the celestial child always searching after the Father of Life. But the *new* impulse craved new ministrations, and Reverence, Faith, Hope, Ideality, Sublimity, and Conscientiousness crowned the animal with an eternal and beautiful glory. As the tiny animal craved continued life and got it, so man craves a higher life, and in proportion as his wish is strong so the top-head grows, in obedience to the second impulse.

Again, we remember that man has two natures, two polarities, as it were—his spiritual, intuitive nature, and his animal or beastly nature. These are opposed. The man who yields to the spirit impulse is of a spiritual type. His motives run spirit-ward and he assim-

ilates what the animal can supply. He who is subject to the animal grows to be an animal with only the germ of spirituality left, yet without its developments. As a man's intention is, so is he. Also there is a Mental type which is midway and makes suffering till it rises to the spiritual or falls to the animal. This is imperfection.

In passing we observe this detail: with what aptness all the faculties are placed!—Perception over the eyes, Alimentiveness at the jaws (these two also representing the two senses, seeing and tasting), Music for hearing, and Weight, or Resistance, for touch.

To sum up, have we not negatively proved two evolutions, one for the base-head, the other for the top-head? And we judge by analogy, since it needed centuries to perfect the *animal* man, how long do you think it would take to perfect a spirit, to which the perfected animal is gross? How many more reincarnations before man is able to bear a *pure* spiritual light?

Nothing is so deplorable as animalism, with the spirit crying out against it. By and by, we can look in faith to a holy life after the veil of the flesh has been rent. We have yet to learn whether we can unite the two *lives*, but in all cases we shall not despise the body, for we learned everything through that.

M. C.

Department of the Interior, Census Office,
Washington, D. C., May 1, 1889.—

TO THE MEDICAL PROFESSION:

The various medical associations and the medical profession will be glad to learn that Dr. John S. Billings, Surgeon U. S. Army, has consented to take charge of the Report on the Mortality and Vital Statistics of the United States as returned by the Eleventh Census. As the United States has no system of registration of vital statistics, such as is relied upon by other civilized nations for the purpose of ascertaining the actual movement of population, our census affords the only opportunity of obtaining near an approximate estimate of

the birth and death rates of much the larger part of the country, which is entirely unprovided with any satisfactory system of State and municipal registration.

In view of this, the Census Office, during the month of May this year, will issue to the medical profession throughout the country "Physician's Registers" for the purpose of obtaining more accurate returns of deaths than it is possible for the enumerators to make. It is earnestly hoped that physicians in every part of the country will co-operate with the census Office in this important work. The record should be kept from June 1, 1889, to May 31, 1890. Nearly 26,000 of these registration books were filled up and returned to the office in 1880, and nearly all of them used for statistical purposes. It is hoped that double this number will be obtained for the Eleventh Census.

Physicians not receiving Registers can obtain them by sending their names and addresses to the Census Office, and, with the Register, an official envelope which requires no stamp will be provided for their return to Washington. If all medical and surgical practitioners throughout the country will lend their aid, the mortality and vital statistics of the Eleventh Census will be more comprehensive and complete than they have ever been. Every physician should take a personal pride in having this report as full and accurate as it is possible to make it.

It is hereby promised that all information obtained through this source shall be held strictly confidential.

ROBERT P. PORTER,
Superintendent of Census.

TOWERS OF SILENCE.

In the outskirts of Bombay are to be seen certain stone structures of considerable height whose plain masonry is unrelieved by ornament or window. They stand among the hills in rather lonesome situations, and naturally the curious traveler wants to know their purpose. They are called "towers of silence," because built by Parsee residents of Bombay for the disposal of their dead. These Parsees are

peculiar people, in manner and custom, yet much superior in many respects to the Asiatics who surround them.

Originally they lived in Persia, and when that country was overrun by the Saracens in the Seventh Century they refused to submit to the modern conquerors, and leaving their country fled to India and settled in Bombay.

They have been as far back as history goes fire worshipers, and their ceremonial is interesting. Every day they adore the rising and setting sun, and at least sixteen times a day does the good Parsee say his prayers, with his face turned toward the sacred fire which is always kept burning by the priests, in the many fire temples which adorn the city of Bombay. These prayers are learned by heart and are not in the ordinary language in which the Parsee converses.

At a scientific meeting not long ago we listened to a communication from a member, who described the Parsee burial towers but did not explain the principle or philosophy of them, and that we think has certain meaning which people in our civilization would do well to consider.

According to the Parsee religion, the earth, the sea, and fire are all holy; hence they must not defile the earth by burying their dead, nor pollute the water by casting them into the sea. Fire is too sacred to permit cremation, so their method of disposing of their dead is to expose their bodies on the tops of these high buildings called "Towers of Silence," to be devoured by the birds of the air.

When a Parsee dies, his body is conveyed to the gates, and there received by priests, by whom, after being divested of its clothing, it is exposed on gratings constructed for the purpose. When the bones have been stripped of flesh, they are swept into a deep pit, where they are left to mingle with common clay. When this pit is full, another tower is built.

H.

motto, "Dead men tell no tales." As they think their chances of detection will be less than if they allowed their victim to live to appear against them, and perhaps identify them, they commit a double crime, not through any desire to evince cruelty, but through fear alone. This conduct may seem paradoxical, but it is perfectly logical. Their fear induces them to count the chances, and between two evils choose the least, or the one which promises the least difficulty to themselves; and since the penalty for robbery, which they have already committed, perhaps is death, and robbery and murder both can be but death, and since detection is less certain with the victim dead than alive, the sense of safety impels the last act.

We have the skull of a man named Johnson, who, with one Lewis, were engaged in robbing returning lumber raftsmen on the Susquehanna river. Johnson had large Destructiveness, Acquisitiveness, and Cautiousness, and he insisted on killing all whom they robbed, as the safer way for themselves. Lewis had less cautiousness, and feared detection less, and in one case, as the victim pleaded so hard for his life, proposed to Johnson that the poor fellow's life be spared, and they would take the risk of detection and the gallows for the highway robbery. Finally Johnson reluctantly consented. The result was, they were arrested and executed, Johnson blaming himself and upbraiding Lewis to the last for breaking the rule of murdering their victims to render detection less likely, and, therefore, themselves more safe.

APPROBATIVENESS.—We can hardly conceive of a state in which a person is more elated, joyous, and happy than when Approbativeness is favorably exercised. Its nature is to seek praise and appreciation and to dread criticism, reproof, and rebuke. When all speak well of a person, and the general plaudits of the people shout his praises, he is buoyed up, sustained, and exceedingly

happy. Under such influences a man's talent is strengthened, and every quality of his being, physical and mental, is endowed with extraordinary power.

We have seen a little boy, when praised for climbing, go to the top of a ship's mast like a monkey, and hang his cap upon it, and then come down safely. But he performed no such feats when not looked at by his friends and stimulated by Approbativeness. In battle, the idea of praise, of fame, honor, and renown, of title and distinction, induces a man to seek glory at the cannon's mouth. Indeed, we believe that all the "pride, pomp, and circumstance of glorious war" finds its most genial soil for growth in this mental element, Approbativeness. Under its influence men seek wealth, and for the sake of houses, gardens, statues, carriages, parties, and display, sacrifice their health, the best years of their lives, exerting every fiber of their physical constitutions, and every mental power, to secure the wealth necessary for their gratification. They sometimes do more—they barter their conscience, their manliness; they swindle, cheat, and steal under the spur of this faculty. The orator rises to the sublimity of eloquence, stimulated by the applause of the multitude; the musician, inspired by the same element, rises to his highest excellence in execution under the stimulation of applause. Persons try to do well, to be moral, cleanly, affable, and, indeed, all that is good and desirable because of the influence of this faculty. So in this way it becomes a help to duty, to goodness, to virtue, and the upbuilding of excellence in character.

But if it be too active, and not properly directed by the other mental powers, it becomes a hindrance to virtue, morality, and goodness; for it inspires those who are vicious to play the hypocrite, to counterfeit goodness, and deny their faults, and even commit one crime to hide another. There is many a murderer committed to hide one's shame;

many a man, to save his name from disgrace, has sent his confiding victim to an untimely death, who, under the action of any other emotion than mortified Approbativeness, would have shrunk from a deed so dark. We believe that four-fifths of all the crimes of women originate in excessive and perverted Approbativeness. But we leave the reader to trace out for himself all the crimes and follies which an excess of this faculty may lead her to do.

In the treatment of a child in whom this organ is large we often see it will be alternately praised and blamed, flattered and frowned upon, according as it is desired on the part of its parent, nurse, playmate, or teacher to urge on or hinder from action the little subject. If we wish it to perform anything, we excite and persuade by appealing to Approbativeness. If we wish to hinder the accomplishment of the same end, we show up the shame side, and the child will do or refrain from doing the same thing, according as we praise or censure the thing in question. How important, then, that this faculty be properly understood by all thus influencing and those who are being influenced, and that it be exercised always in conjunction with the judgment, the moral sentiments, and an enlightened benevolence.

A little thought on the nature of the faculty in question will readily lead to correct principle and action.

—:o:—

A BRIGHT CHILD SAVED.

A FEW days ago a lady brought to me a child—a little boy of four and a half years—and said: "I want you to look at this child and tell me what you think of him."

I complied with her wishes and saw a small, fragile body supporting a head that was over 22 inches in circumference and excessively developed in the region devoted to the intellectual and semi-intellectual faculties.

The features were delicate and highly expressive; the complexion pale, the hair fine and light; the eyes sparkled with the concentrated brightness of active intelligence.

"Well," I said, "he certainly has great talents and a most remarkable head for his age, but his body is entirely inadequate to the task of supporting it; his only chance of living depends on careful training and proper food and clothing."

Said the lady: "*This child is alive because of that very thing.* When a baby not six months old, he was taken to the best phrenologist we knew of—Prof. Sizer, of New York—and we received full instructions in regard to his training, his food, and the way to clothe him.

"We have followed those instructions to the letter. We clothe him as we were instructed to; we give him the food we were told to give him; we have never allowed him to drink tea or coffee, and we will *not* allow any person to teach him anything. He is not to be sent to school until over the age that the Professor mentioned. We expect to raise him, and we consider that we owe his life to that phrenological examination."

The mother of this child is a woman of an exceedingly active mentality. His father is one of our finest lawyers, and distinguished for his intellectual attainments. Three children had been born to them previous to this one, all very bright and precocious, and every one of the three died before reaching the fourth year. The last child, the one referred to above, will probably live, owing to the instructions which its parents have so carefully carried out.

This is but one of several instances lately brought to my notice in which Prof. Sizer is spoken of in the most grateful terms by those that have reaped the benefit of his wise counsels.

M. H.

Newark, N. J., June 4, 1889.

INSTITUTE MATTERS.

EVERY day we have letters from persons who desire to become students in the American Institute of Phrenology. And occasionally we have letters from graduates which are encouraging and pleasant. In some sense we look upon our graduates as our brethren or children. Whatever affects their interests or enhances their profits, gives us joy or sorrow as the case may be.

This 10th day of June we have received information from a student who has just entered upon a summer vacation. He tells us, since the first day of September, though he was out of the field for a month, he has acquired \$4,500 by his lectures.

Another student of ours, H. Austin, of Johnstown, writes us that he happened to be away lecturing when the great catastrophe occurred, which swept his house and all his property into ruins. But, fortunately, his wife and seven children were saved, but they have nothing left but the clothing they stand in.

We have decided to send him railway tickets for himself and family, to Wheeling, Va., where he wishes to start again in business at the very bottom of the hill. We trust our friends and the friends of Phrenology in the city of Wheeling, will give him all the encouragement which his talents and necessities warrant, and as an interest in history aside from our great esteem for him. And we rejoice that he was abroad and that he thus escaped, and that his family is preserved to him.

—:O:—

G—, AUSTRALIA, Nov. 23, 1888.

MR. NELSON SIZER :

Dear Sir.—I hope you will excuse the liberty I thus take in addressing you, but I wish to say how grateful I feel for all the good advice and instruction we have received from time to time through the *Phrenological Journal*, Human Nature Library, Child Culture, and the many beautiful books we have received from the firm. Every time the Journal arrives, it is just a treat to be able to sit down and con it over. "Echoes From the Consulting Room" are nearly the first items I read, for they interest me so. But the February num-

ber with the 'students' addresses interests me very much. I read them again and again and feel in spirit that I am with you all, as indeed I should much like to be. The chief thing that I admire in those addresses is the good feeling they express. Each one is so much in earnest about that which is right. It makes me feel good to read them, and makes one admire that noble Science, whose knowledge improves people and makes them as good as they can be in this world and helps to prepare the soul for more perfect life hereafter. Your work is a glorious one. May you long be spared to work for suffering humanity. I often say Prof. Sizer must often have a taste of his heavenly reward, seeing the benefit your advice is to so many.

As my husband has written to the firm, he mentions that we have been interfered with as regards the book business, which is a disappointment to me, as I was a canvasser; it being unusual for a woman to do anything like that in this country, I was regarded with much curiosity and many comments were made. And, though I broke no regulation, still the Minister of Education could not sanction a teacher's wife coming prominently before the public. But every beginner has some trials. We hope to get over it all and be able to go to work with renewed energy.

I fear that I have trespassed too long on your attention; so with the sincere wish that God will bless the work that you are so zealously engaged in, and also that the coming Christmas and New Year tides may bring you much happiness, I remain,

Yours faithfully, F. C.

—:O:—

F—, TENN., Feb. 8, 1889.

FOWLER & WELLS Co.:

Gentlemen :

Enclosed find \$1.50 for which please send me *Phrenological Journal*, for one year, beginning with the June number.

Have you time to hear a compliment? Many years ago a friend presented me with a year's number of the *Phrenological Journal*, which I now see has been largely instrumental in shaping the course of my whole life. I have been intending ever since to subscribe for myself, and am only now doing so; thus presenting the sad spectacle of good resolutions suspended.

I am, truly yours, MRS. F. P.

CHILD CULTURE.

"THE GOODEST LADY IN THE WORLD."

BY THE AUTHOR OF AN "AUNTIE'S NOTIONS ABOUT CHILDREN, ETC."

"**A**RE you the goodest lady in all the world?"

This was the query innocently propounded to a friend of mine the other day by a fair-haired laddie of six years old; and I have her word for it that a forty minutes' sermon on the superlative deceitfulness of the human heart could scarcely have given rise to more earnest self-searching on her part than did that artless question.

It is a solemn thing at all times to be *trusted*,—a tender, awful, humbling thing to be trusted by a little child; yet every mother ought to be so trusted by her little ones; to them, at least in their earlier years, she should be regarded as "the goodest lady in the world." Not one who reads these lines would wilfully betray that holy confidence, and yet how often, how pitifully soon, in some cases, does it become a wreck!

Until his faith is in some way shaken, a child instinctively believes his mother to be infallible; soon enough must he learn that unerring wisdom and spotless perfection are not to be found on this planet, but for the first few years of his life it is but right that he should think her so, and in at least the three cardinal virtues of justice, love, and truth, there is no reason why, with sincere effort on her part, and help from the willing Father of mothers above, she should not fulfil her son's ideal to the end of her days.

It is said that in no form of wrong are children so early and so delicately susceptible as *injustice*; and yet, poor little things, how much of it have they sometimes to bear! Punished for actions to-day which yesterday were indulged in with impunity; roughly chidden for

the merest accident, or for a disaster of which they have been the wholly blameless cause, having their guilt measured by results instead of in consideration of probable motives; the fractious boy bribed into good behavior, the amiable one passed by without reward; made to suffer for all the misfortunes, the headaches, the backaches, and even the inexcusable ill-temper of those about them; their disputes or complaints—of such great importance in their eyes!—settled according to the mood of the moment, and without that inquiry into particulars which only can insure a just verdict. In such, and many other ways, are the children daily made victims of the thoughtlessness of those with whom they have to do. And yet they so love justice! They would often rather receive punishment at the hands of one who never administers it except well deserved, than a careless letting-off from another whose equity is open to doubt. Amid all the heedlessness, the capriciousness, or the prejudices of others, what an anchor of confidence, what a pillow of comfort it is for the little ones when they can say, "mother is *sure* to be fair!"

It can scarcely be necessary to urge upon parents to *love* their children, but it may, perhaps, be not wholly out of place to remind some not to let the young creatures be in any doubt as to that fact. Demonstrative, or more especially self-mistrustful natures, need constant assurances of affection in order to realize its continuance, and the pathetic query, "Do you love me?" so frequently on the lips of some of our timorous darlings, should be tenderly

and patiently met. It is not sufficient for these to have just love enough to cover them—to supply their physical necessities and watch over them with care; they crave a margin to “tuck in” besides, an unbought layer of caressing words and ways, a conscious plenty that they may draw upon and not exhaust. I never like to hear the common threat, “If you do so and so, mamma won’t love you!” It unwisely degrades, and, in the mind of the young hearer, at least, impoverishes the idea of the maternal affection, and gives an unworthy notion of its strength. Though, of course, as in all cases of this kind, repetition lessens the effect, yet I know from memorable experience what a chasm of appalling possibility may open upon its first utterance by someone whose attachment was hitherto believed to be as reliable as a rock. Mamma will *not* leave off loving Tommy, even if he is a naughty boy, so why threaten it? Say she will be grieved, disappointed, displeased, anything that may be true, but do not hint that she can ever cease to love. A disposition to perpetually fret at a child, to complain of the trouble he unavoidably gives, to notice and reprove *every* small mistake, omission, or dereliction of duty, may possibly be interpreted as a sign of little love; also the coldness of manner and irritability which so readily arise from the languor of ill health, are likely to be misunderstood as a failure or cessation of parental tenderness. Let not such unnecessary doubts come between your heart and those of your little ones; keep them perpetually assured that, whoever else may chill or change, whatever of inconsistency or indifference they meet with outside the home nest, yet *mother’s* love is as firm as the ground beneath their feet, as steadfast as the eternal blue above, and that it encircles them on every hand like the very atmosphere they breathe.

And then as to *truth*. I often think what a strange and horrible shock it must be to a child when first it finds it-

self deceived. So careless in this respect are most persons who have the charge of infants, that in the majority of instances the unhappy experience must occur at so early an age that no memory of the feelings aroused can be preserved. How common a practice it is to coax a baby to swallow its first dose of unpalatable medicine with the assurance that it is “so nice,” and perhaps a pretended tasting and smacking of the lips over the nauseous spoonful? That one dose may, perhaps, be got down the more easily by this ruse, but the child’s confidence in the deceiver is destroyed, and the next, even if actually pleasant to take, will be suspected and rebelled against with redoubled energy. “Take me with you!” pleads a little girl, seeing her mother preparing to start out. “You said I should ride in the horse-car next time you went.” But it is inconvenient to take the child to-day, and the mother, priding herself, possibly, on her tact, instead of saying so plainly, tells the little one that she is not going in the car this afternoon, and departs. Next day Katie discovers, from some remark let fall, that her mother did go a long way in the car after all; she feels herself defrauded and duped, and is thenceforth given to mistrusting the maternal veracity even when there is no cause. I was considerably startled, some time ago, when, having given a little boy a piece of solicited, though perhaps astonishing information, he immediately turned round upon me with an incredulous laugh and the words, “It ain’t; you tell a story!” But when, on closer acquaintance, I discovered that the person who had most to do with his training was in the habit of answering his *bona fide* inquiries for knowledge with the most outrageous falsehoods, concocted, apparently, with no other end in view than to try how much the gullibility of childhood could be induced to swallow, my astonishment was at an end. On the other hand, what is more pleasant

than to see a little fellow stand boldly up in the face of half a dozen dissentient companions and unhesitatingly aver: "My mother says so, and I *know* it is true!"

Justice, love, and truth—three virtues which are at the foundation of all others, three so indissolubly linked together that if either is wanting the other two fall hopelessly apart; so simple that they may be attained by the humblest

mother in the land; so noble that they are a grace to the highest; so appreciated, even though unconsciously, by the trusting infant heart, that she who faithfully, and we must add prayerfully, endeavors to practice them in the small details of daily life may win for herself the precious guerdon of being looked up to by her children as "the goodest lady in all the world."

JENNIE CHAPPELL.

DISCERNING A CHILD'S FAULTS.

CAREFUL study and a wise discrimination are needed on a parent's part to ascertain a child's peculiar faults. Each parent would do well to ask himself, or herself, the questions, "What are the special faults of my child? Where is he weakest? In what direction is his greatest strength liable to lead him astray; or when is it most likely to fail him? Which of them is the chief importance for immediate correction?" Such questions as these should be considered at a time favorable to deliberate judgment, when there is least temptation to be influenced by personal feeling, either of preference or dissatisfaction. They should be pondered long and well.

Unfriendly criticisms of neighbors, and the kind suggestions of friends, are not to be despised by a parent in making up an estimate of his child's failings and faults. Rarely is a parent so discerning, so impartial, and so wise, that he can know his children through and through, and be able to weigh the several traits, and perceive the every imperfection and exaggeration of their characters, with unerring accuracy and absolute fairness. A judge is supposed to be disqualified for an impartial hearing of a case in which he has a direct personal interest. A physician will not commonly make a diagnosis of his own disorders, lest his fears or hopes should bias his judgment. And even though the parent must decide for himself con-

cerning the interests and treatments of his own children, he ought to be glad to take into consideration what others think and say of them, while he is making up his mind concerning his duty in the premises. And what is written or said on the subject by competent educators is worthy of attention from every parent who would train his children understandingly. There is little danger that any parent will give too much study to the question of their child's specific needs, or have too many helps to a wise conclusion on that point. There is a great deal of danger that the whole subject will be neglected or undervalued by a parent.

If the parent were explicitly to ask the question of a fair and plain-speaking friend, familiar with that parent's children, and competent to judge them, what do you think is the chief fault—or most objectionable characteristic—of my son—or daughter? the frank answer to that question would in very many cases be an utter surprise to the parent; the fault or characteristic named not having been suspected by the parent. A child may be so much like the parent just here, that the parent's blindness to his or her own chief fault or lack may forbid the seeing of the child's similar deformity. Or, again, that child may be totally unlike the parent, and that the parent will be unable to appreciate, or even to apprehend, that peculiarity of the child is apparent to every outside intelli-

gent observer. A child's reticence from deep feeling has often been counted by an over-demonstrative parent as a sign of want of sensitiveness ; and so *vice versa*.

Parents need help from others, from personal friends whom they can trust to speak with impartiality and

kindness, or from the teachers of their children in the gaining of a proper estimate and understanding of their children's characteristics and needs. The parent who does not realize this truth and act on it, will never do as well as might be done for his or her child.—*Sunday School Times*.

SCIENTIFIC METHOD IN TEACHING.

THIS paper contains a mere outline of a new theory in regard to teaching. It is based on the constitution of the mind, taking the fourteen faculties of the intellect as named and described by phrenologists, with three slight exceptions, and applying these to the order of creation and inversely to the order of mind development. It agrees so well with experience that I feel sure the teacher and others interested will find it a profitable study.

THE INTELLECT.—The intellect is that part of the mind which knows or understands, and forms the connecting link between the outside world and self. It contains the fourteen faculties named in the order of creation and the order of mind development. No explanation can be made of the action of these faculties, or how we know and think, but there are a few things necessary to note. 1. Each faculty of the intellect has the powers of perception, conception, memory, comparison, etc. 2. The first seven faculties of the intellect to become active may be said to deal with particular qualities of objects and the last seven with general qualities. It is necessary to bear this distinction in mind, and I differentiate them in this table :

Particularization.

SENSE,
FORM,
SIZE,
WEIGHT,
DENSITY,
ORDER,
NUMBER.

Generalization.

CONSTRUCTION,
HARMONY,
TIME,
PLACE,
ACTION,
CAUSE,
EFFECT.

SENSE.—Sense, or individuality, is the

first quality of the intellect to become active. It gives a desire for knowledge, hence curiosity is the first law of childhood, and perhaps it would be well to spend the first year of the child's school life in its cultivation. It will be found that the first curiosity of babyhood has passed away, and that the child of three years of age will note little of what he sees, hears, or feels, unless it is new or unusually attractive. It is the teacher's duty to arouse the lagging curiosity of the child by showing him new beauties in the every-day objects to be met with, something that will call into play the child's imagination, for that is his way of developing the conceptive power of his mind. But little time should be spent in the school-room the first year, and that little should be used in looking over pictures, and perhaps one a day would be sufficient, for by far the greater part of the time can be well spent in roving the fields in search of plants and insects.

FORM.—Form is the second faculty of the intellect to become active. It is from form that activity comes, hence activity is the second law of childhood, and naturally follows curiosity. Perhaps the second year of the child's school life could be well spent in its cultivation. The child is now ready for a slate, and as it is by form that we distinguish words, he should commence the study of words. Have him first draw the picture of the object, and then write the name underneath. Never give a copy for drawing except the object itself, and but one copy of each word that he writes. Teach form

so thoroughly that the child can tell the name of each tree and plant in the school district by the shape of the leaves.

SIZE.—Size is the third faculty of the intellect to become active, and its study should be commenced by the third year of the child's school life. Not absolute size as is seen in feet and inches, but relative size, the size of one object compared with another. By the use of the line relative size and distance of an object must be taught by a thousand practical tests, for it is on this that the world beyond the senses is built up, and as size is a measure of the strength of objects, other things being equal, the study of strength should be commenced. The old story of the single stick that could be broken and the bundle that could not, is an illustration of how this last can be studied when put to a practical test. Capital letters and adjectives should now be introduced.

WEIGHT.—Weight is the fourth faculty of the intellect to become active, and the child should commence the study of weight by the fourth year of his school life. Weight comprehends the law of gravity, and the force that overcomes it, hence its cultivation is largely mechanical. The schoolroom now should be turned partly into a machine shop, and the child taught habits of industry. A nice application of the power of force is required in nearly all fine arts, such as instrumental music, writing, drawing, carving, and sculpture, and that their study should be commenced quite young, we have the opinion of nearly all teachers. A fine perception of the law of gravity is required to stand and walk gracefully, and these should be taught by difficult feats in balancing and in other ways. In what is termed the regular school work the child is now ready to take up verbs, and with them the first reader. The object of not commencing the use of a book until this age, is that the child may first build in the real world, before he does in the book world.

DENSITY.—Density is the fifth faculty of the intellect to become active, and the child should commence its study by the fifth year of his school life. He has become familiar with the line while studying size, with the square while studying weight, and he is now ready for the cube. Teach him to examine the interior of objects and to go to the bottom of every subject. Phrenologists have named this faculty color, but color is only one quality of density, and as a quality its study should now be commenced, with the aid of a paint box.

ORDER.—Order is the sixth faculty of the intellect to become active, and the child should commence the study of order, arrangement, or series, by the time he is ten or eleven years of age, and in the sixth year of his school life. Regularity or order in school work, up to this time, is perhaps detrimental to the scholar, but it must now be insisted on—or rather, if the moral training of the child has been right, he can assume the responsibility of his own order. The child is now ready for his first lesson in arithmetic, learning the series one, two, three, etc. To do this present him with cube blocks of some known size or weight, as the inch or ounce; first have him arrange them in lines, then in squares, then in cubes, until the relative importance of number up to one hundred is built up. In his outdoor work the child should be taught to study the order of nature, the arrangement of leaves, branches, etc., and his drawing should now comply or agree with it. Beauty is nothing but arrangement, hence the child should be trained in aesthetics.

NUMBER.—Number is the analytical faculty, the seventh to become active, and the child should commence its study in the seventh year of his school life. Arithmetic is the only exact science that we have, and nearly all others are dependent on it; hence it is that we should have a clear conception of it, and this can only be accomplished by first

building relatively rather than absolutely. Now before this age the child can not comprehend number; he learns that 10×10 is 100, and he knows that 100 is more than 99, but the relative proportion between one and one hundred he does not understand; hence to him it is an unmeaning number; he is penny wise and pound foolish. Moreover, if he has first built relatively from practical tests, the only possible way, he will be in advance of most scholars of his age at the end of the year, for he can apply his knowledge to extension, weight, etc., in a practical way. Plants, flowers, etc., should now be analyzed, spelling commenced, the human body dissected, etc.

CONSTRUCTION.—Construction is the eighth faculty of the intellect to become active. It comprehends the law of association, hence, composition, etc., and its study should be commenced by the time the child is 12 or 13 years of age. Mechanical cultivation, which commenced with the study of weight, should now assume a practical form in the construction of objects.

HARMONY.—Harmony is the ninth faculty of the intellect to become active. Reading is but an attempt to harmonize expression with thought, and the same may be said of music. Now if the child of seven, or eight, or nine, understands harmony, then he should be taught reading, but if he does not comprehend it, then he should not be taught, for his attempts can be but imitations of his teacher's voice, accents, pauses, etc., resulting in making him read unnaturally. That the child under twelve years of age usually does not understand harmony, we have the experience of most vocal music teachers, and of elocutionists generally. Hence, before this age thought in reading must have entire consideration, and if this is followed the child will read naturally.

TIME.—Time is the tenth faculty of the intellect to become active, and what has been said of harmony may be said of

time, for time is the leading element in music, poetry, etc. It is said that the child when quite young loves music, poetry, etc. This we do not believe. He may love the jingle of sleighbells, and noise, but music and poetry as such, the average child does not appreciate, and their study is incompatible with his child nature.

PLACE.—Place is the eleventh faculty to become active, and all teachers and parents, and boys and girls themselves know that at about the age of fourteen or fifteen there comes a desire to roam or travel. This desire is simply the workings of the faculty place, in its desire for a knowledge of place. This desire should be humored somewhat, and the study of geography prosecuted.

ACTION.—Action is the faculty of history, the twelfth to become active, and naturally follows the study of place, or geography. The child has great love for stories, particularly if they are inclined toward the marvelous, but the plain, dry details of history, from which effects are to be traced, present to him no source of enjoyment and should not be forced upon him until his mind is more matured.

CAUSE AND EFFECT.—Cause and effect are the expression of the highest faculty of the intellect; the last with comparison to become active. That the child does not reason nearly all authorities on teaching agree, and in looking over a number of books on teaching I find three authors who place the time of the commencement of reason between the ages of fourteen and sixteen years. Grammar requires reasoning, and its too early study either results in injury to the child mind, or he simply learns the forms and repeats from memory. The same may be said of higher arithmetic, algebra, and geometry.

GEO. H. GALLUP.

“To hold the attention of the young steadily they must be interested by the teacher.”

NATURAL DEVELOPMENT AND TRAINING.

THE development of the mind of the child must be determined. In some, the reflective faculties develop quite early; in others, quite late. Some are very imaginative and love poetry; others are not at all imaginative and can not bear to read poetry. Some children develop a mathematical faculty and delight in arithmetic, and can very soon study the elements of geometry and algebra. Others are almost dunces in mathematics. In older times it was supposed that a child should be made to study that which he most disliked, in order to promote his equable development. For example, if his memory was poor, his memory should be trained directly. This is wrong. The mind must proceed along the lines of greatest activities, not along the lines of the least activities. Let us see what this means. If a child delights to read and write, but has poor technical memory, let that child read and write to her heart's content. Let the memory alone, but give exercises in reproducing what is written or read, also in comparison and association. The memory will be thus trained without giving words or dates to be committed to memory. Much is said now concerning the training of the retentive faculty, and the best conclusion of those who have studied the matter is that memory is strong in proportion as the observation, association, and imagination are strong. Careful habits of observation and the forming of habits of associating similar things will always strengthen the memory. In no other way can this work be accomplished.

Then wisdom shows us that we should give such children as have poor memories a great deal of observation work and association work, and it will be seen very soon that the memory will assert its power. For example, if a child dislikes to memorize dates in history, at first, *give no dates in history for the child to remember*. But what shall we do? Take this course: Tell a story to-

day, to-morrow tell another one; let it follow in the order of time after the preceding one; the next day tell another one—let this follow in the order of time. Now after several stories are told and reproduced, ask which one came first, which second, which third. Now, what relation has the second to the third and so on. After the order of relationship has been established, then the date can come in; but not until this order of relationship has been established should the date be given. If this course be pursued, the children will have no difficulty in remembering dates and names also.

The reason that some children do not like numbers is because the faculty of *relation* is not developed; the child puzzles over his examples in arithmetic because he does not see the relation between their parts. He reads, "A man bought a piece of ground for \$500, and sold one half of it for \$300, and one fourth of the remainder for \$200. What did he make by the transaction?" Many are entirely unable to solve such an example as this—not because it is difficult, but because the relations between the parts are not clearly seen. Do not urge children on in mathematics faster than they can understand; *urge them on as fast as possible in the direction they like to go*, and every month reclassify the school in reference to attainments. Very much more could be said under this head, but enough has been written to show in what directions children should receive impulses, and in what directions they should not.—JEROME ALLEN, in *School Journal*.

AN inquisitive young man said to his mother's brother, "Uncle James, how is it that you and Aunt Sarah never agree?" "Because, my boy, we are both of one mind, and have been so ever since we were married." "How is that, uncle? I don't understand." "Why, boy, you see she always wants to be master, and so do I."



SKIN TROUBLES AND HAIR.

THERE are not a few diseases of the skin which we can avoid. Salt rheum, one of the eczemas, specially when it results from external causes can be, and so too can chapped hands. By keeping the hands out of water as much as possible, by using soap that does not irritate the skin, by thoroughly drying the hands and protecting them from the action of the air it may be done. Water is to be avoided in all cases of eczema. If one's vocation is such that putting the hands in water is necessary, then special care should be given to drying them. To this end dry them on two towels, one after the other or both ends of the same towel, and immediately afterward powder them with corn starch or flour, or apply some simple ointment and in the open air wear gloves.

Chapped lips is another form of eczema, to alleviate which use something like "camphor ice" on them, applying at night before going to bed, or several times during the day.

Barber's-itch is another disease, that is best avoided by shaving one's self. Owning cup and brush in a barber shop will not save you. The contagion is quite as often conveyed by means of the barber's damp towels and dirty fingers. If a man feels that he must shave, he should do it himself.

Baldness is often due to disease that is preventable. One of the most common

causes of loss of hair is dandruff, and if one begins to give attention to the care of the scalp in early life, he may put off the appearance of baldness for a long time.

The proper care of the scalp consists in keeping it clean by an occasional shampoo of soap and water, borax and water or some simple means, and in brushing and combing the hair, and in avoidance of all things that can harm the scalp. The shampoo need not be repeated oftener than once in two or three weeks, and whenever the scalp has been washed it should be carefully dried, and some simple dressing applied like vaseline or sweet almond oil.

The hair should be thoroughly brushed and combed daily, not in the careless way in which it is done by most people, but systematically for five or ten minutes, and with vigor sufficient to make the scalp glow. For this we need a good brush with long, moderately stiff bristles. A comb with large, smooth teeth, set wide apart should be used with the brush to open the hair to the air; first a stroke of the comb and then of the brush. After the systematic brushing the stiff brush should be laid aside and a shorter softer one used to assist the comb in parting the hair and to polish it.

What not to do is of nearly equal importance with what to do in the care of

the scalp. Pomades on the healthy scalp are quite unnecessary if the hair is properly brushed, and by becoming rancid they are apt to irritate. The daily sousing of the head with water is to be avoided also, for it is objectionable for health reasons, and may cause catarrh. Ventilated, easy-fitting hats should be worn. Working under hot, artificial

light should be avoided so that the head will not be sweated. Withal the general health condition of the physique should be maintained at as high a standard as possible by exercise and moderation in all things; worry and anxiety of mind should be combated by the cultivation of more cheerful habit of thought.

ON THE TREATMENT OF CATARRH.—No. 9.*

2.—*The Care of the Skin.* This has regard to such measures as tend to keep the body clean and the skin in active and healthy condition as an excreting organ. Bathing and rubbing are the two effectual outward means for this purpose. Whether one should use cold or warm water habitually must depend upon temperament and sensitivity. Cold water is a powerful tonic and for a person of average health and strength is beneficial in almost every way, bracing up the nerves and muscles for the activities of daily life and giving the quality of endurance to the more delicate organs and tissues. In a variable climate like that of the United States, especially the northern section, a habit of bathing that tends to harden and fortify exposures should be generally formed. The numerous "modern conveniences" and devices that are introduced to modify or effect climatic conditions are sources of weakness and danger to those who adopt them rather than attempt to strengthen and harden the body by proper hygienic means. A warm or hot bath may be serviceable as an instrumentality in the treatment of the sick, but for one in average health the daily sponge or towel bath with water of normal temperature is sufficient as a cleansing procedure.

Hot baths are depressing, and tend to congestion of the numerous tissues. Dr. Beverly Robinson says on this point: "Take a person of relatively feeble and lymphatic constitution and subject him

to bad hygienic influences, viz: surround him with an insufficient or vitiated supply of air, give him improper food, cover him with badly adapted clothing, and will you not find that he gradually becomes more markedly strumous and sickly? Warm bathing is to be ranked in the same category. It is enervating and takes away from bodily vigor. The skin it is true, is actively congested during the period of the bath, and its capillary circulation greatly augmented, but just so soon as the ambient cold air impinges again upon the cutaneous surface, either directly or through the habitual wearing apparel, the blood supply is driven with increased force (owing to the rapid contraction of the small vessels of the integument) toward the internal viscera and mucous linings, which in their turn become congested, and remain so more or less *constantly*, unless by a superabundance of clothing the body is kept in an unnatural state of heat. If the temperature of the water used in bathing is as low or lower than that of the surrounding atmospheric medium what a different physiological action takes place! A temporary shock follows immersion or the use of the sponge filled with water, after which there is a short period when the surface temperature of the body is lowered, and then a natural warmth or glow takes place, the skin is reddened, its capillary circulation is heightened, and not merely in a temporary manner, but shortly becomes so permanently, and the interior organs are relieved of an

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overload of blood and greatly stimulated in their several functions."

Those unaccustomed to bathing should begin in a moderate way, using water slightly warm to the touch, say 80° Fah., and gradually reducing it a degree or two from time to time until it can be used with actual comfort as it flows from the pipe, say at the temperature of 55° to 65°. It is better to have a thermometer at hand to test the temperature rather than rely upon the skin sensibility at the time. A sponge bath should be brief, three or four minutes sufficing for the whole process of wetting the surface of the body and drying off.

It is a good plan to rub the skin for a few moments with a coarse bath towel or a flesh brush of horse-hair before bathing. This promotes reaction. And after drying off, rubbing with the naked hand is exceedingly beneficial, as it helps to stimulate the circulation in the capillary vessels and makes the skin smooth and elastic. For those in delicate health massage or shampooing by the hands of an intelligent assistant or nurse is very useful. A little bland oil, like sweet almonds or cocoanut, applied at the time helps much to improve the condition of the skin, and render its resistance to exposure greater. For the "nervous" and debilitated I know of nothing else more suitable as a tonic than massage skillfully given. Weak women who shrink from any unusual effort and dread exposure to cold and dampness derive great help from it.

Clothing.—The dress should be worn for comfort rather than show. Hence climate and changes of weather are to be considered. In our ever-changing Northern Atlantic region a supply of both over and under garments of different thicknesses is needed by every person, but especially by those who feel the changes keenly. Winter has its variations of temperature for which an extra coat or wrap may be sufficient for those who are abroad every day; but in the

warm season, say from May to October, there frequently occur cold spells, when it is prudent for the delicate to put on a thicker under-garment than has been worn when the heat was of a semi-tropical character. Flannel or merino is the material that is best for such undergarments, and we advise all troubled with catarrh to wear such underclothing in all seasons of the year. If one's pursuit requires much physical activity, his under-shirt should not be so heavy as to occasion visible perspiration. The person of sedentary pursuits can wear with comfort a much heavier shirt. At night, on retiring, the whole under dress should be removed and hung where it may be aired thoroughly during the night. For sleeping a garment of lighter material than that worn during the day is usually found to be comfortable. If the feet and legs are kept warm it is found that one does not feel the necessity of much covering for the body. Who has not seen women in winter shivering under a load of heavy shoulder garments, when the cause of their discomfort lay in the thin stockings and light morocco shoes that so tightly clasped their feet that they were almost bloodless, and stiff with cold?

Muffling the neck is a bad practice, and invites sore throat and catarrh, but when there are high, sharp winds it is well to protect the ears, nose, and eyes against them, and to turn up the collar of one's overcoat. Ear-tabs are convenient protectives, and cotton wool placed in the auditory canal prevents the communication of the chilly air to the interior membrane.

The contact of a cold, raw atmosphere with the nasal membranes when a person is suffering from a severe catarrhal inflammation is more or less painful, and tends to render it worse. For one who can scarcely avoid exposures of this sort a respirator, covering the nose, is commended, which may be worn while he is in the open air.

Diet.—It has been shown in earlier

articles that improper diet has much to do with the development of common colds and catarrh; so, in adapting food to a case, everything of a rich, stimulating and indigestible nature should be avoided. The object of eating is nourishment and to meet the needs of the body for re supply of the elements of tissue change, and construction. All articles that irritate or heat unduly the mucous membrane, like pepper, mustard, and the various high-seasoned gravies, pickles, and condiments, are injurious; they interfere with digestion and disturb the nervous economy. Greasy and starchy preparations tend to interfere with the liver function and to induce constipation.

The different farinaceous foods are now so generally procurable, and in such good forms, that it is easy to advise a

patient to eat bread made of the whole wheat, oat-meal, barley, corn-meal, etc., and to vary his table programme with the numerous mushes, porridges, cakes, biscuit, gems, etc., etc., that can be prepared from them. Fruits should be used liberally at meals, either fresh, or stewed, or canned. So with most of the garden vegetables. All good fruits are suitable for the invalid's use, although we should not disregard one's preference. Those who dislike onions or turnips, or any of the harder roots and esculents, have our consent to decline them. A plain dietary is best, and excess in its use should be guarded against. Whatever is known to produce disorder in stomach or bowels the patient will do well to reject, and in this regard his *experience* should be faithfully respected.

H. S. D.

IN HIGH PLACES.

“THERE are some things beyond belief, millions and billions of miles beyond credence. They can not be accepted as belonging to the category of ordinary or extraordinary facts.”

The speaker, a bright young medical student, made us all laugh as she delivered herself of these remarks. A half a dozen of us comprising a committee to procure lecturers for our physiological society had gathered to compare notes and discuss matters, when Rhoda Remington, the most brilliant one among us, entered and gave utterance to the above remarks.

“What is the matter now?” we inquired in chorus.

“We must start a missionary branch at once,” said Rhoda, “and I move here and now that a committee be formed to attend to this department, the business of which will be into the fashionable, intellectual, and cultured world and gather in the—the fools.”

Somebody laughingly seconded this somewhat unparliamentary motion, and Miss Remington continued.

“You will, I am sure,” she said, “acquaint me of any desire to make mischief, of any wish to exaggerate the state of darkness which exists in this neighborhood of palaces and electric lights. I have just come from Edith Howardine's. I called for her to accompany me to Dr. Thayer's lecture. She couldn't come on account of preparing her wedding cards.”

“What's the lecture about?” she asked.

“The digestive organs,” I replied.

“Oh, horrors,” said she; “if there is anything I hate to hear discussed it is my stomach, or anybody else's stomach. And those diagrams and plates and things are simply awful. Papa was examining something the other evening and I looked over his shoulder, and it was one of those medical books, and there was the stomach cut in two in the middle, and papa was trying to find out how long the ‘sciatica nerve’ was that runs through it and up round the collar bone somewhere. It made me so faint that when I got back into the parlo-

Charlie was fearfully frightened, and he said that never, so long as I lived—with his consent—should I look at one of those abominable pictures again. Charlie perfectly despises women doctors, and he says that the heart is the only organ that a *lady* should ever know anything about, and that only in a poetic way. Why, he would never forgive me if I went to this lecture. Doctors are the only ones who have any business with such matters, he thinks, and so do I."

"But," I responded, "suppose the 'sciatica nerve' should get the colic tangled up with it somehow, wouldn't it be convenient to know how to get the kinks out?"

"Oh, one can always get a doctor in five minutes," said Edith, "and one would be quite as likely to do something wrong as right, and mamma says it is very dangerous to ever do anything till the doctor arrives."

"Well, I sat in my chair as if I had been turned to stone," Rhoda went on. "I *felt* petrified. Here was a girl who could play Liszt's Rhapsodies, and speak French like a Parisian, and read Schiller, and write brilliant letters, talking like a born simpleton. The 'sciatica nerve' running through the stomach and emptying into the collar bone. Oh, she said it," as we all held on to our sides and looked incredulous. "I wish she hadn't, for it has blown all the wind out of my sails; I am discouraged to death, for what is to be expected of the other girls if Edith Howardine is such a ninny? Well, I tried to be serious and do a little missionary work on the spot; but every time I thought of that 'sciatica nerve' I thought I should go into hysterics. I spoke of her intended marriage and the great responsibility resting upon wives and mothers, and the preparation necessary for the successful performance of those sacred duties."

"That's just the way girls grow old before their time," said Edith, "puzzling their heads over such things, and then

they wonder why their husbands grow tired of them. Now Charlie and I are going to entertain and travel and have a good time. If we need doctors and nurses we shall employ the best that are to be found."

"But what of the women who haven't the means to employ their professional skill?" I inquired, and I could have boxed my own ears for doing so. Some breath had better be saved, I think.

"Oh, I don't know, I am sure," Edith answered, "the world is full of conundrums. But Rhoda, I do wish that you would give up all this nonsense of studying medicine, and keep away from these crack-brained people. It unsexes a woman so. Charlie says it does."

"But the worst is to come," Rhoda answered after a short pause, and looking very serious. "As I passed through the drawing-room on my way out I heard the sound of suppressed sobbing, and there sat Edith's younger sister Milly on the piano stool, crying piteously."

"Dear me," said Edith irritably, "if that child isn't at it again"

"What is the matter?" I asked.

"Oh, Mill has taken a notion that it makes her back ache to practice," she answered, "and wants to give up her lessons, and all that sort of nonsense, but of course mamma won't let her. Just look at her, and see how wonderfully she sits."

"I'll tell you what makes me look awkward," said Milly, dashing the tears from her eyes and turning a tragic face to her sister, "it is because I am growing out of shape. All the girls at school say that I am, and I know it. My corsets are too tight, and my shoulder braces almost kill me, and my left shoulder blade has such a pain in it all the time that I can not get a single breath without it cuts me like a knife; and I wish that every piano that was ever made was at the bottom of the Atlantic Ocean. Look here, Miss Remington, and see if I am not getting deformed."

"I pressed my hand over the girl's back, and I could have cried, too. She was perfectly correct. The left clavicle was much larger than the right, and was raised in the strangest manner. Just below the head there was a bunch in the vertebrae as large as a hickory nut, and such a twitching of nerves I have seldom seen except in pronounced cases of St. Vitus's dance."

"Milly has been growing more and more ridiculous, lately," said Edith, as she followed me to the door.

"She has been growing more and more deformed," I replied, "and she should have had perfect rest and the best medical treatment long ago. In my opinion," I added, perhaps cruelly, but truthfully, "it is already a hopeless case."

"There, I have told you all now, and what do you think of it? Wedding

cards, 'sciatica nerve' in the stomach, straight-jacket shoulder braces, figure-making corsets, ignored pain, disregarded deformity, and music—heavenly music degraded into an instrument of torture. Talk about the South Sea Islanders, or the Zulus, and the Feejees, and the ignorance of the lower classes! I'd take a native of either kind to instruct in practical and useful matters and they'd be a credit to be compared to Edith Howardine."

Rhoda did not hear much of the lecture that afternoon. Her eyes, fastened upon vacancy, showed that her thoughts were far away, but an occasional pucker of the corners of her mouth proved unmistakably that they sometimes ventured to the neighborhood of the "sciatica nerve" and "collar bone."

ELEANOR KIRK.

NOTES ON "HYPNOTISM."

1. THE HYPNOTIC "SENSITIVE."—2. THE HYPNOTIC CONDITION.—
3. EXPERIMENTS.—4. THEORY.

I AM inclined to think that the condition of a hypnotic "sensitive" may be predicated entirely or largely of the differentiations of delicacy, thinness, or fragility of the integument. Suppose the skin—a horny defense against the influx of the outside world to the system of nerves—to be so thin as to allow easy communication with the outer world. Would not the degree of thinness or penetrability represent a degree of corresponding "sensitiveness?" There are several analogous facts which may shed some light. It is generally understood that some are less acutely affected from a "shock" from a galvanic battery than others, and I presume it would generally be considered that such as have a thick and hard skin upon the inside of the hands will therefore be less affected by a galvanic current while holding the "poles" in the hands, than those whose skin in the same region is thin, delicate, or frail. In either case the skin is more amenable when it is

moist or damp from natural or other causes; which proves that the galvanic current is readily transmitted over a good conductor, such as a thin, moist skin. I imagine, therefore, that persons who are keenly susceptible to acute mental or physical impressions are those whose frail, fine, thin skin, interposes the least possible barrier to the contact of the surface nerves with whatever touches them anywhere. Angelic speech, as Swedenborg refers to it, consists in its transmission of motions through all outer avenues of expression, the whole being in a delightful harmony, being ardently engaged in the involuntary act, while the recipient in his entire openness of spirit receives instantly and completely all the other conveys, through the same medium. He sees, hears, feels, understands all over, with no break in the line of communication. This is absolute contact—complete *rapport*.

Different degrees of delicacy in the natural covering of the human body

would perhaps indicate different degrees of "sensitiveness," in the hypnotic sense as well as in general. Again, since all parts of a well-made human being in harmony with each other, should show a similarity in the material of their organization, it may be expected, as I believe is the case, that a fair, fine, frail, delicate skin will accompany fine hair, as well as fine-grained tissue. One interesting phenomenon I have frequently noted, that "sensitiveness" causes rapid development of whatever organs are most frequently exercised, and it very often occurs that a "sensitive's" hands will be hard and rough, from his ordinary use of them, it being a well-known tendency in them to over-develop, a phenomenon accounting for a great many singularly beautiful developments.

Those who are familiar with the phenomena of "hypnotism" need not be told that it very often happens that they can at once distinguish a "sensitive" partly from his general make-up; from his aspect when approached, when the pupil of the eye is observed to enlarge. In the case of an unknown subject, I was once myself apprised of his susceptibility by my influence over him, while seated by his side in a lecture on "mesmerism," my notion being confirmed when he submitted to the handling of the lecturer a few minutes after.

If these notions are of any scientific value, perhaps a brief summary of the actual condition of the hypnotized subject may give some new data, or a clue to something more tangible than ordinary experiments on record. It is well known that the "stages" of the hypnotic state are progressive, extending from the slightest to the most profound "influence." I have several times made particular observation of the complete trance; a deeply interesting state in every instance; the respiration in one interview being singularly deep and quite distributed throughout the whole anterior region of the body, the patient

lying quiescent and calmly reposing. Every anterior muscle observed, pectorals, diaphragm, rectus, and generally the abdominals were felt to be harmoniously in action, offering an excellent study of "respiration."

In this case I found the pulsation at the heart very even, quiet, and regular. In a profound state, after a suggestion which might have induced it, so quiet and profound was the trance that my patient did not appear to the general observation to breathe, or his pulse to beat at all. Perhaps half an inch of rise and fall, in the anterior abdominal region, could be detected, with a vibration having a lateral area of a hand's breadth. His eyelids were "glued down;" there was also a characteristic horizontal margin of the eyelid. It adds some emphasis to this remark to observe that his previous condition was rather disturbed, which, on entering the hypnotic state, was temporarily calmed.

It was observed that as the profound condition approached, the skin lost its lively feel, subsiding into a kind of dullness, as if the senses had retired into an inner citadel. On pushing up the eyelid the eyelid was seen to be averted, one eye drawn back farther than its fellow, and on persisting in holding up the eyelid, the eye was observed to roll slowly downward, when the lid was suffered to close again.

These remarks are a summary of several experiments. Perhaps a note or two further may be of interest.

This subject is hypnotized by looking steadily at a watch hung a little above and at an arm's length before his face, as he sits. Partial trance is obtained enough for suggestion with delusion. On a subsequent trial, he passes into a profound sleep, from which he is awakened feeling much refreshed. The means of introduction of this on the later occasion consist more of "passes" than at first. Delusions occur—that his eyelids stick, that there is "a dull pain" in the vicinity of the stomach: that

there is a very hot space moving, according to the suggestion, from the left to the right side; soon he passes into a profound state, tested by the limbs remaining passive when placed by me in various locations. I say to him, "you may wake up a little;" when thereafter at my suggestion he is unable to raise a certain limb, and I feel that he uses the wrong muscle. During the "profound" sleep, I find respiration to be general, pulsation delicate but regular, the primary throb at the heart comparatively light. On being awakened his pulsation is more intense, but regular. On being questioned concerning his experience, he says that he did not dream, and that when his limbs were moved

about by me he cared nothing for it. While asleep, failing, according to suggestion, to open his hand, he said, "I could never open it very well."

All the literature of hypnotism that I have read—and my opportunities are largely availed of—seems more full in detailing theories, phenomena, delusions, suggestions, than describing aspects of the subject hypnotized. It is therefore futile to endeavor to extract any really tangible data from so much and so various matter. If a theory should be formulated out of plain philosophical facts, it might be a very easy one to understand. What is already known will do well enough to talk about till we find out what to look for. H. C.

A NEW AID TO ANATOMICAL STUDY.

THE study of human anatomy has become so general in our schools that the use of convenient charts showing the different parts of the body has become necessary. For the assistance of teachers and lecturers in this respect nothing that is readily available can be said to be superior to the new paper manikin called the "Man Wonderful Manikin," recently introduced by the publishers of the PHRENOLOGICAL JOURNAL. A sketch of it is given in the accompanying illustration, but a better understanding of its character will be obtained from the following description:

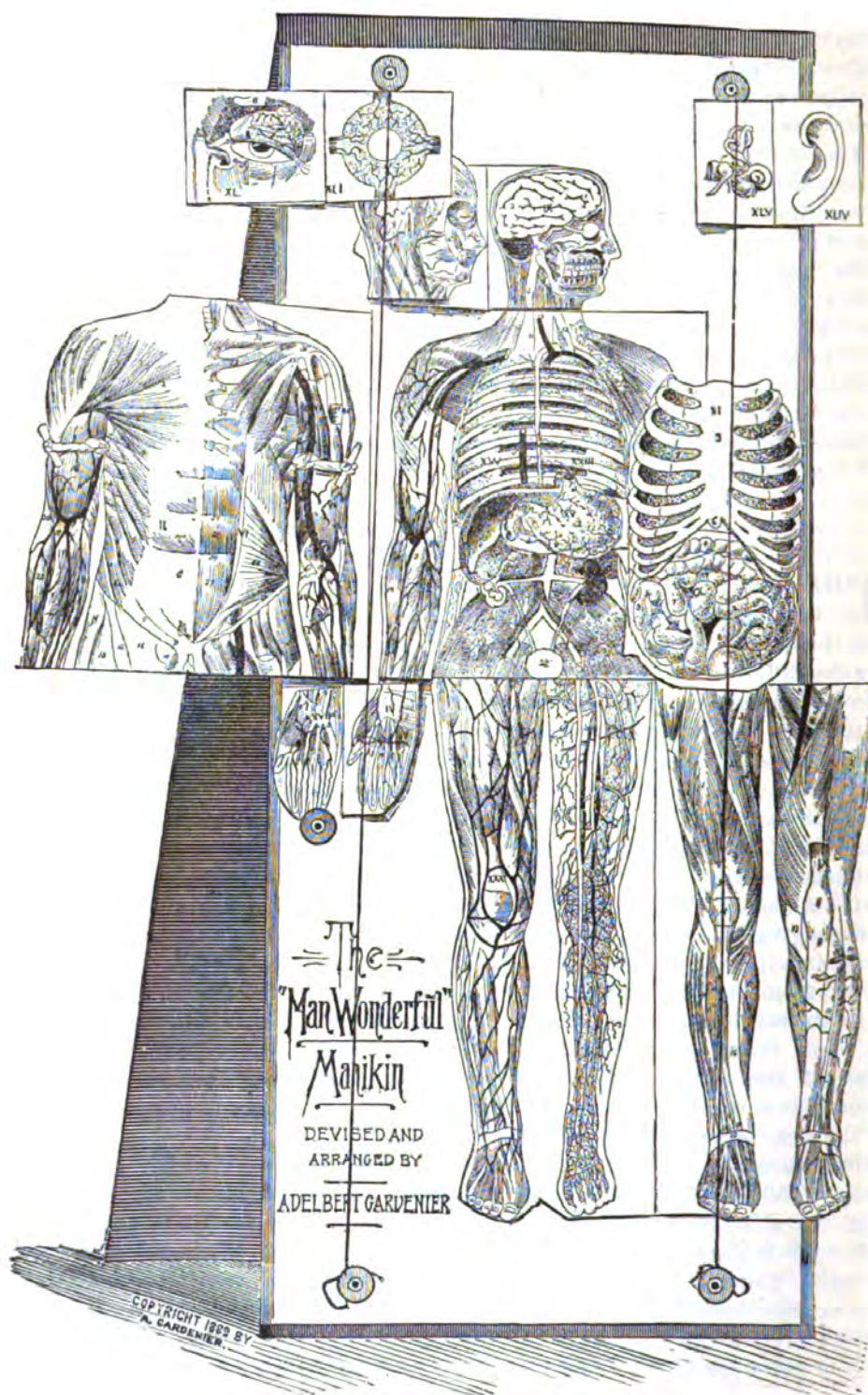
As the manikin is opened upon table or desk, there is presented a front view of the whole muscular system, from the crown of the head to the end of the toes. Upon one side is shown the exterior muscles overlaid with veins, as they would appear if the outside covering, the skin, were removed. On the other side is shown the second layer of muscles, namely, those that underlie the exterior ones. Between these two layers of muscles the great arteries, which carry the blood from the heart to the limbs, are found. These are exactly located, and here is shown how to

stop the flow of blood should one of these great arteries or blood vessels be severed. Thus we are taught how to save life in case of accident. From the position of each muscle we can learn of its use in the movements of the body, and will readily learn the need of various exercises to call into use all the different muscles.

Should we now remove from the front of the trunk all the muscles, we would find the ribs inside and next beneath them are the lungs. Then on the right side just extending a little below would be the liver. Nearer the center would be found the stomach, while below we would find the intestines, small and large, including the ascending, transverse, and descending colon, and bladder.

We have here the effect of dissection without its attending horrors by simply raising one flap or leaf of the *indestructible* material. We can see all that has been described, as well as an extended view of the arterial and venous circulation of the arms.

Space does not permit us to describe fully all the points covered by this ingenious and beautiful device, so we



"THE MAN WONDERFUL MANIKIN."

can only touch upon a general point here and there. The flaps are held back out of the way, while we are studying the deeper parts of the body by an ingenious patent, consisting of a cord passing around a button. By this means they are held in position after use.

Remove the flap covering the lower limbs and one sees a fine view of the general circulation throughout the whole system. Again removing the flap on which the ribs are depicted, and we have the lungs and heart in view. The lungs receiving the impure blood drawn in "blue" from the heart and returning it to that organ, filled with life-giving oxygen, as indicated by the bright red, is fully illustrated. The bronchial tubes, which carry the air to the lungs together with their various branches, are finely shown. The heart when first seen, is covered with the pericardium, but the heart can be opened. Its secret can be learned. We open and see the various chambers and valves, and wonder how so small an organ can do its work.

But let us remove the lungs and heart by raising another flap, and lo! we have now gone to the diaphragm, below which are the stomach and other abdominal organs.

The stomach with its opening near the heart, for the flow of food to enter, and the great number of blood vessels surrounding it that carry so much blood to that organ while we are digesting our food are there. Then we can see the interior of the small intestines below the stomach, with the openings where the bile from the liver, and the fluid from the pancreas, are mixed with the partly digested food, thus completing the digestion. Another view of the stomach is given which shows the effect of alcohol upon the lining of this important organ.

The exact position the largest organ in the body, the liver, is seen. A flap turns back and the interior circulation

of this important organ is revealed; the gall, bladder, and the duct leading from it also.

Removing the stomach we find behind it the pancreas, and on the left side the spleen, that organ of which the workings are not entirely known. Now after all these flaps have been raised we get an interior view of the trunk, and we trace the course of the blood vessels, the place of the kidneys, one shown entire and the other cut through, so that we get a good interior view of it, and there are the ducts leading from the organs to the bladder.

The great thoracic duct carrying the nutrition, which has been gathered during digestion, into the great vein under the collar-bone, claims attention; but when we come to the head it seems impossible to describe all that can be seen. There are the cerebrum, the cerebellum, the nerves leading to the eyes, nose, teeth, and body, the circulation, the mouth, the palate, the epiglottis, and in fact everything necessary for a full understanding of this part of our body.

But all is not seen yet; remove the coverings and lo! behold a full and complete skeleton, that can be studied as well as if it were an actual one. In fact better, because here is shown how the great nerves are situated and the manner of joining the bones together at their joints. The bones are shown bare and also with the periosteum about them. The eye and ear can be examined too, having four views of each given.

If the reader is a teacher or a physician this is just what he needs for consultation during private study, and for illustrating the truths of physiology when instructing others—especially young folks. One who has seen the device says that "every teacher or school should be sure to have the class in physiology provided with a 'Man Wonderful Manikin.'"

PROGRESS.

THE DREAD OF DEATH.

SIR LYON PLAYFAIR, in a letter to the author in a paper published in the New York *Forum* says :

Having represented a large medical constituency (the University of Edinburgh) for seventeen years as a member of Parliament, I naturally came in contact with the most eminent medical men of England. I have put these questions to most of them, "Did you, in your extensive practice ever know a patient who was afraid to die?" With two exceptions they answered "No." One of these exceptions was Sir Benjamin Brodie, who said he had seen one case. The other was Sir Robert Christison who had seen one case, that of a girl of bad character who had a sudden accident. I have known three friends who were partially devoured by wild beasts under apparently hopeless circumstances of escape. The first was Livingstone, the great African explorer, who was knocked on his back by a lion, which began to munch his arm. He assured me that

he had no fear or pain, and that his only feeling was one of intense curiosity as to which part of his body the lion would take next. The next was Rustem Pasha, now Turkish ambassador in London. A bear attacked him, and tore off part of his hand and part of his arm and shoulder. He also assured me that he had neither pain nor fear, but he felt excessively angry because the bear grunted with so much satisfaction in munching him. The third case is that of Sir Edward Bradford, an Indian officer now occupying a high position in the India office. He was seized in a solitary place by a tiger, which held him firmly behind the shoulder with one paw and deliberately devoured the whole of his arm, beginning at the end, and ending at the shoulder. He was positive that he had no sensation of fear, and thinks that he had a little pain when the fangs went through his hand, but is certain that he felt none during the munching on his arm.

COMPARATIVE WEIGHT OF THE BRAIN.

ARISTOTLE taught that of all animals the human being had the largest brain. But it is well known that the brains of the elephant and whale exceed that of man. The following are the weights of the larger animals:

Horse.....	1-400
Elephant.....	1-500
Tiger and Lion.....	1-500-600
Ox.....	1-500-800
Ostrich.....	1-1200
Turtle.....	1-2240
Fishes.....	1-2496-3744

Elephant.....	OUNCES.	159
Whale.....		90
Man.....		47
Woman.....		42
Horse.....		20
Steer.....		15
Gorilla.....		15
Orang-Outang.....		15
Tiger.....		12
Lion.....		8

COMPARATIVE SIZE OF BRAIN AND BODY.

Small Birds.....	1-12
Rat.....	1-28
Woman.....	1-35
Man.....	1-36
Orang-Outang.....	1-51
Whale.....	1-60
Cat.....	1-82
Gorilla.....	1-100
Pigeon.....	1-104
Eagle.....	1-160
Frog.....	1-172
Dog.....	1-214
Hen.....	1-347
Sheep.....	3-351
Goose.....	1-390

TEMPUS EDAX RERUM.—The proverbial belief that time cures all things, with the Cincinnati suffix, "Time will cure a ham," has received a curious substantiation in England. A London doctor, who had treated a lady patient for a long time without giving her any relief, finally wrote her that he could do no more, and that *tempus edax rerum* was the only remedy. The lady at once started for a drug store and applied for the remedy. She was given a bottle containing a mixture for which she paid \$1.85. She continued using this, and at the end of a year and a half, accidentally meeting her physician, thanked him for his wonderful prescription, which had cured her. The druggist's trick was discovered, and she sued him for money spent on the bogus medicine.

NOTES IN SCIENCE AND INDUSTRY.

The Snake Dance of the Moquis.—In the villages of the Moquis Indians in Arizona there is celebrated each year the snake dance, a ceremony of a secret Indian society, which has not its equal in cruel terror. The preparation for the affair takes sixteen days. During the first eight days the medicine men and chiefs put the dancing place in order, and brew a secret drink which secures them against the effects of poisonous bites. During the last eight days the snakes are hunted for which are to be the involuntary participators in the "dance." This year there were gathered about 150 snakes of fair size. The Moquis first subjected them to a sudden, cold bath, rolled them in the sand until they were dry, and then laid them in large stone jars, which were then sealed air-tight with tanned skins. Nobody thought of extracting the poisonous fangs of the serpents. Through that the effects of the "charm" would have been destroyed.

On the eve of the feast a "general rehearsal" was held, which, however, proved harmless, for in that the snakes were not brought into requisition. After the "active members" had sung and danced enough, they went to rest to prepare themselves for the work of the next day. Close to the village there had been erected a large wooden structure where the snakes, carefully tied in bags, were brought. Before this shanty extended a big, clear space, in the middle of which there lay a heavy stone. Before the door of the shanty there lay a long board, which was scrubbed clean and sprinkled with Indian meal to keep all evil spirits away from the dancers. Then came the dancers. The first group of *tehm*, consisting of thirty-six men, were fantastically decorated. Each Moqui held in one hand a rattler and in the other a stick, on the end of which were fastened turkey feathers. The warriors marched around the place several times in a ceremonious manner, and then settled at one end of it. These were the singers, whose duty it was to enhance the feast by their song. Then came the real warriors, also consisting of thirty-six men. They were greeted with a howl, and

the singers then sent forth their "songs," and thus the real feast commenced. The dancers marched in order into the shanty, untied the bags and took as many snakes as each could carry, and returned to the dancing place. Once there, the dancers put the heads of the snakes into their mouths. It was a terrible sight to see the disgusting animals make vain attempts to free themselves from their uncomfortable position. Other warriors considered it an honor to hold the snakes by the tails and keep them so straight that they could not wind themselves around the breast and neck of the dancers. As soon as they completed one circle around the place, the snakes were spit out and caught by others, who carried them around in a circle until the whole dance was over. New snakes were constantly being supplied from the shanty and put in the mouth until the whole stock was exhausted.

During all this the singers were heard to make a diabolical noise, the dancers jumped and wriggled like crazy devils, and the scared snakes in many cases liberated themselves from the hands of the attendants, who held them by the tail ends and then squirmed and struck around them. Sometimes a snake got out of the mouth of one of the dancers, and as quick as an arrow disappeared in the crowd that surrounded the place. The women and girls screamed and cried, and tried to save themselves by flight, while the "warriors" sought to retake the fugitives.

At last the dance was over. The snakes were carefully replaced in their cases and taken away, and next day set at liberty again. The tired dancers refreshed themselves with a "well deserved" meal, and went to rest, and soon the scene of the strange occurrence was deserted and empty. The Moquis keep the composition of their charm-drink, which makes the bite of the snakes harmless, as a great secret.

Pumice Stone.—This is a volcanic product, and is obtained principally from Campo Bianco, one of the Lipan islands, which is entirely composed of this sub-

stance. It is extensively employed in various branches of the arts, and particularly in the state of powder, for polishing the various articles of cut glass; it is extensively used in dressing leather, in grinding and polishing the surface of metallic plates, etc. Pumice stone is ground or crushed under a runner and sifted, and in this state is used for brass and other metal works, and also for japanned, varnished, and painted goods, for which latter purpose it is generally applied on woolen cloths with water. Putty powder is the pulverized oxide of tin, or generally of tin and lead mixed in various proportions. The process of manufacture is alike in all cases—the metal is oxidized in an iron muffle, or a rectangular box closed on all sides, except a square hole in the front side. The retort is surrounded by fire, and kept at a red heat, so that its contents are partially ignited, and they are continually stirred to expose fresh portions to the heated air; the process is complete when the fluid metal entirely disappears, and the upper part of the oxide then produced sparkles somewhat like particles of incandescent charcoal. The oxide is then removed with ladles, and spread over the bottom of large iron cooling pans, and allowed to cool. The lumps of oxide, which are as hard as marble, are then selected from the mass and ground dry under the runner; the putty powder is afterward carefully sifted through lawn.

A Fine Pendulum.—What appears to be an almost perfect pendulum in respect to simplicity is in operation at the University of Glasgow. According to this plan a small shot of about 1.16 of an inch in diameter is suspended by a single silk fibre (half a cocoon fibre), two feet long, in a glass tube of three-fourths inch internal diameter, exhausting the latter to about one-tenth of a millionth of an atmosphere. Starting with a vibrational range of one-fourth inch on each side of its middle portion, the vibrations can be easily counted after a lapse of as many as fourteen hours, a fact not known to be realized elsewhere.

The Midnight Sun in Norway.—The midnight sun is thus described in "A Jubilee Jaunt to Norway": Imagine yourself on a ship at anchor, looking west or

straight in front of you. There is a broad expanse of sea a little to your right hand, behind you will be the rugged coast, and to your left the long, narrow fiord between the islands and the mainland that the steamer had just traversed. You watch the sun as it slowly, slowly sets; the island and coasts look like a rich, dark purple, and the shadows cast by the ship's mast, etc., grow longer and longer. After a bit, when the sun has apparently sunk twelve feet from the horizon, it stops and seems to remain stationary for about twenty minutes; then the very sea-gulls hide away, while the air all of a sudden strikes chilly. Each one has an awed, expectant feeling, and surrounding even the tourist steamer broods a silence that may be felt. Soon the sun rises very slowly again, and the yellow clouds change with his uprising to even greater beauty, first to the palest primrose and then to a bluish pink. The sky, which was just now rose color, becomes gray, then pale emerald green, and lastly blue. Rock after rock stands out, caught by the sun's bright rays, and the reign of day has begun once more.

Potato Ivory.—Much of the so-called ivory now in use is simply potato. A good, sound potato washed in diluted sulphuric acid, then boiled in the same dilution, and then slowly dried, is all ready to be turned into buttons, poker chips, and innumerable other things that ivory was used for once upon a time. Science is a big thing. It made whisky from potato long ago; now it comes up with billiard balls and poker chips from the same old potato.

Woodite.—The material known as "woodite," devised by Mrs. Wood, a clever Englishwoman, promises to become a very useful substance. Its chief ingredient is caoutchouc. During the past few months it has given good results for a variety of purposes, and is now declared to be especially adapted for many other uses. According to Sir Edward Reed, M. P., it has been produced in divers forms, such as fine sheets and ribbons for water-proof articles, dense blocks for resisting the blows of shot and shell, and particularly satisfactory rings for engine packing. One process converts it into an elastic, sponge-like substance; and another, in which it is mixed with whalebone cuttings, gives it a rough or frictional

quality, suitable for mats. Some curious naval applications have been worked out: It is made into armor plates, which, on being penetrated by a shot, close so tightly

that no water is admitted; and it is formed also into light and convenient cylinders for carrying compressed air to drive life-boats, torpedo boats, and scout boats.



NEW YORK

July, 1889.

A PARENT'S DUTY.

THE writer in the *Sunday School Times* from whose article we have taken an extract that appears in "Child Culture," views the character of a child from the same point of view as the phrenological writers. It is rare indeed for the examiner to find a parent who will admit that he does not understand his little boy or girl, and yet when asked to analyze the child's nature, and to explain the source of its conduct, especially those faults that are prominently exhibited every day, he is found usually at a loss. As the *S. S. Times* writer intimates with regard to the frank declaration of a friend, if asked "what is the chief fault of my son—or daughter?" the answer of the experienced examiner of character to the question is often a surprise. For the fault described by him differs from that discerned or supposed to be discerned by the parent.

"Don't I know my own child!" insists the father or mother. Not so well as you might with the help of a disinterested observer, who can without

the bias of parental affection consider the boy's or girl's organization and conduct. Taking society through we think that we are safe in saying that people mistake their own children more than they do others with whom they have to do. The advice therefore is excellent that parents should seek aid and counsel from those in whose judgment they can trust with respect to the training and development of their children. It is an error to appeal to persons who have not given attention to the study of mind and character. The yellow Chinaman is sanguine in this respect and goes for advice to men who are professionally students of temperament and teachers.

MAKING CHARACTER.—"I can't help it" is too often heard in excuse for language or conduct that is improper. This, from a child, would be consistent and tolerable, but from a grown-up person who claims our respect on the score of intelligence and "education" is reprehensible. We all inherit certain traits of disposition, certain powers of intellect, but these must be developed, trained, educated, disciplined, brought into harmonious relation through years of effort and study ere the character becomes refined, noble, and admirable. How crude and uneven would be the expression of any man were his faculties permitted to remain in their natural, untutored state! Character in the matured, disciplined individual is so different a thing from what was shown in his untrained youth that we may well say that it is *something acquired*.

But we see the expression of the man in his language and action, the spirit, energy, ambition, intellectual power that were born with him lie behind the expression imparting the special peculiarities to it, by which he is known apart from others. Yet the influence of training, association, specialized teaching and motive, so modify the action of the strongest feelings and interest that there may be no intensity of coloring impressed by any of them in the recognized character.

What suggestions of achievement are here in self culture! No parent viewing the matter of education aright, may despair of improvement in any of his children. Genius may be something beyond our control, but the evolution of character is a practical affair, to be worked out patiently, earnestly, and with a clear view of the object.

RELIGIOUS UNREST.

WE hear so much about the necessity of progress in religion, and of revised statements of doctrine, new creeds, etc., in this day of theological differences, that it is pleasant to learn how a distinguished scientist, Professor Max Muller, looks at the situation. He is reported as having said at a meeting of the University Club of Glasgow, that instead of propounding a *new* religion the best plan would be to expound the *old*, and not for the purpose of promulgating novel ideas, but to renew the essential truths of religion and apply them practically in life. He referred to the necessity of this to bring about some change in the spirit that now dominates Europe and made it scarcely anything besides a military camp, while the best talent of

the period seemed to be occupied in devising ways for the improvement of military measures, and inventing machines for killing human beings.

Certainly the principles in the old formula of faith, as we have it in the sermon on the Mount, have not been sufficiently applied by state and people to warrant the belief that there is need for something better, and until the trial has been fairly made and their virtue tested, we can not say that they are too advanced for them.

So long as great organizations exist by social tolerance or state establishment for the very purpose of inflicting misery and death upon people at home or abroad, so long a spirit dominates the public mind that is incompatible with that of true religion, whose purpose is not to destroy or kill, to cause sorrow and calamity by wholesale, but to promote the interests of peace through measures of kindness and justice.

The craze for novelty that characterizes secular thought has its unhealthful effect upon religious thought and hence the cry for restatements of belief, revision of form and greater liberty of action. We opine that a fair, earnest trial of the old ordinances would be attended with a mental growth of high significance to individuals and society, and the broader view of intellectual and moral life that would result, would open the way naturally to such a necessary advancement in religious doctrine as would be consistent with general enlightenment. The thought of Burke must command assent that "religion is the basis of civil society and the source of all good and of all comfort;" this being true, how inopportune, irrelevant,

and injurious is most of the agitation formed by restless minds in religious circles and elsewhere !

THE JOHNSTOWN CALAMITY.

OUR magazine for June had been taken from the press when the news of the great calamity at Johnstown reached New York. Otherwise some mention of it would certainly have been made as becoming our claim of a common humanity with the thousands of sufferers from the destroying waters, and with the millions of our countrymen whose sympathy has flown out like a broad ocean swell toward the scene of horror and destruction.

The beautiful valley of the Conemaugh became in a few hours a place of the wildest havoc—chaos, death, grief, destitution, madness, ruling where just before were peace, hope, and the sense of security. Never before in the history of the United States had any such disaster occurred. No similar event is recorded in the late history of any civilized people. That such complete and sweeping destruction involving so great loss of life could have occurred in so short a time by such means would have been regarded almost impos-

sible had the thought of it been suggested before the South Fork dam gave way.

At this distance of a month from the date of the disaster we may consider it with calmness and read the lesson that has cost so many precious lives. One important element of this lesson is the fact that security of persons and property from injury is obtained only through constant vigilance. Wherever one may be care must be exercised with regard to surroundings, and intimations of danger, however slight, should receive thoughtful attention.

Who can but feel a thrill of enthusiasm as he views the spirit with which the survivors of the disaster have set about rebuilding their city and recreating their homes. A new Johnstown will soon occupy the place of the ruinous heaps that border the river.

And so in those districts on the upper waters of the Susquehanna and Potomac where inundations have caused widespread damage and loss. And so too at that young city of the Pacific Northwest, Seattle, where the besom of fire has wrought havoc most appalling, the irrepressible energy of the people will restore and recreate what water and fire has destroyed.



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 pro-

pounded, if a correspondent shall expect us to give him the benefit of an early consideration.

ALWAYS write your full name and address plainly. If you use a pseudonym or initials, write your full name and address also.

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. Personal and private matters addressed to the Editor in the professional capacity of a physician will also receive his early attention.

DANIEL WEBSTER'S BRAIN.—J. C. S.—The brain of Daniel Webster, it is generally stated, weighed 53½ ounces. But it must be recognized that Webster was an old man, and the manner of his living for several years preceding death probably caused some degeneracy. It is not at all unlikely that at his prime, say when fifty to fifty-five years, that his brain would have turned the scale at five or more ounces in excess of 53½.

SPECIAL.—A large number of manuscripts of which for one reason or another we can not make use, have accumulated on our hands because the senders did not see or did not care to follow the suggestion at the head of this department with regard to inclosing the necessary postage for their return. Some of these unavailable manuscripts are of value and well suited to publications of a different class from that of the PHRENOLOGICAL, and we retain them in spite of the inconvenience of having our shelves occupied with matter that we do not want, because we thought that their authors would ere long ask about them. Our old and experienced contributors, as a rule, send the return postage. It is hoped that those who have not heard from the editor with regard to prized contributions sent months ago will note the reason just stated and communicate soon their wishes relative to their disposal.

CRAMPS.—OLD SUB.—These often very painful muscular contractions are usually of reflex origin, and due to various causes such as over exercise, a sudden strain, indigestion, or central disorder involving the origin of the nerves supplying the affected muscles. Your case may be due to indigestion. If the trouble is of long standing it should be looked into carefully by a physician having a knowledge of nervous diseases. Rubbing and massage usually relieve an ordinary attack, and where the pain is severe and lasting hot fomentations with or without an anodyne may be applied. If

you are a good deal on your feet avoid unnecessary exercise and see that your dressing is loose and comfortable.

CRANIAL MARKINGS.—E. D.—The head of which you speak is certainly well marked in surface irregularity, if the half dozen points you mentioned are three fourths of an inch higher than the contiguous territory. This condition is due we think, largely to temperament, and shows considerable osseous growth. At the same time the faculties that relate to the regions of special enlargement are doubtless active and exert their special influences upon the character of this person. You have but to analyze the disposition and conduct with such aids as the text books on character furnish to ascertain how far these active faculties go toward giving him his peculiar bias or traits by which he is commonly known in the community. The book you have, "Heads and Faces," will assist in the analysis.

SIMPLE GYMNASTICS.—ROUND SHOULDERS.—There are several books published that will give you directions for simple home exercise. See the catalogue published by this house. We advise no severe, rough, unnatural movements—nothing that is likely to produce a shock or a strain. The exercises peculiar to the Delsarte system of vocal culture are of the natural class, and require no apparatus. An exercise like the following would be beneficial to you as your chest is rather narrow: Take a position as near that of a soldier as you can, with the hands and arms straight down by the sides. Now slowly raise yourself upon the toes as high as you can and then return as slowly to first position, keeping the body meanwhile perfectly erect. Repeat this exercise a few times, then try it on the feet separately, first on one and then on the other foot, meanwhile breathing in and out deeply and slowly. Go through these movements several times a day, and it may be a surprise to you to find how much it will improve your figure and chest capacity.

Progressive Phrenology.—Notwithstanding the many drawbacks to which the science of Phrenology has been subject, there never was a time in its history when it was more prosperous or more universally

accepted as an important professional study than at the present. The passing glances given its elements even as lately as Mr. Combe's time, have given place to almost constant study and research on the part of many, nowadays, so that I believe the time is not far distant when a course of phrenological study will be a part of the curriculum of a thoroughly organized college or university. This assertion may appear to some rather far-fetched, but when we consider the advancements made in the public dissemination of the phrenological doctrines since Gall and Spurzheim introduced the subject, and compare them with the interest shown other sciences, it must be admitted that such an outlook is not altogether imaginary.

The progress of any industry or profession is governed by the number and variety of demands made upon it, and these, again, are in accordance with the effort put forth to induce patronage. Now, what effort is being made toward furthering the interest in Phrenology? A glance over the list of graduates of the American Institute of Phrenology, at the close of each session, shows that the number of its supporters and promulgators is rapidly increasing, and an influence, such as was never known before, is at work. The question is being discussed in some quarters as to the advisability of introducing phrenological study into public schools—a measure which, if adopted and properly executed, can not fail to be a success. Pupils would be taught that they have a brain to cultivate; that material organs must undergo training before immaterial intelligence manifests itself harmoniously. Fit the brain according to its developments, with a view to quality, size, activity, etc., restraining where needed and cultivating where necessary, and the mind will not be slow in applying its powers to the proper sphere of action. The child whom nature intended for the work-shop or engine-room, should not be pushed into a college to be fitted for the medical profession or to figure in our law courts. Parents should fling away the conventional idea that the professional step ladder is the one upon which all their boys must climb to fame; Charles and William, with their adapted constitutional features, may reach the top, while

John and Harry, who were “allers tinkerin’ round steam-engines and things,” would topple into their graves before they reached the third rung. One of the greatest obstacles to the progress of this science is the extreme inability of some of its advocates to define correctly the principles upon which it is based. They seem to throw a shroud of mystery over it, making it so enigmatical that people are dubious about accepting it.

Let the adventurers in the field who are given to clap-trap get their hair cut, stop curing every disease incidental to humanity *by faith*, sell their Oscar Wilde clothing, and buy a book on the first principles of Phrenology, and by close application and observation let them step out and honestly tell their hearers what little, instead of how much, is known about the mysteries of the mind; wipe out the old and hollow bumpology theory; make known the reliable basis upon which the science is established, and what of the old feeling against Phrenology that remains will soon be a thing of the past.

v.

PERSONAL.

MRS. FLORA F. HAINES was employed by the Maine Labor Commission to gather statistics concerning woman wage-earners. She reported over fifty different occupations in that State in which women are engaged, ranging from cotton and other manufactures to the professions. The greatest number are employed in manufacturing, there being about 7,000. The average weekly salary is \$8, and one maker of portraits in crayon gets \$1,600. One woman is the proprietor of a prosperous newspaper; another owns an extensive orchard; there are a dozen regularly indorsed physicians in practice, and three ordained ministers, all Universalists.

WORTH, the famous Parisian dress-maker, is a native born Englishman. He is a man of striking appearance, with rather a Scotch type of face, made more noticeable by the Scotch cap he usually wears. His parents intended him for a printer, but he disliked to soil his hands with printers' ink, and decided for the dry goods trade, beginning in London, and finally going to Paris, where he found favor with the Empress Eugenie.

and consequently with the fashionable world. M. Worth has a fine chateau near Paris, where he is very fond of entertaining his friends and customers, among whom a large percentage are Americans. Vambéry, the celebrated orientalist, was apprenticed to a milliner but "kicked" at the occupation.

WISDOM.

"Thou must be true thyself,
If thou the truth would teach."

"ENDEAVOR so to live that when you are yourself you will not be ashamed of yourself."

"THE man who deserves a monument never needs one, while the man who needs one never deserves it."

FATE's not unkind, whatever men may say,
If goodness walks companion of their way.

THE captious temperament that resents every trifle, insists upon every right, finds fault often without regard to time or reason, is the worm at the root of social welfare and domestic peace.

A GOOD-NATURED man is the most troublesome morsel that ever malign passion attempted to feed upon.

OF all the bores one meets with in society, the man who demurs to everything, the mere phrase-catcher who is always on the watch to trip you up on a technicality or correct you with a quibble, is the most detestable.

MIRTH.

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

"Wor school ob medicine yo' b'long to, Doctah?" "I don' b'long to no school, sah, I's graduated."

WE are asked whether a phrenologist can tell what a barrel contains by examining its head. Some people think that he can.

TEACHER (severely)—John, why is it that boys' hands are always dirtier than girls'?

JOHN (hesitatingly)—Please, sir, the girls wash the dishes.

A TEACHER asked a class to write an essay on "The Results of Laziness," and one of the bright but lazy boys in the class handed in as a composition a blank sheet of paper.

"Did you think I was lost, ma?" said Jennie who had gone for a walk around the block and returned five hours afterward. "No," replied her mother; "I thought that a young man had found you."

A COUPLE of burglars were trying to effect their entrance into a house. The master of the establishment heard them, and opening the window, he courteously observed, "You had better come again after a while, gentlemen, as we haven't all gone to bed yet."

COUNTRYMAN to dentist: "I wouldn't pay nothin' extra fer gas. Jest yank her out, if it does hurt." Dentist: "You are plucky, sir. Let me see the tooth." Countryman: "Oh, tain't me that's got the toothache; it's my wife. She'll be here in a minute."—*Troy Telegram*.



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 the Editor with recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

SELECT SERMONS, by the Rev. Charles B. W. Gordon, with an introductory sketch by Mrs. Charles B. W. Gordon. 12mo, pp. 420. Petersburg, Va.

The Reverend Charles B. W. Gordon is pastor of the First Baptist Church at Petersburg, Va, and is also editor of the *National Pilot*, President of the Petersburg Temperance Union, and holds other official relations to religious work and reform. It may be inferred, therefore, that he is a gentleman of considerable mental activity. His portrait forms the frontispiece of the book, and it indicates an active temperament, a man wide-awake, zealous and ardent. He is yet a young man. A cursory examination of the sermons discloses the fact of their being elevated in thought, spirited, and earnest; it is altogether an exceptional work of pulpit oratory. Few colored men have chosen to place their utterances in this permanent form, and Mr. Gordon

as a pioneer among his brethren, certainly compares well with the published sermons of our white preachers.

LIVING QUESTIONS; STUDIES IN NATURE AND GRACE, by Warren Hathaway, pastor at Blooming Grove, N. Y. 12mo, pp. 365, \$1.25. New York: Fords, Howard & Hurlburt.

The tone of these sermons, generally, is that of a man of advanced thought, and therefore a spirit of broad liberality is indicated. His breadth of thought, however, does not go beyond the bounds of loyalty to church, or rather belief in the grand truths of Christianity. In the preface he says: "In doctrine reproof and instruction, the word of God is authority; while pulpit and pew bow to our Lord Jesus Christ, as the only living, glorious head of the church. And I have entirely missed my aim if He is not set forth as now and for ever the only name and power of human redemption." Appreciating the thought that the effect of modern science upon all modes of thinking has insensibly brought about the application of rational discussion to religious themes as well as all else. Mr. Hathaway seeks to adapt what is true to his teachings. He is a conservative man in many respects, not accepting evolution as a theory yet demonstrated, but there is, he believes, a necessity for modifying our relation to the old orders, and for a re-invigoration of faith through modern scientific disclosures. It is interesting, indeed, to know how a man who is earnest in his loyalty for old truth, can be hospitable to what modern thought puts forward. This author believes in the divine spirit and in human reason, and he discusses living questions in these sermons, as is indicated by some of the titles:— *The Effects of Conscience, The Resurrection, A Divine Vocation for Every Man, Personal Liberty, The Mission of Affliction, The Battle of Life, The Real Issue or A Discourse on Evolution.*

THE REPORTING STYLE OF SHORTHAND, for Class, Correspondence, and Self-Instruction, by Eldon Moran. Christian Publishing Co., St. Louis, Mo.

This purports to be the Tenth Edition of the book, which has received much support. It is better known, we think, in the West than in the East, and being based upon the Pittman System, American style, it certainly has a field of use among reporters. The range of reporting shorthand is well covered in the lessons and exercises. As a rule the engravings are clear, so that the student will have no difficulty in distinguishing between heavy and light outlines, curves, etc.

REPORT OF THE JACKSONVILLE AUXILIARY SANITARY ASSOCIATION OF JACKSONVILLE, FLORIDA.

This book, just issued by the Executive Committee of the Association, gives a detailed account of the work done during the prevalence of the fever epidemic in Jacksonville, last year. It details what those who have inquired into the subject know to be true, the unhealthful condition of certain parts of that favorite winter resort, previously to the outbreak of the fever; and it is a further demonstration of the importance of cleanness to the permanent health of any well settled community. Jacksonville has been thoroughly cleaned and fumigated since, and other Florida cities and towns have thought it expedient to take vigorous sanitary measures for safe protection; so that it may be said that Florida is now a more desirable place for temporary and permanent residence than before.

THE BIBLE OF NATURE OR THE PRINCIPLES OF SECULARISM, a Contribution to the Religion of the Future, by Felix L. Oswald. 16mo, pp. 240. Truth Seeker Co., New York

Dr. Oswald is one of our prophets in the sphere of hygienic reform, and he is inclined in discussing a topic, whatever it may be, to point to those principles of hygiene and physiology that are fundamental to true development in human affairs. So in the discussion of the subject included in this title we find him dwelling upon Health, Strength, Chastity, Temperance, and proceeding further, he discusses Knowledge, Independence, Free Thought, Justice, Humanity, and so on. He believes that there can be no true progress in mental or moral excellence without due regard to those principles that relate to the physical nature in the origin and growth of human beings.

Society and individuals are not to be converted by mere pulpit or platform exhortation, but by obedience to the laws of nature and conformity to the canons of truth and duty. Important questions now agitate the thinking world. Labor, Society, Prohibition come in for their share in this agitation. Dr. Oswald wields a trenchant pen. With a sharp criticism founded on deep conviction, he strikes at the very core of the social outrages and abuses that prevail in American life—the abuses that are tolerated by church and State receive no quarter, and their promoters and abettors are dissected without little allowance.

PUBLICATIONS RECEIVED.

THE JUVENILE TEMPERANCE RECITER, No. 3, prepared by Mrs. L. Penny, has a collection

of Prose and Verse suitable for different occasions in the parlor and in public. Published by the National Temperance Society, at ten cents. G. N. Stearns, Agent, New York.

ELECTRIC RULES, TABLES, TESTS AND FORMULÆ, by Andrew Jamieson, C. E.

This little hand-book is published by the industrial Publication Co., of N. Y. It is a compact and quite thorough work for the use of the practical electrician; has minute directions for calculations and tests, and numerous engravings that exhibit the instruments and apparatus employed. The contents include formulæ of the absolute units, practical, electrical, mechanical, heat and light units, electro-chemical equivalents, electrolysis, heat and energy of combustion, electrical conductors, copper, etc.; insulators, batteries, etc., submarine cables, land lines, electric lighting, etc., etc., etc. Price in Cloth, 75 Cents.

A PRACTICAL GUIDE TO SUCCESS IN THE USE OF RECIPES, FORMULÆ, ETC., by John Phin, author of "How to Use the Microscope."

Mr. Phin gives us another practical little book. This time it is one that has a place in the household. There are recipes, and recipes, thousands, yea, millions of them afloat in the world, but the number of them that can be said to be perfectly intelligible to the average mind, is exceedingly few. What housekeeper is there who has not often been at her wit's end in the attempt to use a recipe gleaned from her cook-book for making some novelty, from a lack of clearness in the description. Mr. Phin's suggestions are to the point, and both makers of recipes and formulæ, and the users of such conveniences, will have occasion to thank him should they read the little book he has given them.

SIXTY-FIFTH ANNUAL REPORT OF THE OFFICERS OF THE RETREAT FOR THE INSANE, AT HARTFORD, CONN.

One feature of this report is the declaration that the writer has not yet discovered any remedy which will restore to its normal activity a disordered mind, and that he, in common with other physicians who consider mental diseases, has not yet "been able to surmount the difficulties found in his pathway, and connect any special mental symptom which was observed during life, with any corresponding morbid state, found after death, and the exact relation of cause and effect, and for the reason that the processes of mentalization are unattended by any external manifestations, or any internal ones, in the way of brain changes, which can be subject to investigation." We think that some of our experienced alienists who read the report will be somewhat surprised by this candid acknowledgment. It seems to us that this gentleman has not studied mind rightly. He has been looking altogether at external indications, and paid but little attention to fundamentals. We could point him to so old a work as Spurzheim, on insanity, for principles and demonstration which he would find most edifying in his work. We would ask him only to make proof of the suggestions of the great Prussian physiologist, and we are sure that should he do so, his next "annual report" will have a better ring, on the relation of the processes of mentalization

to external manifestations. As for the discovery of any one remedy, or any specific remedy, we scarcely expect that, so far as such a thing can be furnished by drug or chemical, but we feel warranted in assuring our numerous friends, who have the care of the insane at heart, that obedience to the laws of physiology and hygiene will prove prophylactical and remedial, as much regarding insanity, as they are in ordinary physical disorders.

BULLETIN OF THE ANTHROPOLOGICAL SOCIETY OF LYONS, NUMBER SEVEN, FOR 1888.

This interesting resume of the proceedings of the society named, we have received from the Secretary.

THE ILLUSTRATED PRACTICAL MESMERIST. By William Davey. Sixth Edition. Published by James Burns, London.

This writer takes a view of mesmerism that is advocated by many physiologists, viz., that the agent or operator exercises a special force, power, or impression upon the subject or patient. The object of the book is to direct those who use mesmerism as a medical adjunct.

ISZMA, OR SUNSHINE AND SHADOW. By M. Ozella Shields. Recent number of the "Fireside Stories." Published by J. C. Ogilvie, New York.

TEMPERANCE HAND-BOOK FOR SPEAKERS AND WORKERS. By Julia Colman, author of "Alcohol and Hygiene," "Primary Temperance Catechism," etc. Price, paper, 50 cents; cloth, \$1.00.

This new book from the pen of that experienced and skillful writer on Temperance and Hygiene, Miss Colman, is an addition of practical value to the literature of reform. Miss Colman always writes for a purpose and writes to the point. She is not given to excesses of language. Knowing what she writes about and having abundance of material immediately related to her subject, she has no need to spin indefinitely and unnecessarily.

A book of 178 pages, it contains ten scriptural lectures, ten temperance discourses, ten scientific lessons, and these are packed with suggestions of use to all who are engaged in the field of temperance work. J. N. Stearns, Publishing Agent, New York.

THE EGYPTIAN NILE AS A CIVILIZER. By J. G. Lansing. New Brunswick, N. J.

This is the title of a very interesting paper, read by Professor Lansing, at a meeting of the congress of anthropologists in New York, last year. It was published in the *Presbyterian Review*, and many who heard it read will be pleased to know that it can be obtained in pamphlet form from Prof. Lansing. His address is Rutgers College, New Brunswick, New Jersey.

THE THIRTY-FIRST ANNUAL REPORT of the Board of Directors of the Brooklyn Library, shows a creditable growth of that beneficial institution. The addition of books of a substantial nature has been large, and there is much indicative of the growth of a healthy literary taste among those Brooklynites who take books from that collection.

Pears' Soap

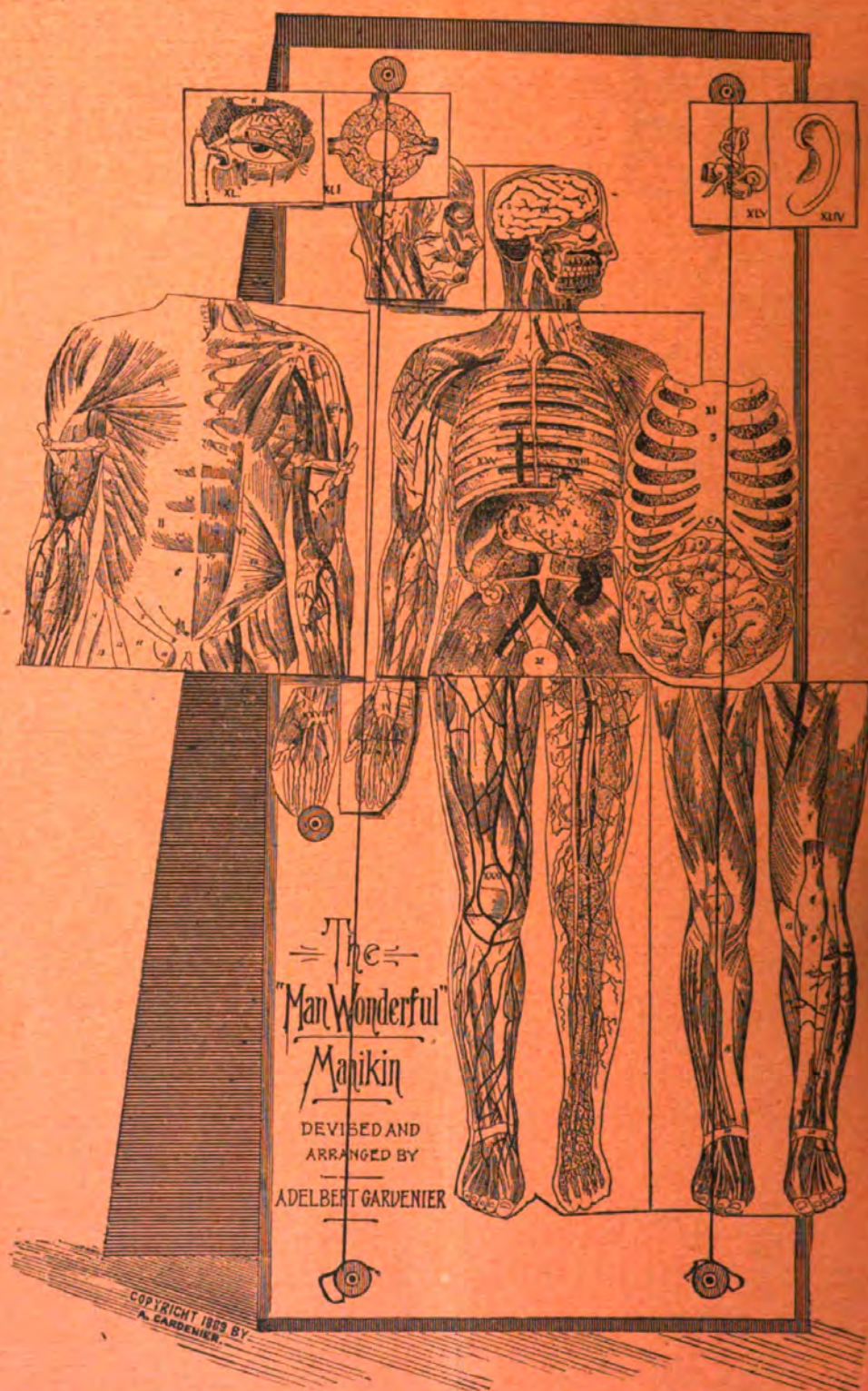
The late HENRY WARD BEECHER wrote:



Henry Ward Beecher

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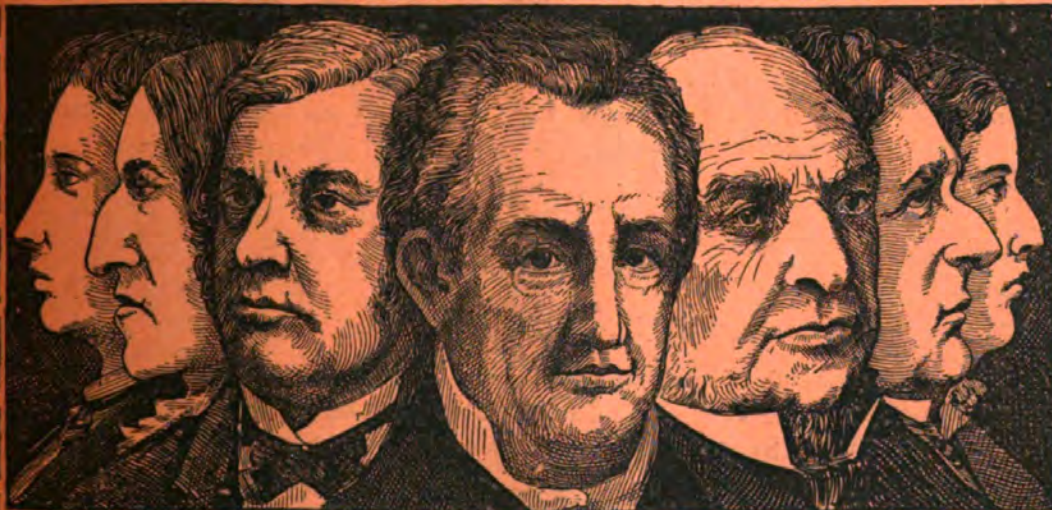
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Number 2.

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THE

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ANNOUNCEMENT.

We shall fulfil our obligation with regard to giving the reader a glimpse of the young Russo-French physician, Mlle. Caroline Schultze, in September; also, an appreciative sketch of the late Dr. Maria Mitchell will be given, and probably some account of Wilkie Collins, the novelist. Mrs. Oakes Smith contributes a personal sketch of Margaret Fuller. Marriage and other Contracts; Phrenology in Education; A New Center of Measurement, illustrated; and Dreams, will be notable parts of the contents.

The Phrenological Journal is published monthly at \$1.50 a year, or 15c. a number. To each new yearly subscriber is given either the Plaster Paris Phrenological Bust or New Lithography Phrenological CHART Premium, a new plate, 19 x 24 in., with ring for hanging. When the Premium is wanted, 15c. extra must be received with the subscription to pay postage on the JOURNAL and the expense of boxing and packing the Bust, which will be sent by express, at expense of the subscriber; or No. 2, a smaller size, or the Chart Premium, will be sent by mail, postpaid.

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ERRATUM.—In the last paragraph of the Editorial entitled "A Centennial Suggestion," the words printed "movement," "civilization," should be "moment," "reconciliation."

THE
PHRENOLOGICAL JOURNAL
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[WHOLE No. 608.]



MELVILLE W. FULLER.

Chief Justice of the United States Supreme Court.

MELVILLE W. FULLER.

CHIEF JUSTICE OF THE UNITED STATES SUPREME COURT.

THE appointment of Mr. Fuller to the first place on the bench at Washington, seemed to many a bold exercise of authority by Mr. Cleveland; but we have not heard that in the result it has been shown to have been unwise. Occupying a prominent position in Chicago, a lawyer with a large practice, and regarded as a discreet and sound adviser with respect to every day affairs, his reputation may have been chiefly local; yet the sound discretion that is displayed in the management of an important case before the court, and the common sense that is applied to the investment of unused capital, are elements of high value when clothed with the mantle of judicial character. We have seen heads that possessed more of the special cast of development that is regarded essential to great ability in reasoning, yet the portrait, if it fairly represents Justice Fuller, has characteristics that give it peculiar interest. It is out of the ordinary as regards the temperament and the markings of organic development. The physiology combines both strength and intensity, and excitability. He is, we should say, a restless man, alive all over, irresistibly on the move, yet rarely shows weariness. He can walk and talk constantly while his interest is alive on a certain subject. He has an unusual degree of sensitiveness, and at the same time great power of self-control; when highly excited he shows it in his manner, his attitude, while the voice may be calm and the language free from the phraseology of temper. His will is remarkably strong, and gives him the power of self-control, while at the same time it renders him tenacious and persevering. With so much firmness he has a broad head, and the spirit of the thorough-going executant. He is a very keen seer; his intellectual power lies in his ability to grasp facts; in a given

case he is not disturbed by the multitude of details, he can take them all in, and his method of analysis is that of the chemist or naturalist more than it is of the logician. His memory appears to be excellent, and with so much language he should exhibit ease and fluency as a speaker, and employ tact and taste in his modes of expression.

As we have said, he is sensitive, very appreciative of character and dignity, but has little respect for mere formality, conventional usage, and mannerisms. He is broad in his idea of religious principle, and not inclined to give his personal support to the declarations of mere dogma, the "question of fact" enters into his moral life as much as into his intellectual.

Justice Fuller was born in Maine, the capital of that State being the place, and the date, February 11, 1833. The old home of his father is still standing on Elm street. The family seems to have been strongly marked in a *legal* sense, as his father, Frederick A. Fuller, was a lawyer, and his mother was Catharine Weston, daughter of Judge Nathaniel Weston, for thirty years Chief-Justice of Maine.

Young Fuller gained his preliminary education in the common schools of Augusta, and was graduated at Bowdoin College in 1853, at the early age of twenty years, standing at the head of his class. Even in his boyhood he was noted for brilliancy of intellect. After leaving college he studied law with his uncle, B. A. G. Fuller, and in 1855 was graduated from the Harvard Law School. His next step was to enter the practice of law with his uncle. For about six months of that year he continued in this relation, and edited *The Age*, a Democratic paper published in Augusta. Moved by the golden inducements of the new West, Mr. Fuller bade good-by to his

native city in 1856, and departed for Chicago, where he at once took good rank in his profession.

He has exercised not a little prudence in the investment of his savings from what became in time a large income, and to-day he is said to be the possessor of a large and well paying estate in the heart of commercial traffic.

He is married, and has a large family, which having been accustomed to living in a style that had little regard to expense, it was mooted by some "know-

ing ones," when the offer of the Justiceship was made to him, that he would scarcely withdraw from professional work that yielded a large return to take a position at Washington with a salary that was very considerably less.

Mr. Fuller, however, disappointed these gossips and pleased his *confreres* of the Chicago bar by accepting the place, evidently preferring the dignity and importance of the judicial office to the routine of the practitioner of law.

OUR CAKES.

"WE can not eat our cake and have it." This is one of the earliest lessons taught by experience and learned through suffering; one of the first practical comments on the necessity of moderation and the value of making up our mind as to what we really wish, and the price which we are prepared to pay for the gratification of that wish. We can not eat and still have. The cruse of oil and barrel of wheat no longer exist; and no Fortunatus' purse is now tumbling about the world waiting for the lucky finder to put into his pocket and draw from to any extent he likes without diminution of its contents. The sole representative of that inexhaustible cruse, that self-replenishing purse, known to us in these latter days, is capitalized property, on the interest of which we live, with care not to go beyond our income. This is a cake at which we can eat for the natural term of our lives, and be satisfied with our meal. But if we devour it all at a sitting; if, instead of capitalizing we scatter, and live on our gross sum as if it were income—what then?

Is not this ruling the lines, whereon we shall have to write the text, We can not eat our cake and have it? When we have sold out hundred by hundred, and lived on the fat of the land when we ought only to have afforded ourselves the lean; when we have flour-

ished in the sun like butterflies, for whom life has no serious work, and honeymaking is a degrading occupation left only to those dull creatures, the bees; when we have furnished our house, and bought our pictures, set up our carriage, and splashed into the glittering sea of fashion and luxury, then we have to fall down from our pleasant place of pride when our cake is all gone, and confess sorrowfully, that we can not eat and still have.

We all know people of this kind, to whom their cakes are as if they were everlasting; as if the slice taken off to-day were able to renew itself by some mysterious manner for to-morrow, people who never give an outlook to the future, but go on from hour to hour and day to day, as if life were eternal and circumstance unchangeable, and there were no such things as consumption, destruction, and decay. But we see them fall to the ground. It has to come, and it is inevitable. After having squandered in a few years what should have lasted them for life, they have to cast about mournfully for bread, which they are glad to accept stale and insufficient, in place of the richer cake which they devoured with so much uncalculating greed. Then there are regrets, self-reproaches, despair, and "How could I have been such a fool!" is the burden of a

sad song of sorrow that has to be chanted forever after, in place of the mad chorus that once rang through the air. Sometimes, indeed, the burden of it is exchanged for another of futile reproaches against this and that, him or her, who helped to eat the cake that should have been preserved, and who thus comes in for a share of the blame that belongs only to the eater's own folly—or, it may be, worse than folly.

We eat our cakes too fast in other things beside money. We can not eat them and have them, say, when we spend our intellect on that terrible temptation, "good-paying work" for the immediate moment,—but though good and paying for the immediate moment, work that exhausts our wits and does not allow of renovation—work that degrades our better selves, that is which loses in the long run, however well it seems to pay in the short, because it destroys our reputation and staying power alike. But we can not eat our cake and have it any more in brains than in dollars. If we spend all and harvest nothing we shall come to the bare bones before long; and if we sacrifice the future for the present, and prefer the success of the moment to the stability of after time, we shall find that we have eaten to excess, and that our indigestion of to-day will end in vacuity to-morrow. We have to husband our working powers and the brain-power whence they spring, as we have to husband everything else that we possess, and to eat up in a short time what ought to last for all our life is bad management, and the end will prove its evil.

We may do the same thing with friendship. We can eat up a friendship, as we can eat up everything else, and leave ourselves no crumbs to go on with out of all that large cake that once was ours. If we throw too much on our friends—make too many demands on their sympathy, their patience, their good-nature, their allowance, their generosity,—we shall end by eating up in a

short time the cake of love that should have lasted to the end. Many a friendship has been squandered in this manner by excess of demands, and many a love has followed suit. By the folly of jealousy, which, once a stimulant becomes at last a poison; by the folly of display, which once a delicious kind of enchantment becomes at last an oppressive nightmare; by the folly of that uneasy need of perpetual assurance, which once gladly responded to as the sign of delightful vitality, becomes at last a tyranny, too onerous to be borne; by all these absurdities and extravagances is the food of love devoured and destroyed, and the cake which should have lasted for a life-time, eaten and done with before half the journey has been gone through. We eat our cake too greedily, too inconsiderately. When it is gone we sit down and cry, and wonder how it has come about that we have nothing left to go on with. If we had husbanded our resources, they would have lasted; it was our excess which left us poor so soon, as many broken-hearted people find out when too late.

So with our health, our strength. If we eat it all up in youth by imprudence, by vicious courses, by foolish ignorance of the best laws of life, we have none to last us through maturity and old age. We eat it up in a few years, and have to go short for a time hereafter. We over-tax ourselves by long walks, by heavy strains, by tremendous exertion of our powers somehow, and we are struck down by paralysis or some obscure form of spinal complaint. We live fast, and the grand vitality of youth which "pulled us through" at the time gives way before long, and we are wrecked forever on the shoals of dyspepsia or liver-disease. We have eaten our cake at a sitting, and we have none left for the future. We have spent all our health and strength in the morning, and the evening finds us weak and failing, crippled and laid aside. It is all a question of degree, of modera-

tion. We may use our youth and enjoy it to the utmost limit of good sense, without eating up our capital on insane pleasures, that carry poison with them and leave destruction behind them. We need not be cowards nor ascetics, yet we need not exceed ; and to devour all our cake of health and strength in the few years of early youth, leaving none for the future, is the act of a madman,

and brings its own punishment with it. We must, if we are wise, make some kind of calculation in our life, and say what we shall spend now, and what we shall keep for the future. The rash say so much, which is all, and leaves them nothing ; the cooler, and those able to forecast with judgment, say so much, which leaves them a sufficiency.

HENRY G. FOX.

NOTABLE PEOPLE OF THE DAY.—No. 22.

ROBERT B. ROOSEVELT.

ONE of the representative men of New York City—representative in the true sense by reason of birth, character, and the part he has performed for many years in the public affairs of his city and state is Mr. Roosevelt. He has not figured as a politician or as a leader of any special interest, but as an independent, earnest-minded citizen who has the solid welfare of the community at heart. The portrait presents to us a face and head strongly marked with Dutch characteristics, and the gentleman will not deny his Knickerbocker extraction. That large base of brain indicates energy and executive talent, the spirit of industry and thoroughness. The temperament has a good share of the vital element, supplementing his mental vigor well and enabling him to manifest his spirit by well-balanced activity. He is not a man of fanciful mentality, but practical and utilitarian, mechanical and industrial. The very full temple region shows uncommon mechanical capacity. He could have taken prizes in almost any sphere of industrial art. The perceptive faculties, especially in the central part of the forehead, are large, giving him a quick discernment of things and a good memory of what interests him. Taking the intellectual faculties generally into account he would be the man to administer the executive department of a business or of

an enterprise of a scientific nature. He is fond of investigation that relates to natural objects, animate or inanimate, the former especially, because he possesses so much of life spirit himself. He has good financial qualifications, can advise as the banker or trustee with respect to the application of money and property. He has ambition, but the head does not show that sort of ambition that craves display or would make use of a fortunate place in society to shine or invite admiration.

Robert B. Roosevelt was born in New York in 1829. He pursued his collegiate studies at Harvard and afterward entered the legal profession. He was, however, independent of any necessity of effort to earn his living, so that he gave his attention, after a few years, mainly to the study of politics and literature.

In 1868, in conjunction with Charles G. Halpine, he managed and edited the *New York Citizen*. He has also published several books on the culture and catching of fish, a subject in which he is an acknowledged master. He was made a member of the Fish Commission, and in 1881 became its president. During the existence of the celebrated Tweed ring in New York, Mr. Roosevelt was active in uniting the best elements of the two parties in opposition to the unscrupulous dictator. A Democrat by

affiliation himself, he fought against corruption in his own party, and all parties. He was very active in the organization of the Citizens' Association, which ultimately succeeded in freeing the city of the Tweed combination.

Elected to serve in the Forty-second Congress, he there also showed the same

settlers, who, some two centuries ago, founded the Empire City, and his historical studies have made him an ardent admirer of the nation to which he was accredited as Minister for the United States.

New York has reason to be proud of the descendants of the early Dutch set-



ROBERT B. ROOSEVELT.

spirit of hostility to the plunderous schemes of avaricious demagogues.

In the fall of 1888, Mr. Cleveland appointed Mr. Roosevelt Minister to Holland, an appropriate position, certainly, considering the gentleman's descent and capacity.

His ancestors were among the Dutch

settlers, for they, as a rule, have contributed to the better features of her development, and have not been found in the ranks of the factious and corrupt.

GEN. ABRAHAM DALLY,

A Survivor of 1812.

ONE of the incidents of the late cen-

ennial anniversary in New York City was the appearance before the grand stand on Fifth avenue, where President Harrison sat reviewing the parade, of a very aged man in old continental uniform, and who was warmly received by the President and the thousands around him, and given a seat by his side. This

committee had seen fit to refuse them. Taking then the matter into his own hands, the undaunted old soldier appealed to the President himself, and obtained what he wished. Certainly, it seems to us that on such an occasion it would have been most fitting to have accorded a prominent place to the very



GEN. ABRAHAM DALLY.

aged veteran, dressed in the honored but long-discarded costume, was no other than the man whose face looks out from under the old cocked hat in our engraving. It is said that he had requested the Centennial Committee for certain privileges in connection with the great display, but for some reason or other the

few survivors of the second war with Great Britain. Could any place, in fine, have been too good for them?

Abraham Dally was born in the city of New York, August 12, 1796. His paternal ancestry were from Ireland, long previous to the American Revolution, but on the maternal side they were

of old New Amsterdam Dutch stock. During the second war with Great Britain, declared in 1812, Abraham Dally was mustered into the service of the United States on the second of September, 1814, in the 11th New York Regiment, Heavy Artillery, under Col. Cor-

has been conspicuous as the commander of the veterans in the morning salute on the Battery and elsewhere. The General is now in his 93d year, and feels no need of glasses in either reading or writing, and writes with an exceedingly steady, firm hand, as the specimen of his chirog-

*Presented to the Publishers of the
Phrenological Journal by General
Abraham Dally aged 93 Years
a Soldier in the War of 1812
Brooklyn E D May 18th 1889*

nelius Harson, Capt. Andrew Bremner being his company commander. He was mustered out at the corner of Tryon Row and Chatham street, on January 2, 1815.

In the year 1852, the veterans of that war in the State of New York were marshaled into regiments by Gen. John H. Van Rensselaer, and under him as Commander-in-chief Abraham Dally was commissioned as Brigadier-General for the city of New York. Ever since he received his commission until quite recently he has been very active in promoting the interests of the veterans, and has kept an office in this city for the transaction of all such business as might arise from either pension or other claims of veterans on either the State or general government. The widows and other heirs of veterans have reason to be grateful for his interest in their behalf, as many have obtained their just dues through his interposition.

On all occasions when patriotic celebrations have been in order, Gen. Dally

raphy that accompanied a large photograph of himself recently sent to the publishers of the P. J. indicates. His hearing is but little impaired, and all his mental powers appear to be active, indeed as much so as found in men by no means so old, and his voice is quite strong and full. The decrepitude of age is most apparent in the failure of his lower extremities. He steps along quite rapidly, but it is difficult work, although he does considerable walking every day. He inherits an asthmatic constitution from his mother who was a lifelong sufferer from this disease, so that now he never lies down to sleep, but always sleeps sitting upright in his chair.

The old gentleman is about 5 feet 8 inches in height, and weighs 150 lbs.

Z. K. GILBERT,

An Enterprising Maine Farmer.

It is pleasant to refer to that employment which is the most useful of all employments, depending, as the existence

of mankind does, upon it. In these later times it is fashionable in some circles to decry the agriculturist, to speak of him as one of lower stamp than men engaged in commercial pursuits, or professional lines. They who depreciate the farmer or his vocation are wanting in knowledge and good judgment; they forget—if they ever knew—how much history and civilization owe to the peaceful farmer. Many eminent names stand on the records of the Hebrews, the Greeks, the Romans, and of other peoples, that were borne by men who loved their hill or valley demesnes more than the din and excitement of the city and only left them at the call of their country and because their country needed their counsel and leadership.

At the council board of our nation in the early years of its foundation sat many farmers. To-day where are they? How the early Congresses contrast with the Congresses of the present for quality of statesmanship and private character! We but utter the sentiment of many a patriotic citizen when we say, Would that the farmers of the nation had a large representation at Washington! Would not the true interests of the people be better considered?

Maine is not a State that ever claimed much notice for its agricultural resources, and to-day the overwhelming competition of the West has made the prospect of success in that far northern region, as well as in the other New England States, very forbidding to the young and ambitious man who inclines to farming. We can not wonder that so many of the young men have gone West or into the cities and left the old farms to "run down," or become the abode of shiftless foreigners. But there are still opportunities for the enterprising and industrious in the soil of New England, if they will adapt themselves to the changed conditions of life, and abandon the old methods. This, such men as Mr. Gilbert has fully demonstrated. A correspondent of *Farm and*

Home describes his place as consisting "of some 300 acres of strong land about equally divided into woodland, tillage, and pasture, situated in the northern part of the town of Green. His ample buildings are charmingly located upon the east bank and about 100 feet above the Androscoggin and about a quarter of a mile from the river. The farm produces 75 to 100 tons of hay annually, besides large crops of corn, wheat, oats, fruit and vegetables. The apple crop is quite an item in the income of the farm,



Z. K. GILBERT.

ranging from 200 to 400 barrels, according to the season. He raises annually about seven acres of corn without hand-hoeing, four or five acres of potatoes, and a lot of oats. Pastures and road sides present a clear and clean appearance, the proprietor remarking that it costs him annually nearly as much to cut bushes as grass. The usual amount of stock upon the farm consists of 35 to 40 head of horned cattle (mostly cows, three horses, and a flock of sheep. I noticed some very fine thoroughbred

Jersey cows as well as other promising grades. Butter, made upon the farm, is the chief source of income, about 7,000 pounds being made annually.

"Mr. Gilbert thoroughly believes in farming, viewed from any and all stand-points. Further, he believes that the State of Maine is just about the right spot. As proof of this, only recently he bought a farm of some 140 acres, lying half a mile from his homestead, stocked it with about 20 cows, hired his help by the year and started butter-making as a business enterprise; and this after a lifetime experience upon his home farm with opportunities for observation enjoyed only by the few. These farms are worked independently of each other. A separate set of books are kept for each, the only connection being that the team and farm machinery of the homestead

are used upon both, the expenses, however, being charged to one and credited to the other."

The character of Mr. Gilbert, inferred from the portrait, is distinguished by energy and determination. He is not a "driver" in the harsh sense of that term, no railroad "boss," but a pushing, direct, matter-of-fact worker; one who takes hold and leads when it is necessary to accomplish his purpose. He believes in the dignity of his vocation, and sees no reason why the husbandman should not be the peer of any other man in mental capacity.

As Secretary of the Maine State Agricultural Board, he shows ability as a speaker, and as a contributor to the *Maine Farmer*, he shows the acumen of a well-informed and experienced mind.

EDITOR.

MATHEMATICS IN PHRENOLOGY.

I FIND it is impossible to measure correctly with the box as designed by Mr. Straton; the water vibrates so that I seldom can get within ten cubic inches of the size of the head, and with troublesome subjects not within fifty.

There are two difficulties; first to keep the head in the same position until the record is taken, second to accurately measure the water displaced. To overcome these difficulties—First. To keep the head steady lay an oval piece of wire with four cords attached inside the box, the cords passing out over each angle and fastened by cleats: the head being immersed in the water, and placed in proper position the cords are drawn so as to bring the wire in contact with the head, when the cords are secured it forms a rest.

To measure accurately the water displaced I have had a receiver made with a glass front, 25 inches deep, 5 inches long, and two inches wide: it is marked in inches and tenths of an inch in the direction of its depth, every inch in depth contains ten cubic inches, every ten

inches containing one hundred cubic inches.

An overflow 4 x 1 1-2 inches and five inches from the bottom is cut in the side of Mr. Straton's box, and closed by a water-tight slide, which being removed when the head is fixed in position, the rise of water displaced flows into the receiver. The record can easily be read, the receiver registering ten times the depth of the rise in the box.

Having only seen the article on Mr. Straton's method, I do not understand how he intends to apply his measurement to the numbering of heads; the following I believe to be the best method. Let us take Mr. Straton's measurements (as a means of illustration) 84 cubic inches to be the smallest, and 187 cubic inches the largest head; 84 cubic inches will thus be a No. 1, and 187 cubic inches a No. 7 head; the difference between the largest and the smallest being 103 cubic inches, the measurements of No. 2, 3, 4, 5, and 6 can be ascertained.

The system of numbering heads from the circumference is open to serious ob-

jections, which are overcome by my improvement on Mr. Straton's method. I have known heads marked No. 6 and No. 5 by the usual measurements, yet when immersed in the water measure the No. 5 head exceeded the No. 6 by 25 cubic inches. As the number of the head is determined by the size, and not by the position of the brain, the measuring of certain regions can not be the best way of obtaining it; the size of the head denotes the power of the mind in some direction, therefore we must get the actual bulk of head in order to find the true power of the mind; the size of different groups will give the direction. The number of the head defines the number of the organs, thus an organ harmonic with a No. 5 head would be a No. 5 organ, small, No. 4 1-2; very small, No. 4; very large No. 6; the variations above and below the size of head extending only to the number of the head lower or higher on the scale of size.

When this marking is carried out one head with all its organs can be compared with any other. In numbering a head nothing but its absolute size is to be considered; temperaments, qualifications, health, condition, activity of special organs, are all to be marked separately on the chart; the combinations and qualifying conditions to be considered by the delineator. The chart marker is to mark only what he sees, not to add or subtract from the size of an organ on account of temperamental or other conditions.

Not only does the number of the head indicate the numbering of the organs, but also the numbering of the Temperaments and qualifications. Thus, if the bodily conditions are such that they supply the brain fully and without waste, the number of the Temperaments will be the same as the head; if the bodily conditions are *greatly* beyond the requirements of the head then they will be marked one number higher; if the head is not supplied properly and yet the body is wearing out under the strain, the Temperaments will be marked one number less than the number of the head; the conditions between very large and very small being indicated by halves and quarters, or by decimals. The qualifications are indicated in the same manner; thus, if the body and brain are proportional to each other and the qualifications are working them to *excess* then the qualifications will be marked one above the head; if on the other hand there is a great fund of unused strength with poor manifestations, the qualifications will be marked one number below the number of the head.

By this means the weight of the body could be told from the numbering on a chart because a certain weight of body would be necessary for each size of brain.

By adopting this system we should be able to mark a chart in Tasmania and send it to New York to be delineated, or *vice versa*.

JOHN J. SHERIDAN,

Hobart, Tasmania.

THE LESSON OF LIFE.

IN his exquisite little poem, *With Sa'di in the Garden*, Sir Edwin Arnold has given us an admirable exposition of the Sufi doctrine—the mystic and philosophic phase of Muslimism. The plot is excellent, and blends the didactic with the aspirations and experiences of life, displaying both so that the latter is flavored by the other, and at the same time

is exalted by it. It is an Indian representation, not an American one, and we must regard it accordingly.

The *personæ* consist of four individuals: the English Saheb, whom we recognize as Earl Dufferin, the Viceroy of India; Mirza Hussein, a Mollah; Gulbadan, a singing-girl, and Dilazar, a dancer, with their maid. The place is

Agra, in the garden by the Taj Mahal, the tomb built by Shah Jahan for his queen, Arjamand, Mumtaz-i-Mahal. The little party is assembled to hear the Mollah or Moonshee read the *Ishk*, the third chapter of the *Bostan*, or Pleasure Garden, of Sa'di. It is nightfall, and they begin with song and dialogue, and he reads portions from the Sufi poet. These present a view of the Muslim doctrine, not such as we have been taught to regard it. Gulbadan relates the story of her illness at Calcutta, the kindness of an "English Hakimi" and the Lord Viceroy's wife; and then recalling the words that in Paradise was no place for Nautchnees, consoles herself:

"We shall meet there, and that will not be hell!"

This sentiment the Mollah confirms, giving a summary of the Sufi philosophy in all its stages:

* * * "Lord Sa'di speaks of faith
At outsetting, since *Shariyat* comes first
In Sufic lore, where forms and creeds are all;
Tarikat next, where forms and creeds recede,
And 'the Path' mounteth to *Hakikat* free,
The Stage of Truth, past doctrines and past names,
And thence to *Ma'arifat* the Stage Divine,
Where the Soul dwells in light unspeakable;
Nor sees alone *Jalal*, the Glory of God,
But *Jamal*—Beauty, Grace and Joy of God,
For which dear splendors we desire Him most—
Not for His Terrors, nor His Majesties!
And this doth Sa'di inculcate in verse.
Nay, ye began him better than ye knew,
Speaking large charities, and hopes for all."

He then reads on, pausing for interludes and discourse. Finally, the Saheb interrupts, pleading to "bring Sa'di down." The Mollah complies, explaining that the heavenly is linked with the earthly love, and that beauty is of God at last. After the two girls have sung a chant replete with the same sentiment, the Viceroy asks can they dance to low songs, when knowing such strains as these? They reply that they are only little green parrots, taught to speak their best, and Gulbadan compares herself to a vase broken, yet odorous with

perfume. The Saheb disclaims this, because "Sa'di says that they, too, were near to God," and Mirza adds:

"Now will he tell how Earthly Love
Hath its persistence; and the might of that
To show self naught, leading the Spirit on,
That it may lose itself, and gain by loss."

He propounds the end and aim of Sa'di:

"To this chief wisdom: that Love is not Love
Except it tear forth Self-love from the heart."

The lover is to forget what else was dear—wealth, comfort, peace, pleasure; nay, life itself. Beauty is a perfectness of God, in which he is shown forth. The soul is moved by it—first, by vision of the senses, making the flesh thrill, the delighted blood course, the heart bound with worship, and glad eyes grow dim; whence "the human craze for household, wife, and child." Then the passion comes to draw near Heaven's perfectness, lose the self in it, and live for it.

"Thus haps it that the breasts of Beauty nurse
Spirits to second life, as mother-breasts
Nourished the babe to growth of boy and man."

Gulbadan tells the tale of Hatim and his steed—the one fleet as the wind, and his owner the most generous of men. The Sultan of Roum (Asia Minor) sends messengers to ask for the animal. They arrive in a woful time, when swelling streams prevent access to his herds. After a night's princely entertainment they deliver their errand. Hatim sits mute and sad; that horse, his friend, his joy, his wealth, he had killed for their suppers!

Dilazar sadly asks whether such grace, or a participation in Sa'di's mysteries, was for singing-girls. After another reading by the Mollah, and conversation, she complains that the Sufis saddened her; they were not flesh and blood; she and Gulbadan could never win from them "lovely, gilded shawls," wreaths or gems. Then, again, at a later period, she tells the story of a Mah-ratta dancing-girl, who had fascinated an English officer, and was slain by her own lover.

"Sa'di would say this was not love at all," says Mirza. "True love rises from dear Beauty seen to larger Beauty unbeheld."

In another interlude he relates the story of the Shah Jahan and his incomparable Persian queen. Her enemies had placed a beautiful Rajpootna girl in the royal apartment. The King found her there, eloquent in her naked beauty, surpassing Queen Mumtaz herself. He was "wise in his pride, terrible in his wrath." He praised her as fairest of Allah's works, but his faith as fairer still. "Begone! I shall slay or I shall love; and both were deeds indign!" Others seized her, and delivered her to the Queen for vengeance. Arjamand drew a dagger, broke off the blade, and gave her its jeweled hilt, and kissed her mouth.

"Go! thou hast given me
The richest, best, last gift which Earth could give
In comfort of my great Lord's constancy."

The Saheb asks thoughtful Gulbadan for her judgment.

"My lord! I marvel, and admire! but this
Is like strange golden fruit on tall trees
In other gardens than where Nautchnees live.
They will not think *we* have the right to love
Such lovely things and thoughts. * * * * *

'Tis not meet you ask of us
If Arjamand wrought well; only I feel
One might do queenly deeds, nurtured a queen."

Next comes a relation, the sublimest and most true of all the examples given in the poem. It is the tale told by Dila-zar:

"I knew a singing-girl with soul as large
As Arjamand's, if I might tell of it."

Leave is given, and she tells of a party of players on a journey. The chiefest singer, always pleasant, patient, bright, was with them—"born to the bells," but gentle, winsome, so that shy things never feared her. As they rested by a pool in the forest a young child, belonging to a company of Brahmans, came over to them, and nestled into the arms of that girl. Up rushed the mother,

and snatching the babe from her, taunted her with her calling. Her companions were wroth, but "she, the Mild-Face, laughed," and said the Brahman mother had much right to scorn. Presently both parties, resuming their journeys, drew near a tank by a temple, where wild beasts were numerous. The child was set down, while the mother went to bathe. A great, gaunt tigress came and lay down near. The alarm was given. All were in most painful suspense. The singing-girl drew her *sari* tight round her knees, walked straight to the spot, and brought the child away. Then the brute, rousing from its rapt surprise, sprang over her with a roar, tearing her shoulder; then made its way to the jungle.

"And so the mother took her infant back,
A gift from the Bazar-girl!"

"SAHEB. Gulbadan—
As we may judge from her averted head—
Hardly believes you!"

"DILAZAR. 'Well! she doubts herself
If she doubts that bold deed. Look, sirs! I
turn

The choli from her shoulders! there's the seal
The Tigress stamped upon it—for it was she!"

At once both Muslim and Englishman rise and salute her. Old Mirza cries:

* * * "Here is a singing-girl turns my last
page,

And teacheth Sa'di! Gulbadan! Salaam!"

The Saheb is not less demonstrative. He calls her "brave, loving Gulbadan," and promises her an armlet of tigers' claws set in fine gold.

"Is't true? Did those eyes stare a Tigress
down?

Did that brown satin wrist and little hand
Forbid the man-eater her bloody meal?"

GULBADAN.—"I did it, Saheb, for the baby's
sake

Who loved me so, unasked. It was not bold!
I was afraid; the beast was more afraid!
It would have leaped, but had not time to
think."

Mirza hesitates not to pronounce this love as true as that of Majnoun, of which Sa'di treats.

So we are carried all through the book—readings from Sa'di, with discourse and song. Who admires should procure

the poem itself. After all, the anxious girl finds her august question unanswered. Her own outcast lot the poor Magdalen keenly feels. Whether it was her own sin, her hereditary lot, an abuse of fate, Karma, or external compulsion—was it all hopeless?

"Ah, English lord! but those who teach the Soul,

Obeying Nature, or hard need, a fate;
Or set to this by whatso force or fault;
Have you no happy wisdom, too, for us?"

He assuringly responds:

"My tiger-tamer, with the roe-deer eyes,
What shall I know? Heaven hath its scheme
for you,
Its pity, and its pardon, and its love,
Even as for queens. * * * * 'Inshallah! be
well pleased!

Would I had such a good hope as Gulbadan!"

At once light-hearted Dilazar is roused to know "what is meant? Then high words make even Nautchnees muse."

The Saheb answers her with a summary of the chapter read, and Sa'di's philosophy, that all glory and grace of things are as shadows or images. The charm, not only of man and woman each for the other, but of all things great and beautiful—these, and the joy of life and ecstasy of love, are pages of Love's book. We learn—

"that Love hates naught except self-love;
Will have us learn in Life's great book to be
Patient and reasonable, kindly and mild,
Led always by the hand of what we love
Nearer and nearer to the Loveliest,
The Largest, Highest, Fullest, Happiest, Best,
Despising none."

To this Mirza gives assent: "Well hast thou gathered, sir." Presently the Saheb affirms the essential unity of faiths, whether on the hill of Syria with Christ, or under the tree with Buddh.

"Lose thyself," Sa'di says, "to find thyself"
The secret Word of Love."

The Mollah makes an eloquent appeal to know all that is, beyond every boon and blessedness, clear to the Love and Life which have not place nor name. Then he asks the Saheb, will he, when men beyond the seas declare that Islam has no deep philosophies, and speak of Sa'di and this night when they sat together. This is cordially promised; he has a Friend that will do this. Then he thanks all present, blessing Mirza, presenting money to Dilazar, and praising her who took the baby safe from the tiger's jaws. "I owe more than much gold," he says. So this poem, full of choicest lessons, and exquisitely beautiful, ends. ALEXANDER WILDER.

WHY?

TELL me by what hidden magic
Our impressions first are led
Into liking or disliking,
Oft before a word is said.

Why should smiles oft-times repel us,
Bright eyes turn our feeling cold;
What is that which comes to tell us
All that glitters is not gold?

'Tis no feature plain or shrinking,
But a power we can not shun,
Prompts our likings or dislikings
Ere acquaintance hath begun.

Is it instinct or some spirit
Which protect us and control

Every impulse we inherit
Through a sympathy of souls?

Is it instinct, is it nature,
Or some freak or faulty chance
That our likings or dislikings
Limit to a single glance?

Like presentiments of danger,
Though the sky no shadow flings,
Or that inner sense still stronger
Of unseen, unuttered things—

Is it? Pray will no one tell me,
No one show sufficient cause,
Why our liking and disliking
Have their own instinctive laws?

W. C.

THE SIZE FAMILY.

IT is often said that man is the creature of circumstances. And it is only too true that many persons drift so carelessly and aimlessly through the world as to allow their surroundings to rule them, instead of impressing the character of a determined human will and noble purpose upon everything that comes in their way. Those, however, are not the people who are compelling the otherwise destructive elements in nature to render most valuable services to mankind, and whose wise precepts and beautiful lives are uniting the human race into that brotherhood in which all love their neighbors as themselves.

Circumstances and surroundings are too often looked upon as real, formidable facts. The boy and girl of "poor birth" are too apt to feel, not only that the beginning foreshadows the end, and that they will always be poor, but also, that their lot will be a low one, confined to the ordinary uses of manual labor; while those whose parents control an abundance of this world's goods, or who are favored with ample opportunities to cultivate their mental and social powers, easily fall into the seductive idea that they belong to a select class, as though the opportunities into which they were born were the end to be attained, or that to which these can only be facilitating means.

Push and energy open the way to success, and the person who thus secures his own opportunities is sure to use them to the best advantage, while those who are born into the most favorable circumstances for great achievements in life, too often fail in making very good use of their best privileges. The love of pleasure, ease, and show—self-love—is man's great enemy. It is even this that hinders the poor boy and girl, as well as the rich and favored, from developing and using the opportunities that are at their command. They who without any effort of their own, are placed in

most favorable circumstances for becoming useful and prosperous, have many warnings among persons of their class not to trust to these alone; but the less favored will often need the encouragement of the noble examples of the stars that have risen out of their own ranks.

But the next, and a very important question is, what constitutes a noble character and makes a person worthy of the honor and respect of the human race? Here the differences of opinion among thoughtful people can not be so very great; yet some will naturally give greater prominence to one trait of character and others to another, nor do all have a like appreciation of what seems to them good and useful. There is a propensity to help praise what every person praises, and condemn what all denounce, and thus to have little to say about the good qualities of our neighbors who have not a public reputation, or those noble characteristics in the common people which are found in so many that they no longer attract the general public attention; or which are active in such quiet ways as to make it evident that the object is usefulness and not notoriety. Yet the noblest lives are those which aim not at great things, but strive to be useful in every possible way. No useful calling is low; but the higher the calling the lower it is to be negligent in it.

Many years ago there lived a family in Dauphin County, Pennsylvania, by the name of Size; two sons and four daughters. The parents had not been born to wealth, and to say that the father was addicted to strong drink, of course, also implies that they were very poor. The mother was evidently a good woman, though but little was said about her. None of her children, at least, felt it necessary to follow the example of a drunken father, or to depend upon the miserable fare which he would provide for his family. They all sought early for homes among the farmers of

the neighborhood; and their behavior was such, that wherever such services as they could render were needed, there was a home for any of them. But they never needed to change homes. One of the sons and one of the daughters lived for many years in the same family. Finally the son left and learned the carpenter's trade, and then his younger brother took his place with that farmer.

But the idea of some is that a boy and young man can not well get down lower than to be a "hireling" on a farm, or a young woman than to be a servant in a farm kitchen, especially at the time when the Size family were so hired out, for then the work of the women of the house included milking the cows, butter-making, attending to the poultry, and generally, also, to the calves, and pigs, and the garden, too, more or less field work in harvest, and hay-making, and corn planting, hoeing, and husking. The men never milked, but some churned the butter before farm work in the morning, or after coming from it in the evening. Some also fed the poultry, carried the milk to the pigs after the cream was skimmed off by the women, attended the calves, and even carried in the firewood. This depended mostly on the hired man, whether he chose to do it or not. The Size boys, of course, did it all. Michael, the oldest, had the reputation from his employer that in all these duties, "he was as true as clock-work."

Perhaps we would say this was all very good for the employer, if the hired man, after doing a faithful day's work on the farm, would work several hours every night in and around the house. Wages were then very low, but the farmers of this neighborhood were generally honorable, so that faithful workers were, as was then considered, well paid for rendering very good services and doing extra work. And the hired man and woman had a home; they were in the family very much like its own regular members. They had use-

ally as good quarters as the sons and daughters of the family. They ate at the same table, worked together, and generally sat in the same room, except, perhaps, when there was special company; and when they had company, they also had the privilege of privacy. To persons as were the Sizes, whose own home was such as a drunken father would provide for, a home in the family of a Pennsylvania farmer was a grand thing.

After Michael Size had learned the carpenter's trade near at home, he went South to Jackson, Mississippi, where he obtained very much larger wages than ruled in his old neighborhood. This long trip by foot, canal boat, and river, was considered a great undertaking for a young man from this quiet, German-Pennsylvania neighborhood. But few young men ever left their native home to seek their fortune among strangers with the comfort of the hearty good wishes of all his neighbors that followed Michael Size. He worked at his trade in Mississippi till he had saved together twenty-five hundred dollars, which at that time was a fortune for a young man to have. He then came up to Illinois, where he settled himself on a farm, and where, as far as the writer knows, he is still residing, an old man, well provided for, and evidently with a "conscience void of offense."

John Size, the younger brother, also sought his fortune in a strange land. During the gold fever of 1849 he went to California; and, having not since been heard from, it is supposed he was murdered, for at that time murders in the gold regions were not uncommon. The sisters all died young, of consumption; all unmarried. While they lived, they had every comfort that the most favored daughters of our well-to-do farmers enjoyed, and the hearty friendship and good will of all who knew them. All this because they loved to make themselves as useful as possible to every person, and they never

interfered with the rights of others. Many lives of humble beginnings, like those above briefly sketched, have risen to great honor and wealth, while these all but one continued only for a short time, and none of them attained to anything that is generally regarded as belonging to this world's greatness. They were simply honest, industrious, respectable, and reliable; but the result was that they enjoyed the means of a comfortable living, and the good will of all the people that knew them. There are probably more persons like them than of great wealth, or of those who have filled important public offices, or who stand high in the literary world, or as explorers or inventors. But has the world any greater benefactors than these humble, faithful people who are scarcely known away from the little circle in which they move? They deserve to be much more generally known; for no work is more worthy of the highest praise than theirs. The stronger evidences of the world's general approbation of this kind of greatness would encourage many who feel that they are of little value in the world.

Happiness is the great prize for which nearly every person is contending. It is generally sought in wealth, honor, and pleasure, notwithstanding no one has ever found it in these. Some wealthy people are happy, because their wealth affords them opportunities of being useful to others, which they would not otherwise have. So is honor a great help for good to a person of helpful purposes; so also knowledge, skill, and every other human attainment. But the end of pleasure-seeking is generally disappointment to him who indulges in it; and it often brings about his moral, physical, and mental ruin.

The humble persons above spoken of were not even engaged in any special effort to obtain happiness for themselves. With them was the pleasure of being useful—rather the love of being so—and, pursuing its dictates. It brought them

the highest gratification that the human heart can have, the pleasure of knowing that they have not lived in vain, which only those can enjoy who do not labor merely to excell others, nor covet what others have. Great wealth and wide extended honors, though sought by so many, are found comparatively by a very few, and really enjoyed by scarcely any; but every person can cultivate a desire to be useful, and by practicing it with a will, he always finds himself at peace with his own conscience and his God, and at least with nearly every person else.

J. R. HOFFER.

Mount Joy, Pa.

SHOULD WE EACH ANSWER WITH : A SONG ?

I HAVE a sweet voiced mocking bird
Whose notes are rich as ever heard;
By cage's bars all unconfined
He roams the house to suit his mind.
I call, when he is from me long,
And lo ! he answers with a song.

It matters not, though night or day,
Nor though my tones be grave or gay,
Not e'en though anger in them be—
The same sweet notes come back to me.
He knows to whom those tones belong.
And always answers with a song.

Dear little Tot, whose notes of love
Were caught, methinks from realms above,
True is the lesson thou hast taught
In bringing to my mind the thought
That earth had less of grief and wrong,
Should we each answer with a song.

Yes, in this long, changing life,
So full of care, so full of strife,
So full of anxious, longing hearts
By sharp words pierced, as if by darts,
How many weak ones were made strong
Should loved ones answer with a song.

BELLA FRENCH SWISHER.

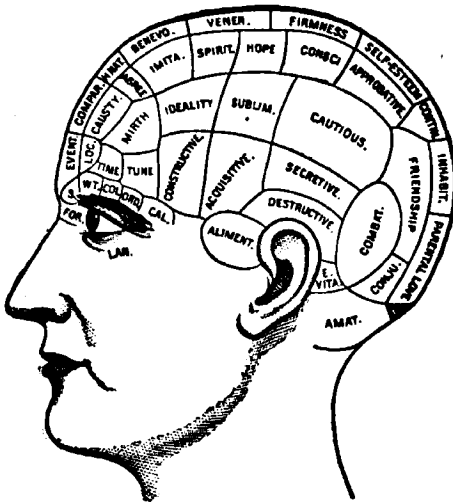
THOUGH tangled hard life's knot may be
And wearily we rue it,
The silent touch of Father Time
Some day will sure undo it,
Then, darling, wait,
Nothing is late.

Mrs. Dodge.

PRACTICAL PHRENOLOGY.

[CONDUCTED BY PROF. NELSON SIZER.]

PHRENOLOGICAL HEAD.



THE WORKING OF THE FACULTIES.

No. 2.

NOTHING is more plain than that large Combative-ness is a help to a man in many kinds of business, and in the accomplishing of most of the active, demonstrative duties of life. It enables him to clear the track, overcome obstacles, and conquer difficulties; it even gives him a relish for difficulties, because the excitement and stimulus of overcoming them is a real pleasure. Men are employed for their courage, energy, and earnest executive power; interests are intrusted to them according to their ability to conquer opposition and carry out the desired end.

Sometimes, however, Combative-ness becomes a detriment and hinderance to a man's success. There are vocations which require mildness, patience, and sedentary habits; in all such positions Combative-ness is a detriment to a man.

It makes him all the time boil over with unused energy, and if he must follow such pursuits, he is not only miserable himself, but renders others about him unhappy. When this faculty is allowed to take a sharp, criticising fault-finding, pugnacious, dogmatical direction, it has a tendency to drive away customers and to disincline them and forbid their having business relations with such persons, and then it is positively a hinderance to success. We know individuals who are always avoided when people can get their interests as well served by others. They are not employed in shops, stores, as attorneys, or as physicians; because any little grievance, insult or provocation raises a tempest, and this tempest is a greater evil than the good which these persons can possibly do is supposed to be worth; at least, so great an evil, indeed, that peaceable and amiable people prefer to avoid it if possible. Persons who have too much of this propensity, or who have hitherto employed it in a sharp and offensive manner, should endeavor to modify, suppress, restrain, and direct it better for the future.

Acquisitiveness in excess often overleaps its mark and fails in securing its legitimate gratification, because it leads its possessors to become so greedy and grasping, so much inclined to overreach and take the "lion's share," that everybody is put on their guard against them. We know persons who want a cent a pound more than the usual price, who are not satisfied with ordinary profits. The result is, their neighbors buy of them only when they have not

the time or the opportunity to go elsewhere. He who looses a valuable customer by an overcharge, or in the sharp practice or any other undue exhibition of acquisitive selfishness, literally "kills the goose that lays the golden egg." We have known hotel keepers to raise their prices for the sake of greater gain, when the public, supposing that the prices were reasonable for the service and entertainment rendered, left them to fail for the want of support. The keeper of a dining saloon having a full run of custom and anxious to get rich rapidly, raises his prices above a reasonable point for the place and the articles furnished; the result is, his customers leave him, and he loses the profit of their patronage, and at the year's end has made less money for his time and efforts than formerly; and in addition to this, has lost the sympathy and friendship of a class of men whose continued custom for years would have made him rich. This is one of the meanings of "killing the goose that lays the golden egg." This is shearing the sheep so close as to take skin and all, and rendering another fleece impossible. These are some of the hinderances of Acquisitiveness; its helps, of course, are favorable to thoroughness, enterprise, and acquisition.

—:O:—

MENTAL MECHANISM, NO. 1.

THE musical register, as represented by the keyboard on the pianoforte, covers about sixty notes, or seven and one-half octaves. The literature of music can thus be represented and expressed. These notes, while independent of each other, have co-ordinate relations.

Mind represents itself by forty-two faculties, each faculty being self-sustained and independent, and yet having correlation with all the others.

In the intellectual make up, we have three groups of faculties. One group has to do with observation like

a photographic instrument. These faculties relate to that which is external. One of the faculties sees things as things; as mere objects; thus, Individuality has to do with the division of matter into things, parts. The grammatical expression, *noun*, represents that which individuality appreciates. Rock, pebble, sand, tree, branch, twig, leaf, horse, ox, fish, bird; and then it takes into account the separate parts that make up the horse, as head, eye, ear, leg, foot, back, chest, neck, or anything so constituted that it can be seen or touched. The word *noun* expresses its existence. Think, if you can, that Individuality does not try to know what things are or what they are for, it does not estimate strength, length, breadth, shape, color, but has to do solely with the simple existence of things as things.

Things have qualities, and the term quality in grammar, is called *adjective*. It expresses quality or condition; short, round, angular, heavy, light, cold, hot, clear, black, brown, red, green, and each of the qualities of matter has for its use or appreciation a separate faculty.

Form is one condition of matter. One can make of a lump of clay the statue of a noble man, of a beautiful woman, of a spirited horse, a serpent, aligator, fish, lion, which is all the same color, and the noun, *clay*, expresses the material, but does not express the shape. Form does that, but does not know or care whether the material is bronze, marble, wood, or wax.

Size is the name of another faculty and its office is to appreciate magnitude. The smallest shot used by the sportsman is a ball perfectly round, and the faculty, Form, is satisfied with that, whether it be of the size of a bird-shot, a buck-shot, a bullet, or a cannon ball, the shape being the same, Form is content.

Size recognizes the quality of magnitude. A person can handle all these little bullets with the fingers in the dark and recognize their form and also their size, but there is a quality which

the sense of touch does not reveal, namely, color. Though Laura Bridgman, recently deceased, could tell the different colored worsted, used for crochet work, but she did it by the softness, harshness, dryness, or other qualities which the dyeing material conferred upon the wool. Anybody can tell by the sense of touch indigo blue cloth from that which is brown or black, by the softness or harshness respectively. We mean that a faculty of Color is required to appreciate things of the same form and size which have different colors. Color being a quality of matter, we have a faculty for its investigation and appreciation.

The faculty of Weight enables persons to distinguish the difference between articles that have the same form, the same size, and the same color. Suppose a five dollar gold piece made of the true metal, which has a certain weight, and thus a person accustomed to handling them, can instantly determine between it and a counterfeit piece made of brass or a lighter metal of the same size and form and the same inscription. Imagine such a piece being gilded so as to look and feel like gold; thus the senses of Color, Form, and Size would be satisfied, but we toss it and say it is light for gold and put it on the scales. The nature of things may be judged by Weight readily while all the other conditions seem to be the same.

When I was a boy, I carried into the cellar a dozen of the finest pumpkins we raised. There was a row of barrels lying against the unmortared cellar wall and on this row of barrels I set the pumpkins against the wall. When one was wanted for use I would bring it up. The largest and finest pumpkin, fair in form, golden in color, and measuring eighteen inches in diameter, without a mark of decay, sat until the last, and when I was requested to bring up my premium pumpkin, I went down joyously, grabbed it by the stem and braced myself to lift it and it came up like a

band-box. The rats had gotten into the cellar wall, made a door into the rear of the fruit and eaten it all out hollow, leaving nothing but a shell about the thickness of orange peel. The faculty of Weight, had we gone there in the dark, would have told the whole story, that a fraud had been practiced on the article; it was not what it seemed to be. The faculty of Individuality, Form, Size, and Color were satisfied, and only the faculty of Weight was left to detect the discrepancy.

The last of this group is Number. Matter is divisible. More than one thing exists and the idea of number from one to millions is the basis of the science of numeration. Some have a superior endowment of this faculty and the term genius is applied to their excellence in the numeration of numbers. Zerah Colburn, author of works on Mental Arithmetic, was a marvel to the world at six years of age. He was born at Cabot, Vt., September 1, 1804; died March 2, 1840. At six years of age he manifested such powers of computation as to astonish the learned world. Questions in multiplication of five places of figures, reduction, rule of three, compound fractions, and obtaining factors of large numbers were answered with accuracy and with marvellous quickness. Among the questions propounded to him on his visit at Harvard College were the following: How many days and hours in 1,811 years? His answer, given in twenty seconds, was, 661,015 days, 15,864,360 hours. How many seconds in 11 years? The answer, given in four seconds, was, 346,896,000. It is said that a few months before his birth, his mother, who had never been taught arithmetic, had on her mind, for a day and a night, a puzzling question as to how many yards of cloth a given amount of yarn which she had would make. To a person understanding arithmetic this would be a simple problem, but she had to do it by a mental process, without rule, and this extra-

ordinary effort on her part was organized in her child and made him a genius in mental arithmetic, but not in mathematics.

—:O:—

MEMORY CULTIVATED.

SAN FRANCISCO, Cal., June 27, 1889.

PROFESSOR NELSON SIZER, of Fowler & Wells Co.:

Dear Sir:—Once I had a very poor memory for facts and events; but, through reading Phrenological works, I hit upon an admirable plan for strengthening it: that of thinking over at night the occurrences of the day. This I have now been doing for a year, and as an inevitable consequence, my memory has much improved. I am very desirous of finding some plan for developing Language, which is as good, as convenient and as easily adapted for daily practice, as that I have used for Eventuality: some method which will strengthen the memory of words as quickly and effectually as the other the memory of facts.

You have kindly given me advice before on Phrenological subjects, and will you not double my obligations to you by a few words relative to this?

Yours very respectfully, A. S. J.

ANSWER.—The way to cultivate any faculty, or muscle, is to use it judiciously and naturally, and if you would cultivate Language, try to put your thoughts into words. Read aloud; that would train your vocal organs in connection with your percepts. The using of the words also in connection with your reasoning and imaginative powers which take into consideration the theme or subject on which you are reading, would aid in remembering and recalling the words.

One of the troubles of the culture of Language is, that people don't train their voice and all their muscles to co-ordinate with speech, on the subject which they think about. One may

witness dancing and not be a dancer. One must dance to obtain grace of motion, and train himself in that line of memory, so as to impress all the different evolutions of the different dances. You may look on and see a man make a barrel, and your hands will remain as awkward as before. Watch a man making a barrel, then try to put into practice what you have seen done, and your hands will learn the trade. Vocalize your thoughts, put them into words, and that will suggest vocalization respecting all thoughts and help it. Read quietly, and then look from the paper and tell your mother, or wife the story, as well as you can, in your own words. You will have a fresh memory of the facts and thoughts, and let that memory stir up your Language to clothe them in fitting words. Another method is to think of a subject and with pen or pencil dash it off as well as you can, and then read it over and try to express it in a different way, or better. Then write it again and half a dozen times, and bring in all the words which will serve to express the thought smoothly, strongly and clearly. The next time you want to write something all the words you have used and their uses will be at your command and be a part of your cultivation; and you can use these words any where else to a better advantage than you could have done before this method of self-training. Then take a paragraph from some other writer, and see if you can express it in other words, or in another form of phraseology, as well or better.

If you will practice this method for a half hour each day for six months, your daily conversation will impress your intelligent friends that you are about half through college, so far as language is concerned.

The truth is, if we paid no more attention to methods of training for business, than we do to the training of our faculties for their improvement, we

would make a failure in business very often.

—:O:—

MORE STRIKING PROOFS.

WHILE in the lecture field we are frequently put to very severe tests in deliniating character. For instance, a short time since while lecturing in Le Mars, Iowa, I examined and marked a chart for a person. He took it home, and his brothers and sister read it. One of his brothers was a disbeliever in the science, and so he said, "You go back to Dr. Oliver in five days and get another chart. Leave this one at home and if he gives you the same markings, I will believe in Phrenology. If he does not, there can be no truth in it." Well, I marked another chart, and it corresponded with the first one, and so his brother was convinced of the practical utility and truth of the science, and is to-day a warm advocate of what he once denounced.

Another instance: I just examined a young lady at Scranton, Iowa, and marked a chart. I spoke of several organs she had cultivated within the past few years. At the close of the examination she went to another room, and returned with a chart that had been marked by Prof. Geo. Morris, a few years previous. She compared the two. There was an exact correspondence, except in two or three organs which I had marked a half degree higher, and which she acknowledged had been cultivated. In the matter of occupation, I had marked the same as Prof. Morris. She said that this was a striking proof of the truth of the science, and that in the school room, and in the family she would put it into practical use. I could relate many more examinations equally remarkable, some of which I have made when blindfolded to convince the skeptical, and that is a good way to *open their eyes!*

DR. F. W. OLIVER.

[Dr. Oliver is a graduate of the American Institute of Phrenology. So also is Prof. Geo. Morris.—ED.]

—, Ky., June 6, 1889.

FOWLER & WELLS Co.:

Herewith I send you a P. O. money order and the picture of a young lady, with the required measurements of head, weight of body, complexion, etc., for the purpose of obtaining a full description of her character and talents. Please make it as full and complete as possible, as her family are skeptical upon the subject of Phrenology, and this is sent upon my solicitation.

For myself I have had, in the fulfilment of the statements made by Prof. Sizer, in a chart of character furnished some years ago, the most convincing evidence, not only that Phrenology is the most perfect and exact science, but that it is the most inestimable boon conferred by modern civilization upon the human race, and I can never be sufficiently grateful for the knowledge of myself that I obtained from the chart referred to.

Believe me ever the friend of Phrenology and yourself,

D. C.

—:O:—

AMERICAN INSTITUTE OF PHRENOLOGY.

THE Session of 1889 opens on Tuesday, September 3d, and from present appearances we are likely to have a large class of ladies and gentlemen. The public is awake to the advantages to be derived from the course of instruction, and clergymen, lawyers, physicians, teachers, and business men, as well as those who wish to make Mental Science a profession, are making inquiry with regard to the Institute and its work. The "Institute Extra," giving particulars, is sent by mail to all who write for it.

One of the "Resolutions" of the class '88.

"Resolved, That we heartily recommend to all students of Anthropology the American Institute of Phrenology, with its scholarly and efficient professors, its fine collection of educational appliances (skulls, busts, casts, oil paintings, etc.) not found to be in any other institution of its kind."

CHILD CULTURE.

THE FIRST SEVEN YEARS.

THE first seven years are in the fullest sense plastic," says Mr. A. E. Winship, in an article that appeared lately in the *Journal of Education*. A child inherits much less than we think in some directions, and much more than we think in other directions. He inherits impulses, but not habits. He inherits tendencies, but not prejudices. He inherits tastes, but not temptations. We are accustomed to say thoughtlessly that we were born Democrats, or Republicans, Southerners, or Northerners, Baptists, Presbyterians, Unitarians, or Romanists, all of which is the farthest removed from the truth. Take a hundred children at two years of age from Republican homes and exchange them for the same number of children from Democratic homes, and nine-tenths of those "born Republicans" would vote the Democratic ticket and nine-tenths of the "born Democrats" would vote the Republican ticket. The same would be true of Baptists and Romanists. On the other hand, impulses born in a home of vice will remain natural impulses though the child be adopted into a home of virtue when two days old. These impulses may be suppressed, controlled absolutely, but they are there all the same.

Until a child is seven years of age he needs to be carefully moulded. He is plastic, physically, mentally, morally. He does not retain impressions, but you can do anything you please with him if you will hold him in position until he is seven. Nothing could be more unlike perfection than a club foot, and yet, taken in the plastic years, that foot can be turned, straightened, lengthened,

limbered, and made like a perfect foot. But it must be kept there by constant attention until the plastic period shades into the receptive. Every physical deformity is capable of being righted in the plastic years.

Similarly every mental and moral deformity is susceptible of being righted. Impatience, quick temper, surliness, timidity, coarseness, are capable of being every way rectified by proper and persistent attention in these early years. The inherited tendency will always be there, but it can be placed under such control that the inheritance will never be suspected.

The danger in these years is that the child will be mentally and morally set in wrong moulds. Superstitions are mostly acquired at that time. Before a child is ten years of age he may be trained in superstitions that no amount of intellectual training will remedy. I have known a brilliant man, a leader of his class at Harvard, a student for three years in German Universities, a man whose whole life is away from superstitious prejudices, who has a number of the most senseless superstitions, and he really gives greater prominence to the influence of a silly little sign that was instilled into his mind before he was seven than to the highest wisdom.

Every influence should be brought to bear upon children in these years to protect them from superstitions, from impulsive associates, from horrible tales, from vicious companions, from exciting stories. They should be given boundless liberty in every harmless tendency, but every harmful mental and moral inheritance should be as persistently

and skillfully righted as the club foot. There will probably be no deformed-footed man in the world who was born in New England after the year 1890. There are people so greatly interested in this matter that funds are provided for any cases where the parents are poor. What a day it will be when half as much interest is taken to right mental and moral natures in these plastic years!

This is emphatically a *home age*, but,

unfortunately, there seems to be no way to educate the homes to do the right thing in the right way, and we must depend in part upon the schools; but it must be a home-like school. The teacher must understand that she has plastic minds and characters, that she must not stimulate them, that she must study their deformities and place them under influences which shall be like moulds for their plastic natures.

TEACHING VOCAL MUSIC IN SCHOOLS.

AN encouraging sign of the times is that a common-sense, practical method of teaching vocal music in our schools is rapidly gaining ground in the educational world. This method may properly be termed the Objective, as it applies the Pestalozzian system to instruction in vocal music precisely as it has been applied with unvarying success to other branches of education. It has been used five years or longer in the public schools of Boston; and during the past two years has been adopted by many schools all over the country, as being the most satisfactory method known. Its principles and processes are such that they tend to rouse and judiciously train and develop the student's musical nature; to cultivate his sense of tune and rhythm; to teach him how to use his voice, and last, but not least, to make him a correct and rapid reader of music.

The Objective method of teaching vocal music is adapted to the comprehension of the youngest children in our primary schools. It is surprising with what ease such children read music after only a few months of instruction in singing, when that instruction has for its foundation the true educational principle.

Ignorance of the correct manner of using the voice; lack of lung power and weakness of the vocal organ itself; a sense of not having control over the latter which produces nervousness, that

in its turn tends to cause a weak, thin quality of tone—all the difficulties, in short, that beset uncultivated singers are in a great measure removed by the use of the Objective system, which pre-eminently deserves the title of Common-Sense Method.

The questions may be asked, "How can music be objectively presented? and in what respects does the Objective method of presentation differ from those heretofore in use? While a verbal description of the process must be necessarily incomplete, such a description may convey a sufficiently clear idea of it to arouse interest and to stimulate inquiry and intelligent investigation. The staff considered as a dry abstraction, with its paraphernalia of signs, is not an interesting subject. The habit of teachers has been first to present the staff notation, *afterward* the *sounds* represented by that notation. The pupil of average ability would soon perceive that the signs occupied different positions on the staff, some ascending, some descending, and that there was a corresponding difference in the tones represented by them. As it was obviously more or less difficult to hit on the exact corresponding distance between any two tones and between their respective signs, the habit of guessing at the sound which should correspond to a certain sign was naturally soon formed. If the pupil was a good *Yankee*, he might in most instances guess correctly; but such guess-

work, however clever, is, after all, a poor substitute for *intelligent reading* of music at sight.

The Objective method aims first to stimulate such musical faculties as the pupil may possess, and through exercise to strengthen and develop them. In order to attain these ends the scale is considered as a whole, each tone being presented in its characteristic relation to every other tone, until all the sounds of the scale, as they are thus associated, become distinct mental objects. By means of judicious rote-singing the pupil's ear is at the same time cultivated, and a taste formed for good music. The tones of the scale are definitely named, the same relative tone having the same name regardless of the key. The name of each tone is its number, counting the keynote, of course, as one. Then each sound is considered in relation to all other keys. Hence, the pupil soon discovers that the major scale is as easily sung in one key as another, by simply changing the keynote; likewise the minor. The latter is taught to younger pupils by following the same routine that was used in teaching the major scale, *after* the pupil has acquired a *sense* of the peculiar somber quality of the minor scales and keys. The idea which is carried out in the Objective method, of doing *before* naming, is indicated by clearly expressing the Minor Mode *before naming* its quality. This is done by means of certain rote songs and musical exercises written in the Minor keys. A secondary method of presenting the Minor scales to older students is by an analysis of their parts with a study of the deviations from the Major.

As merely an idea of the salient points of a musical system can be given here, it can only be remarked further that the Objective principle is so applied in explaining all the supposed intricacies of the staff notation that the much talked of difficulties of the latter cease to exist. The pupil acquires

technical knowledge by such easy and pleasant degrees that its acquisition becomes almost an unconscious operation of the mind.

The Objective principle is applied to Rhythm or Time in precisely the same manner as it is to Tune. The student must form a correct conception of the *length* of sounds after having gained such a conception of their *pitch*; and he must form it by dealing with the different durations and accents of time, in short, its realities, before he is perplexed by any characters representing the same.

In music, as in anything else, real things, viz., sounds, must be dealt with in order to gain any true knowledge of it. Unless this is done correct conceptions of the relative pitch and length of sounds can not be gained; and without such conceptions all knowledge of the names of characters used in representing either the pitch or length of sounds is of no value.

It is obvious that in music we have to deal not only with that which can not be seen, but that of which no idea can be given by any pictorial representation. Therefore, in the study of the subject only the sense of hearing and the feelings awakened and stimulated through that sense can be appealed to.

This fact is kept constantly in view in the Objective method of teaching and is embodied in the assertion that "The sense of hearing is more susceptible of education than that of sight, and can be developed more quickly."

Physiology preparing the way by imparting a knowledge of human organization, and the best means of keeping it in that healthful, vigorous condition upon which vocal quality and power so largely depend; with an advanced, sensible method of teaching vocal music among the masses through our common schools, may we not hope that in time our own people, like those of certain foreign countries, may become known as a nation of singers?

MARIE MERRICK.

THE TRAINING OF CHILDREN.

THE chief difficulty with those who have the management of children lies in the fact that they have not yet learned to manage themselves. The training of a child has to do with its well-being physically, intellectually, and religiously, and only one who is himself properly trained in these matters is capable of directing another.

• It is a lamentable fact that two-thirds of the people we meet are chronic invalids; seldom down sick perhaps, but never well; never in a condition to enjoy without painful reaction what should be the natural activity of mind and muscle. They undertake but little, accomplish less; are never equal to an emergency, and, in fact, get from their lives a small amount of the enjoyment which is their due. How much of this is owing to mismanagement in childhood, it becomes each parent's duty to inquire.

All parents should understand enough about physiology to be able to deal wisely with their children's bodies from the beginning, and to teach this important study to them as soon as they are old enough to comprehend. Many important branches are taught in the schools; but physiology, if taught at all, is not done in that whole-souled manner it is the parents' duty and privilege to do at home. If this matter was properly attended to, there would be fewer nervous, dyspeptic men and women dragging wearily through life, a burden to themselves and those around them. "A sound mind in a sound body" is a thing of wonderful capabilities. A child thus endowed is constantly upon the lookout for information. It finds it in the conversation of its parents. The companionship of a cultivated person is a powerful educator. If, unfortunately, the parent, owing to circumstances which surrounded his youth, is not, in this respect, what he wishes his child to be, he must put forth every energy of mind and body to overcome these de-

fects. He will find it hard work; indeed he can never be "as one to the manner born." But he can do a great deal toward fitting himself to be such a companion for his child as he could wish him to have.

More important than all else is the religious training of children. Few people, of whatever profession, would purposely, or even willingly, keep their sons and daughters in ignorance of Him through whom "we live, move and have our being;" but how may one teach another who has not himself been taught? "Be what you would have your child to be," touches a parent's experience at every point, and only when we have learned and appropriated this important maxim, shall we know how to train our children.

MRS. S. E. KENNEDY.

DON'T MENTION THE BRIERS.—It is not only a wise and happy thing to make the best of life, and always look on the bright side, for one's own sake, but it is a blessing to others. Fancy a man forever telling his family how much they cost him! A little sermon on this subject was unconsciously preached by a child one day last fall.

A man met a little fellow on the road carrying a basket of blackberries, and said to him: "Sammy, where did you get such nice berries?"

"Over there, sir, in the briers."

"Won't your mother be glad to see you come home with a basketful of such nice, ripe fruit?"

"Yes, sir," said Sammy, "she always seems glad when I hold up the berries, and I don't tell her anything about the briers in my feet."

The man rode on. Sammy's remarks had given him a lesson, and he resolved that henceforth he would try to hold up the berries and say nothing about the briers.



ON THE TREATMENT OF CATARRH.—No. 10.*

THE one who adopts a vegetable dietary for the most part is not so likely to overfeed as he who must have his chops, or roast, or stew, twice a day; and he is not so likely to contract an unnatural appetite in the use of the sapid, mild-flavored dishes that come from the kettle and steamer, as the latter, with his high-seasoned and half-burned flesh stuffs. High authority in medicine tells us that the increase of kidney diseases is due to over-nutrition; for it is among the well-to-do, and those who tarry at the table, that the increase is found. The excess of work put upon liver, kidneys, and lymphatics, and maintained for years will break down the best constitution; and it often occurs that the man of ruddy face and full habit, whom his friends speak of in terms of admiration as "enjoying splendid health," is on the eve of collapse with "Bright's disease." The man who is temperate, even abstinent, in his eating, and never touches wine or spirits at table, is rarely subject to grave kidney disturbance, and such a man is not likely to complain much of catarrh.

Speaking from personal experience, I can say that the great majority, or fully eighty per cent. of the cases that have come under my observation, were persons who had dyspepsia in some form, and had been laboring with that

for years. The first step in their treatment was the regulation of the diet, and the restoration of functional activity to the impaired organ or organs of digestion.

After putting a catarrh patient on simple diet that affords ample nourishment, without irritation, to the stomach, and having him pursue a certain routine, with reference to bathing and exercise, improvement has usually been shown after a few weeks. The mere adoption of a line of life that reduced the tendency to vaso-motor excitement, and prevented high vascular dilation, had its effect in reducing the turgidity and congestion of the nasal membrane.

Knowing as we do now the important office of the sympathetic nerve in the procedures of tissue circulation, secretion, and nutrition, and its ready susceptibility to impressions from without and within, the scientific treatment of inflammatory disorders must include such hygienic adjuvants as will prevent unnecessary exposure to causes of nervous excitement.

Ordinary catarrh, it is claimed by some physiologists, is not inflammatory, but an altered condition of the mucous membrane, due to disease of the vaso-motor system. This altered condition is brought about by the change in the nutrition of the part, and the excessive or insufficient action of the mucous

*Right of republication reserved.

vessels. In the aggravated form, however, inflammation supervenes, with its tendency to the breaking down and destruction of the substance of the nasal structure.

The great majority of the cases of catarrh are of the *moist* variety. For them a climate naturally dry is far better than a moist, because the surplus moisture in the air increases the tumefaction of the nasal membrane, and produces a more active mucous secretion, with the resulting interferences to breathing and comfort. Those who are affected thus, and who are compelled to live in a region that is moist, should, if possible, at the season of the year when dampness is superabundant go to some other locality for a time. During the rainy months of spring and of autumn, the common experience of our New England coast towns and of the middle Atlantic States, a change of residence to the high levels of the interior would be found advantageous.

For the dry or atrophic form of catarrh a soft, comparatively moist atmosphere is more agreeable than the dry. It must be said, however, that the subject of chronic catarrh usually indicates a rather capricious adaptation to locality; and what seems well suited to one case is found to be quite intolerable to another.

"Sea air is especially applicable in some cases, particularly to those having a cough accompanied with considerable expectoration. The soothing and somewhat dry atmosphere of pine forests is very helpful to certain sufferers of this class." *

Many patients rapidly recover after going to some quiet, country village, where they are free from the worry and excitements of home or business life, and the benefit obtained is to be credited less to climate than to the opportunity for rest that the change has brought. To "nervousness," that common mal-

ady of modern civilization, a very large proportion of catarrhal complaints is due. In my own experience a large porportion of cases have had their origin in nervous debility, or nervousness was associated. The treatment of these must have a special regard to a removal of the nervous factor by such hygienic means as will restore the systemic balance. If there is any intestinal disease, any organic fault that interferes with the digestion and assimilation of food, if there is any habit or vice that frets and chafes the nervous economy and depresses the spirits, its effect will be manifested in the nasal disorder. No hope of improvement can be given to a patient unless the digestive trouble, or the habit that preys upon the nervous system is corrected. Especially is the case discouraging if a constitutional predisposition lies back of the acquired causes.

The importance of pure air to the subject of catarrh is as great as to a consumptive. Hence all places where there is a lack of ventilation should be avoided. The vitiated atmosphere of a close room, especially one that is heated by the common coal furnace of the day, is to be avoided as a valley of death. In winter, heated rooms should have a provision for supplying moisture to the air. As a rule, the water-chamber of a furnace, in most cases neglected by the attendant, tends to over-saturate the air, and render lungs, and air passages, and skin, over sensitive to out-of-door exposures. It is better to have a wide-mouthed pitcher or basin filled with clean water set in the chamber or sitting-room. The air will take up moisture from this, and a more natural condition be maintained.

In our cities the cold air-box of the furnace is usually close to the ground, and below the street or sidewalk level, where, instead of supplying a current of pure air to the inmates by way of the warming flues, it introduces for their respiration pernicious gases from gutter,

* "American Resorts." By B. W. James, M. D.

or sewer, or from decomposing matter that has been permitted to accumulate in neglected corners. The supply pipe of a furnace should have its outer opening well above the street level, the higher up the better, and away from any known source of atmospheric contamination.

It must be said, in this connection, that modern ingenuity has not devised anything better than the open fire-place of our grandsires, the steam apparatus and hot water furnaces of the day have not reached its hygienic level.

H. S. D.

A COMMON DIETARY ERROR.

NO greater dietetic fallacy can well be conceived than that an article of food will prove not only harmless but beneficial, if it is "craved," "hankered for," with no regard to its quality, or the state of the system. The habitual use of any article, in itself unfit for the human stomach, will induce an unusual "craving," the extent of that craving depending on and corresponding with the degree of such unfitness. When the system is in its normal condition, wholesome and nutritious food is always palatable, relished, and that of necessity, that the body may be sustained. This fact favors the needed variety, meeting all the wants of the system, preventing the special selection of a single article, as a matter of taste-preference. It follows that a special craving is largely if not wholly dependent on habit, the use of unnatural food, or of an unnatural and unusual amount. As well might the user of tobacco claim that his artificial relish for his quid or pipe will justify their use, and render them harmless, beneficial, even; which powers will not be claimed by any consistent and intelligent victim of the "weed." Or the habitual drunkard may urge his almost uncontrollable "craving" for intoxicants a good reason why he should continue his destructive habit, claiming that intoxication will be prevented by the strength of his appetite.

Food is wholesome or otherwise, of itself considered, with no reference to our freaks or fancies, that is, when in our ordinary condition. It is fortunate, however, that in sickness there is an apparent or real exception, which may be

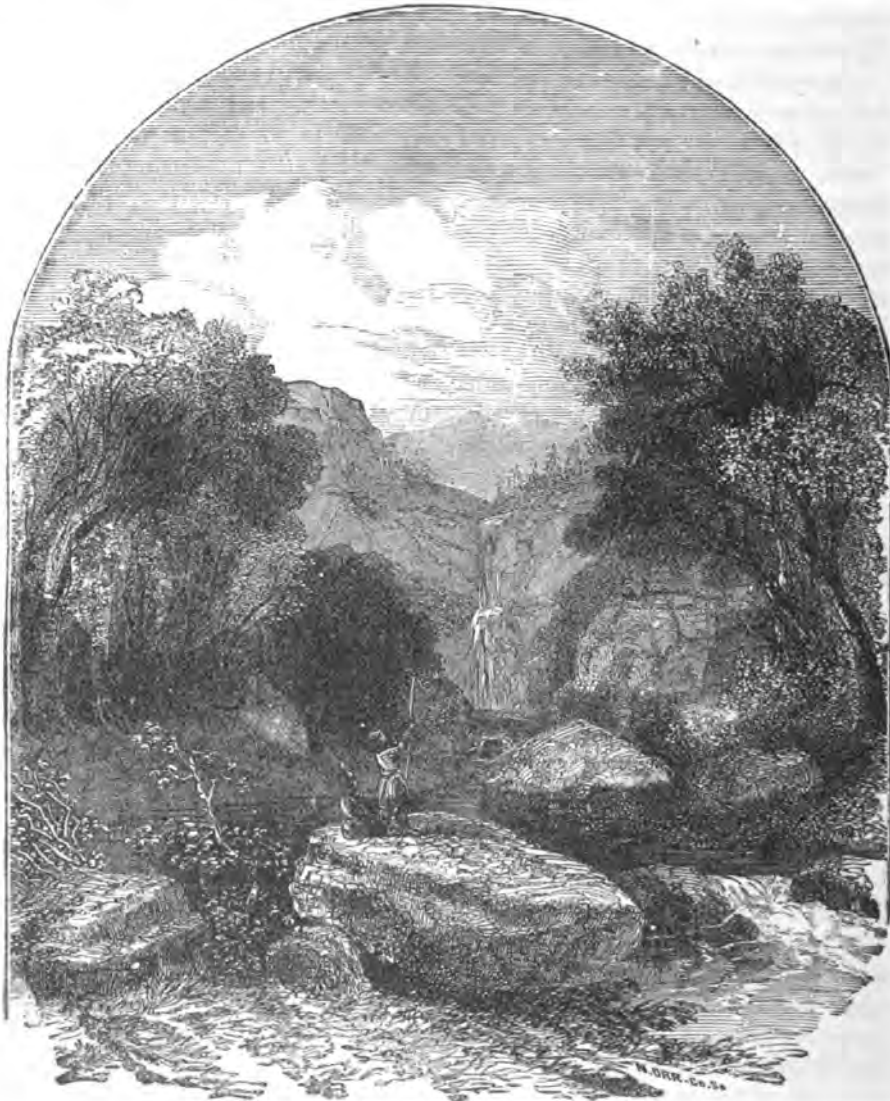
accounted for on the principle that the body is then "put on its good behavior," so to speak. It is a fact that the drunkard and the tobacco users during an attack from an acute form of disease, find their artificial appetites temporarily suspended, the tobacco being nearly or quite as nauseating as to them as to the uninitiated. This is fortunate, since the sick are thus relieved of the usually unfavorable effects of these two poisons, while all of the powers of the system may unite in a grand effort in the line of recuperation. If one's general habits have been uniformly good, I have faith in the "craving" then existing. My experience and observations favor the idea that these are the dictations of nature, ever practically on the alert to remove our disease, though the attending physician gets most of the credit for cures! It is often true, after a long siege, that the system is deficient in heat-generating power, which is often indicated by a desire, a "craving" for candy, it may be, indicating to me that the carbonates are in demand, under which circumstances I feel assured that some of the best forms of the sweets would be useful, sugar or maple syrup being preferable to candy, as it often is made. Again I have observed that some patients almost clamor for pickles, which I can not approve, if made from cucumbers about one-tenth grown, as they are unfit for the stomach of the swine even without being pickled! To meet such "cravings" I am fully satisfied that a seasonable use of the "acid fruits" would be serviceable, not impairing digestion like the pickles, but really

improving it, regulating the appetite, the patient's taste in all respects.
removing the "cravings," satisfying

DR. J. H. HANAFORD.

THE MOUNTAINS OF NEW YORK.

AMONG the favorite inland resorts for summer tourists or tired citizens seeking a summer's rest, recreation, and their character is widely different. Three distinct ranges enter the State



A SCENE IN THE CATSKILLS.

tion and pure air, there are none more popular or more eagerly sought than those among the mountains of this State. The territory they occupy is and extend across it in a general Southwest direction. The most easterly of these ranges is geologically a continuation of the Blue Ridge of Vir-

ginia, and runs through Rockland, Orange, Putnam, and Dutchess Counties, forming the celebrated Highlands of the Hudson. The second range extends through Sullivan, Ulster and Greene Counties, terminating and culminating in the Catskill Mountains on the Hudson. The Shawangunk Mountains run through a very picturesque country, and form a high and continuous ridge between Sullivan and Orange Counties, extending into a part of Ulster County; they are the extreme eastern spur of this range; and the Heldeberg and Hellebark Mountains are spurs extending north from the main range into Albany and Schoharie Counties. The third range extends northeast through Broome, Delaware, Otsego, Montgomery and

Herkimer Counties to the Mohawk, reappearing on the north side of that river, and extending northeast to Lake Champlain; forming the region in the northeastern part of the State known as the Adirondack Mountains. There are many popular hotels and resorts distributed over all these ranges, although the Catskills and Adirondacks receive most attention on account of their wildness, offering, as they do, so great a change to those who would for a time be free from the treadmill round of business and social life in our cities. A week or two of nomadic life in the Catskills, of which our illustration gives a scene, forms a delightful passage in one's history, and supplies a tonic at one's physical and mental to drooping spirits.

SOME PRACTICAL DON'TS.

DON'T give a child any sweets, except molasses candy or chocolate caramels, and these very rarely.

Don't permit a child under five to remain out of bed after eight P. M., even if you have to forego social duties you think most sacred.

Don't think that a child needs food each time it manifests hunger. Try to assuage thirst by several teaspoonsful of boiled and cooled water.

Don't hold a child in convulsions in your arms, but strip it quickly and immerse it to the neck in a hot bath; to which a tablespoonful of mustard may be added.

Don't allow a patient with colic to suffer until the physician arrives; give large injections (two quarts of warm water with ten drops—adult dose—of tincture of opium).

Don't seek relief for burns by the use of cold water; if nothing else is obtainable use warm water; better still, keep the part wet with sweet or linseed oil.

Don't lose your head when with cases of bleeding from the lungs: they very rarely prove immediately fatal. Prop

the patient up in bed and give him small pieces of ice to swallow and fifteen drops of tincture of ergot (no sugar of lead or acid) every hour, until your physician arrives.

Don't imagine that sunstroke (heat prostration) follows exposure to the sun exclusively. The same may be produced by excessive heat even at night, especially when the person is much fatigued, or in a crowded room.

Don't eat pork. When it is absolutely unavoidable to do so, it should be rendered harmless by being thoroughly cooked by a strong fire.

Don't allow meat and vegetables to be placed in the same compartment of the refrigerator.

Don't wear high heels, women who wear them publicly advertise the fact that they seek or wish to maintain serious internal troubles.

Don't mistake weight for warmth in clothing; feeble people may be worn down by heavy clothing, and yet be less sheltered than those who wear light woolen fabrics, both as inner and outer garments.

Don't read, write, or do any delicate work unless receiving the light from above and over the shoulder. Don't read in street cars or other jolting vehicles.

Don't rub the eyes—except with your elbow.

Don't attempt to clean the ears with anything but the tip of the little finger.

Don't attempt to remove hardened ear-wax by picking it out. If you can not reach a physician when hardened ear-wax becomes troublesome or painful, you may gently inject (by means of a fountain syringe) warm water, to each pint of which half an ounce of bicarbonate of soda has been added.

Don't allow yourself to become habitually constipated. Coax intestinal action by regularity of habit, exercise, fresh and stewed fruits, and the avoidance of constipating food.

Don't believe that eating fat will make you fat; quite the contrary holds true.

Don't eat gamey meats; remember that

"gamey" is the hyper-refined word for rotten.

Don't try to check a diarrhoea suddenly.

"Don't pour a mouthful of coffee into an empty stomach, even if you must tear a button from your coat and swallow it before," says an Arabic proverb. This applies to tea as well.

Don't attempt to remove foreign bodies from the upper part of the windpipe by trying to reach them with instruments of any kind. Try giving a violent blow on the back immediately after the accident. If this does not succeed, have the patient held suspended by the feet, head downward, and moved rapidly from side to side while you strike between the shoulders with the palm of the hand; stop this at once if the patient shows evidences of suffocation; if these continue, or the foreign body is not dislodged, send for a surgeon to perform tracheotomy or laryngotomy as quickly as possible.

THE THERAPEUTICS OF WORK.

FROM the *Home Journal* we extract the following pertinent reflections: There was much truth in Mr. Dombey's advice to his dying wife: "Make an effort, Mrs. Dombey." I have myself twice seen apparently dying women of strong will who had been given up by physicians brought to life by the entreaties of their children, and I have seen how these women, watching moment by moment their own feeble bodies, have learned to live beyond their apparently allotted time. I have seen, three times, children left for dead by doctors and friends brought back to life by the long-persistent efforts of the mother or father, who refused to part with the child. One was a case of scarlet fever, another a case of gastritis, where the child seemed to have no life left, and the third was a child, cold and unable to breathe from the effects of cholera infantum. The father, a healthy

man with plenty of flesh and vitality, upon the child's being declared dying opened the clothing over his chest, laid the child against his warm flesh and kept it there a day and a night. The vitality was restored and the child lived.

Many cases of suspended animation pass for death and pass into death by reason of the paralyzed inefficiency of those who should proceed at once to vigorous measures to restore vitality instead of waiting until doctors arrive. Here is where the habit of work, actual everyday mechanical work, aids the mind to prompt action. The worker rarely stands still, helpless in face of danger, but proceeds at once to vigorous action. Habits of work keep the mind alert and the muscles ready to obey. Among the working classes, if my own observation does not mislead me, there are fewer cases of invalidism and of sudden death than among the leisure classes. Steady,

healthy, every-day occupations are not only powerful preventives of disease, but really drive it away. It is the man who coddles himself from draughts who is always catching cold, and the man who watches his digestion who drifts into incurable dyspepsia.

Setting aside consideration of mind-curers, faith-healers, and those numerous spiritual benefactors who like to exercise their superfluous energy on the weak and credulous, one may reasonably assert that the basis of life is really will-power. And the excuse for existence is that will-power is exercised in work.

The will need take at first no cognizance of the past, nor of the future. It says to the moment, "I am here," and to humanity, "I am ready." Both respond. The bodily powers rise at first slowly to the feeble demand, then more quickly. For work is a stimulus and a tonic. Whether chosen in bitterness of spirit or in cheerful admission of its value, whether taken as a medicine or as a pleasure, it is the one grand resource in which may be buried the sorrows and the mistakes of the past, the miseries of the present, and the forebodings of the future.

ELIZABETH MERRILL.

THE REMEDIAL AGENCY OF HEAT.

THE therapeutic value of hot water is becoming more fully understood and more general of application, and its advocacy is more kindly received now than ever before.

There are people still to be found who in spite of the abuses heaped upon their bodies by their parents and themselves, are yet sufficiently rugged to employ cold water as a remedy and re-act from it with pleasing results. But hot applications, of which hot water is the least offensive and most cleanly, are most acceptable as well as most beneficial to the large majority.

Medical men may quarrel over the inaccuracy of the phrases, "I have caught cold," etc., but the mass of people understand these phrases much more readily than they would professional, scientific accuracy of statement. It is not so much a knowledge of professional methods of expression which the poor sufferer from influenza, sore throat, catarrh, rheumatism or pleurisy is seeking, as it is a remedy for his pains. He would say, "call it what you please, only help me and don't stop to argue about it."

Well, then, we will call it "taking cold," and say, "use hot water. Don't be afraid of it; use it freely, but wisely." Frequently where acute nasal catarrh is threatened, a hot footbath, with a hot

compress on the forehead, and one at the nape of the neck will avert the disagreeable condition which seems inevitable. A stubborn cough can be conquered often by persistent application of hot water to the throat and bronchial regions. Surely it is better so to treat the suffering body than to medicate it from one disease into another. Care is, of course to be taken that the clothing or bedding may not become so wet as to bring about more dangerous, or at least, more disagreeable conditions. Lukewarm water is worse than useless, it must be *hot*, as hot as the skin will bear. Then, and only then will the congested blood vessels expand, sufficiently to relieve the throbbing and fever. In many of the ailments of children, such as croup, colic, earache, and toothache hot water is the most reliable and speediest agency of relief. For the aged it holds much comfort, easing the rheumatic conditions of the almost marrowless bones, as with the wand of a magician.

Try hot water instead of squills for the baby's croup; instead of cough syrup and troches for the sore throat; instead of quinine for sciatica; instead bromide or nux for neuralgia. Try it faithfully and patiently and save your drug money toward your new Summer suit, and the new suit will be needed

if you keep your cold weather enemies at bay with a liberal barricade of good, wholesome food, suitable clothing, reasonable hours of exercise, freedom from drugs and narcotics or stimulants. If after all your care, however, you are circumvented and the dreaded enemies occupy your frontal sinuses with neuralgia demons, your bronchi with goblins from coughdom, and dance to weird rheumatic tunes through all your joints, "cook them out." It can be done. The days of miracles

are not wholly past if only hot water be made the medium for this performance. Some genius of a philanthropist will yet invent a mode for applying heat remedially which will do away entirely with the housewife's bundle of flannels sayed up with a view to a hot water crusade against an enemy in "the house beautiful" who is crowding "the man wonderful" closely to the wall with a view to summary ejection.

A LADY PHYSICIAN.

PHILOSOPHY IN FABLE.

PAPER I.—THE FOX AND THE LIZARD; OR, MARRIED, NOT MATED.

THE sun had all but set, and a delightful color pervaded the vicinity of a deep woodland stream reaching far in and up country.

A well fed fox, an old inhabitant of the neighborhood, had set out upon his evening walk. Suddenly coming upon a pretty young lizard asleep under a hawthorne, he had curiosity enough to stop. In a moment the lizard awoke with a sigh, and the fox, addressing her, said:

"Miss Lizard, you seem in grief—can I be of any assistance to you?"

"Alas," replied the lizard, "I am not Miss, but Mistress."

"Married then," said the fox, with a sympathetic glance, "and one so young, too."

"Yes, indeed," replied the lizard; "but if my husband were only kind to me I should not be here this evening alone, with none to exchange a word. Only you came along, I was beginning to wonder if there was anything alive in all the woods."

"If it be not rude, Madam, may I ask you how long you have been married?"

"Seven years to-day," returned the lizard, "and I thought my husband so good and beautiful when I first met him. He is a leopard from Southern climes, and his charming spots and graceful step in the dance first attracted me."

"Only girl-like," said the fox, glancing upward and uttering a long, low whistle.

"Yes, I know it," said the poor lizard. "But if I could only get him to be a little kindly I should feel so happy. As it is, we have not a solitary taste in the same direction; not one idea in common."

"I don't see," returned the fox, "how you can expect it. Neither by nature, food, nor habits of life is such a companion intended for, nor suited to you."

"I begin to realize it. But then," pursued the lizard, "he looks so nice, and my main idea when we married was, that by association with myself he would soon change."

"Ha, ha, ha," laughed the fox, "the old mistaken notion again. Why, my dear Mrs. Lizard (for her husband's name did not set well upon her), you surprise me! Though young in years your experience might have taught you that your husband's entire make up far from agreed with your requirements. Had you only considered his form, voice, and the rougher outline of his head, you would know that such a gentleman must necessarily and always be antagonistic to you both physically and mentally. My dear lady," continued the fox, lowering his voice, "if any child in this

vicinity, only one-third your age, saw your husband coming, and for an instant beheld his spots, its intuitions of danger would inevitably force it to run ; yet you marry and settle down with this beast. Indeed, I am sorry for your fate—you have my heartiest commiseration."

"But, Mr. Fox," returned the lizard, "can you suggest nothing for me to do, that will in some measure alter things, if only a little? Can I not, for instance, by the use of chemical soap, wash out my husband's spots?"

"I fear not, madam, and if you could, it would be then next to impossible to lessen the great width between his ears, reduce that ferocious look in his eyes, or change the mixed meanness and determination depicted around his mouth."

"Alas!" said the lizard, "I fear I am undone, and that no relief remains, save in death, or by divorce."

"You are right for once, madam," said the fox with emphasis.

"But," pursued the lizard, pray, "Mr. Fox, were *you* never married?"

"I was once, madam, and to the handsomest young fox in this county. We had a large family, all of whom are now scattered and doing well, as far as I know. My poor wife was unfortunately hunted down and killed last month by Farmer Catchemalive, so you behold in me a widower."

"Dear me, Mr. Fox," replied the lizard, "if you don't mind my saying it, I believe I should be quite content and happy with you—you are so sympathetic."

"It is not leap-year, madam; and if it were, I assure you that beyond having a fellow feeling, we are entirely unsuited to each other. I am honest in this, or I might easily take advantage of your loving declaration. My late wife might have been quite as congenial, or nearly so, to me, as your husband is to you. I know of such instances among my fox lady and gentle-

men friends. She was, however, absolutely one with me in everything. When hunted by hounds or men, we invariably ran together. If I happened to fall, she without a moment's hesitancy gave me a leg up; or, in getting over stile, rather than see her slip, I always gave her a leg down. She had a sweet disposition to begin with; and in these characteristics, where she failed in being my exact counterpart, she became my complement. For instance, we both loved chicken; but then, I doted on a leg, and she liked the wing. So fond, indeed, was she of wing, that in order to please her I would sometimes run out late at night, and hurriedly fly home with the wings of four chickens, leaving their bodies behind. You will believe me when I say it was perfect bliss to live with such a girl; indeed it was," continued the fox, his voice gradually becoming husky, and a slight moisture gathering in his eye.

At this juncture (woman like) the poor lizard looked down, then blushed, and burst into tears. But there remained only an instant for grief. The gamekeeper's step was heard in the distance; so Raynard, which was the Christian name of Mr. Fox, hastily (though in accord with perfect Spanish fashion) kissed the lizard's hand, and wished her a sweet "good-night," and was gone.

PAUL BLANC.

FROM THE OLD GERMAN.

How should the heart of a little child be?
 As pure as the lily that blossoms on the lea,
 As clear as the dews from the heavens that fall,
 As true as the mirror that hangs on the wall,
 As fresh as the fountain, as gay as the lark
 That trills out its song 'twixt the day and the dark,
 As glad as the angels when, soaring, they fly
 On the bright wings of love to their home in the sky.

"*Harper's Young People.*"

NOTES IN SCIENCE AND INDUSTRY.

A Remarkable Furnace.—A surprising account is given of a furnace constructed by an inventor to secure the perfect combustion of coal, and thus avoid the great loss of heat and waste of fuel resulting from the imperfection of the best methods hitherto employed. "In a common cylinder stove, with a few kitchen shovels of coal"—so runs the statement of an eye-witness of one of the exhibitions of this invention in Philadelphia—"a fire was lighted, which, in a few minutes, without artificial draught, created a heat intense enough to melt cast iron, spiegel, and manganese ore. These results are accomplished by so arranging the fire that two different currents of air of different temperature pass through separate parts of the grate. A partial vacuum is created in the center of the grate, and a cyclone in the drum of the stove, thus producing perfect combustion all over the surface of the coal. In fifteen seconds from the lighting of the fire the drum is red hot. A few seconds more and a rapid vibration occurs in the drum, and is felt all over the room with startling effect. The cyclone in the stove is raging in full force, the drum loses its heat, and it is discovered that the air is being drawn down the chimney. Within four minutes from the time of lighting, the materials above mentioned may be melted, and yet the temperature of the room may be kept at a moderate heat. A 50 pound charge of coal will last 24 hours, so slow and so complete is the combustion."

New Theory of Petroleum.—

The theory is held by Professor Mendeleef that petroleum is produced by water, which penetrates the earth's crust and comes in contact with glowing carbides of metal, especially those of iron. The water is decomposed into its constituent gases, the oxygen uniting with iron, while the hydrogen takes up the carbon, and ascends to a higher region, where part of it is condensed into mineral oil, and part remains as natural gas, to escape wherever and whenever it can find an outlet. If this assumption is correct, and a sufficient store of metallic carbides is contained in the earth's interior, petroleum

may continue to be formed almost indefinitely, and yield a supply of fuel long after coal is exhausted. Professor Mendeleef supports his views by producing artificial petroleum in a manner similar to that by which he believes the natural product is made.

The Cause of Mirage.—Emil Sorel, in *La Nature*, says: "There are days on which, in certain weather, and despite the curvature of the earth, the distance of visibility is doubled, or more than doubled. This phenomenon is explained to us by a well-known law of physics. If we throw a coin into an empty vessel, it will be hidden by the edge of the latter, at a certain distance; but if we fill the vessel with water, the coin will become visible. We have here a case of refraction, such as is explained in elementary works on physics. Every one also knows the theory of the mirage put forth by the celebrated Monge, who explains the phenomenon as due to a diminution of the air's density in contact with the superheated earth. A contrary theory will explain the mirage at sea. While the sun is making the atmosphere intensely hot, the sea and the strata of air in contact therewith remain relatively cold, and these strata become superposed in the order of their density. A luminous ray emanating from the sea will pass from one stratum into another of less density, there will be a refraction, and an object beneath the horizon will be seen above it. This theory supposes two conditions, to wit: a heating of the atmosphere, while the sea and the earth remain relatively cold, and a calmness of it to permit its strata to become superposed in the order of their density. It is precisely when these two conditions are fulfilled that the phenomenon of the mirage occurs. On such days ships rise instead of descending in measure as they recede. As the horizon is perceived by direct visibility, a ship is finally seen above the horizon as if it were suspended in the air. It is the famous 'phantom ship,' familiar to sailors—a visible ship in its natural, upright position. If atmospheric conditions were favorable, a second

ship would be seen above the first, etc. Certain mariners worthy of credence have assured me that they have seen as many as seven superposed ships."

A Remedy for Thrush.—Speaking of the celebrated horse Knox being ruined by thrush, a horseman remarks that, so far as his observation goes, New England breeders do not pay sufficient attention to the feet of their colts when in the stable, and in consequence of this neglect many severe cases of thrush occur every year. "My remedy for thrush," said he, "is a mixture of tar, lard, and vitriol in the following proportions: One pint of tar, one pint of lard, one ounce of pulverized blue vitriol, and one and one-half ounces of pulverized white vitriol. Melt the lard and tar in the sun, on a hot day, add the vitriol, and mix thoroughly. My reason for melting in the sun is that the tar is less liable to harden than when melted over a fire. Put some of this mixture on oakum, clean the diseased foot thoroughly, then apply the oakum, pressing it around the frog. This has never failed to effect a cure with me."

A Great Industrial Expedition.—One of the latest and best outcomes of newspaper enterprise—best, because of its practical relation to the present and future of industrial affairs in America—is the expedition of workmen, called the Scripps League, to Europe. This league comprises the following Western newspapers: The *Evening News*, Detroit, Mich.; the *Press*, Cleveland, Ohio; the *Evening Post*, Cincinnati, Ohio; the *Evening Chronicle*, St. Louis, Mo.; the *Echo* (the League weekly), Detroit, Mich.; the *Sunday News*, Detroit, Mich. The object of this expedition, now being carried into effect, is sending a large party of practical workmen, representing the common trades of the country, for the purpose of visiting the industrial centers of Great Britain and the Continent, paying all the expenses of the trip. About fifty mechanics and a considerable staff of correspondents, artists, and photographers, constitute the expedition.

The main purpose is to accumulate information concerning the advance of industrial art, from the standpoint of actual workmen. While experts, scientists, and theorists have been making observations

abroad, the opportunity has never before been afforded the workmen themselves to investigate the advance of their various trades. Each member chosen to accompany the party will therefore be especially selected for the knowledge he has of his trade, his capacity for observation, and his ability to convey to others a fair idea of what he has seen abroad. The progress of the party and the results of observation are sent to this country by means of an extensive cable service and correspondence. Ultimately the whole outcome will be placed in substantial book form, in order that it may be of permanent value to the working masses.

The steamer *City of Rome* was chartered for the purpose of taking the expedition abroad. The route of the party in its main features includes visits to Liverpool, Birmingham, Manchester, Sheffield, London, and other great manufacturing points in England; Glasgow, and the shipbuilding industries of the Clyde in Scotland; Rouen, Paris, and the great lace and silk centers of France; Essen, Dusseldorf, Antwerp, and other leading iron and industrial centers of Germany and Belgium. The central point, however, is Paris and the facilities which the World's Exposition will afford for observation of mechanical arts in all branches.

Cranial and Facial Protuberances.—To the phrenologist, quality is as important as quantity; and in nothing is the quality of the individual indicated more than in the protuberances of the head and face. In people of an uncouth nature they partake of their low surroundings, and are heavy and coarse; while in advanced and cultivated people they are more delicate—indeed sometimes too delicate.

In our life's experiences we see all shades of character; some too coarse; some too fine; but I think the majority have more or less of that happy balance that indicates the higher culture and character of our nineteenth century civilization.

If there is one thing the phrenologist believes in, it is the proposition that the brain is the seat of the intellect in man, and that the brain forms the man, and not the man the brain. Of course the man's actions, conditions, and surroundings, may and do, more or less, affect the brain. But, even under these conditions, the brain has first

to be formed before it can affect the human action; and when formed, and not until formed, does it govern the body. The bodily conditions, more or less, affect the mental action, but the brain is the seat of power.

If we go back to the early ages of man we find facts enough to reconstruct the primeval races. They were of a rude organization, and the protuberances of the skull proper were in accordance with their rude and barbarous lives. Coming down to the ancient Oriental nations—the Jews, the Assyrians, the Egyptians, the Persians—we see finer types of organization, with culture and refinement, yet an aggressive cast withal.

The well-developed bridge of the nose, in particular, is most conspicuous. In the earlier Greeks we see a combination of the primeval and cultivated man. Later, the more refined outline, that has become classical for artistic beauty and culture. The mental organization of the Greeks, from the time of their first coming into notice to the decline of their power, was in harmony with their surroundings. The brain developed the man; as he was, so was the brain power behind: or, better, as was the brain power so was the man.

The ancient Romans only sustain the theory, and add weight to the facts and conclusions. The Roman nose is proverbial. It was an aggressive nose, of the military type. Later it became more refined; in some cases as delicate as the Assyrian, and when this type was reached the intellect of the nation was in harmony with it.

The phrenologist, in his earlier researches and observations, noticed that where there was a large osseous development just behind the ears the individual was combative in proportion to its size; and where the protuberance was continued, a little lower down, the individual had powers of endurance in proportion to its development.

The prominence of the bridge of the nose, and the character indicated by it, are older than physiognomical science itself. The phrenologist simply accepted the anatomical fact, as it was in harmony with his ideas and not opposed to them. It was like the key in music—it indicated a certain pitch or character in the make-up of the man. The points I have indicated correspond to that key-note. They govern the analysis of

the character of the subject under the examiner's notice, but the examiner does not depend merely upon the size and shape of the brain any more than the sailor, in judging of a vessel, would look simply at its size, or tonnage, and model. He would look also at the material of which it was built, how it is built and rigged.

Somehow the world seems to think that a phrenologist should not, like other men, in other departments, have common sense, and exercise it. He should, they seem to think, merely see so much brain and such a development of shape. He should not look at texture and corresponding points whereby character is indicated. The architect, when he passes judgment upon the strength of a column, must know more than its mere size; he must know of its material, whether pine or oak, whether brick, stone, or metal. The mere contour may be there, but that contour may be made up of some weak and perishable material, or it may be made of enduring brass. The opponents of the science of Phrenology refuse to believe in it for one reason, viz., they claim that in certain points on the skull there is no brain corresponding to the external protuberance. Their reasoning is as follows: The phrenologists claim that the brain is divided up into organs, and they have the skull all mapped off into certain groups, but here and there no brain lies to correspond to certain external prominences. No sensible man will contradict the statement that there are crests and ridges on the skull that do not exhibit brain development. But these objectors do not go far enough. They do not seem to see that nature has put certain marks upon the human skull that are correspondent to the brain's nervous quality, and type of the individual, and not to its contour merely. The phrenologist is guided by these external marks and by other external signs also for his estimation of quality a most important item of diagnosis. This is no fine-spun or ingenious theory. The fact is as potent as any scientific fact of value. These protuberances bear proof that the brain is the seat of power, and that the power is not confined to the mere contour of the brain, but that there is a power there that causes the strong points of the brain to assert its

quality in bony protuberances of the cranium and face, or in the whole of the skull proper.

Under the light of these facts the "frontal sinus" is no longer a drawback and apparent contradiction to the claims of Phrenology. The external sign is there in bold relief. That quality of the mind that governs the perceptive element makes itself known by the presence of certain projections over the nose and elsewhere. Notwithstanding all the ridicule, and the anti-phrenological research, the contour of the skull, its protuberances included, is a sure indication of the nature of brain. The variety is infinite. No matter what the character of the individual, the contour of the skull—the whole skull proper—reveals it.

Phrenology is a most practical science; of great benefit to the world in general, but of greater value to the individual. By it he may not only the better study and under-

stand the world in general, but the better understand himself, and how to call on one faculty to supplement another.

ISAAC P. NOYES.

Washington, D. C.

The Invention of the Thimble.

There is a rich family of the name of Lofting in England, the fortune of whose house was founded by such an apparently insignificant thing as the thimble. The first ever seen in England was made in London less than two hundred years ago by a metal worker named John Lofting. The usefulness of the article commended it at once to all who used the needle, and Lofting acquired a large fortune. The implement was then called the thumbbell, it being worn on the thumb when in use, and its shape suggesting the rest of the name. This clumsy mode of utilizing it was soon changed, however, but the name softened into "thimble" remains.



NEW YORK

August, 1889.

THE GRAY COMMISSURE AS A PSYCHIC CENTER.

AT a late meeting of the Anthropological Society of Paris, an interesting discussion was held, with reference to a line of investigation undertaken by M. Terraz de Macedo, on the relation of the gray commissure of the cerebro-spinal system to manifestations of mental faculty. The gray commissure is sometimes wanting in the structure of the brain, and therefore physiologists have

entertained a variety of opinions with regard to its necessity and importance in the cerebral economy. Variations of constitution occur in the minute anatomy of the brain as they do in other parts of the body, and it does not necessarily follow because there may be a want of substance in a given part, or a failure of identical arrangement in an organ of one person as compared with its constitution in another person, that their comparison indicates some defect prejudicial to the mental or physical integrity of the former. For instance, the distribution of the nerves, the location of the arteries, or veins, etc., is by no means identical in different persons; and it does not follow because A differs from B in this respect, that he is inferior in the completeness of his physique, or that his functions are any the less perfect in their activity. So, many anatomists attach no importance to the want of the gray commissure in the brain, although

it would seem at first sight to be an essential part.

M. de Macedo has looked into this matter somewhat extensively; has examined over two hundred brains with great care, and of this number found the commissure wanting in forty-four cases. In order to ascertain whether or not any significance should be attached to this peculiarity he made a minute examination into the history of the subjects, and, according to his report to the Society, "In each of these cases, without exception, inquiry demonstrated that the person lacking the commissure presented the following physiological characteristics: variability of opinion, instability of character, public and private irregularities, extreme irritability, insolence, impertinence, ingratitude, want of reflection and circumspection, failure of good sense and of mental harmony." On the other hand, M. de Macedo's examination showed that, as a rule, those provided with the commissure were generally endowed with qualities quite the opposite to those undesirable ones mentioned.

A declaration of this sort in an assembly like that of the Anthropological Society, awakened not a little controversy. Ground was taken against the inferences of M. de Macedo, to the effect that he should have considered other characteristics and peculiarities of the cerebral organization, and endeavored to ascertain how far anomalies of a physical nature had to do with the mental peculiarities. It does not seem that de Macedo included in his view any other cerebral peculiarity than that of the failure of the gray commissure. On the part of the essayist it was claimed that a

determination based upon over forty observed cases certainly went much beyond the nature of mere coincidence, and therefore it was worthy of respect, and that the observer had little, or no reason, to go outside of the direct line of his inquiry. The same objection might lay against Broca's observations when he insisted that so important a function as that of language was dependent upon a small part of a certain convolution; but the observations that have been made since, in regard to a language center, have determined the fact overwhelmingly. The part that is performed by the main commissures is that they bring the two hemispheres into relation and co-ordination. Center is related to center by fibers which connect them one with another. Every center having its peculiar action in the mental economy, if that action be wanting, it must, to some extent, impair the outcome of mental activity. If a little tumor, by its pressure upon a nerve branch, can produce convulsions, and throw a person entirely out of gear, certainly the division of a commissure that associates certain parts must in some way modify or suspend the concerted action of those parts.

A center may be defective in itself through loss of substance, or through want of proper nutrition. The lunatic is a lunatic by reason of brain disease or a failure of the co-ordinate relation of his mental faculties; his mind is like a string of bells that have lost tone and quality.

The percentage of cases in which the gray commissure was lacking, reported by M. de Macedo, appears to be very large and it seems to us next to incred-

ible, especially when we know that the gray substance is exceedingly susceptible of injury by manipulation, particularly when the fluids of the brain have become coagulated. We are not prepared, therefore, to accept the inference with regard to the character, as M. de Macedo has related it to the commissure, and should have been better pleased with his paper had he given us some data, showing the cranial contours and cerebral developments of his cases. We should then have had a better opportunity for considering the force of his conclusions, assuming, of course, that his determination of the absence of the commissure to be a constitutional condition.

TOO MUCH ALIKE.

THE sensation of recent date was the prize fight between two big, human brutes. Basing our judgment on the attention given it by newspapers and bulletin boards, and on the animated discussion of the comparative merits of the "great" bruisers in circles deemed refined, no event since the Centennial celebration has given such a stirrage to the general community. Even the Johnstown calamity was eclipsed, and affairs—social and political—lost their interest. The excellent citizen who avowed that "such brutal exhibitions were a most shameful outrage on modern civilization" was found scanning the last "Extra," and the man who on the 9th of July declared that he did not know who "beat" in the fistic contest was the subject of ridicule.

Since the fight there has been a deal of moral talk and preachment in the re-

ligious and secular press about the *status* of public sentiment, and the weakness of civil authority in regard to such exhibitions. No doubt a large class of people look upon them with most hearty aversion as degrading and shameful in the last degree; but the fact that two men can be openly trained for months for the express and widely-known purpose of meeting in a rope ring and pomeling each other with bare knuckles until one is so badly wounded that he can no longer stand up, is a clear expression of the favoring interest of popular feeling.

Can this be otherwise when the better class of the community are found giving more and more favor to those forms of muscular contest that are represented by the ball match, the race-course, the rowing match? At New London thousands of well-educated and well-dressed men and women assembled to witness a series of boat races between crews of half-naked young men, and when the young men of one boat were straining their muscles to the utmost, and their hearts to the edge of bursting, in the effort to distance their adversaries of another, the air was rent with the roar and screams of the half-frantic spectators.

"Very high-toned affair!" quoth your collegian. We question its difference in moral effect from that of the display of the so-called "brutes" of the fistic ring. So far as courage is concerned, do not the latter show the more?

The editor of one of our evening newspapers received an invitation to attend a reception in honor of the victorious champion—in which he was informed that his presence would "add a dignity to the affair which, perhaps, it

would not otherwise possess, and will also assure the public at large that the religious element in our society and the school of ideas represented by the scientific development of human muscle are in entire harmony with each other."

This shows that opinion among sporting men is pretty well settled that a boxing match, with, or without, gloves, is entitled to a place in the category of legitimate athletics, and whether a man has his skull fractured at football, or his arm broken in a boat race, or his eyes put out in a ring set-to, the spirit of the thing is all of a piece.

We approve all rational measures for the physical education of young people, but when the claims of superiority for this college or that university are made to hinge upon the prowess of its ball players or boat rowers, the higher American education appears to us to have acquired a complexion that is not very admirable, and it is time to consider seriously the drift of it.

A CENTENNIAL SUGGESTION.

THE hundreds of thousands who gazed upon the great spectacles that have made the Centennial of Washington's inauguration ever memorable, saw nothing more interesting than the finely appointed regiments and well mounted officials from the Southern States. Governors and generals and soldiers were there in the splendid review of the second day who twenty-five years ago were heart and soul with the Confederate cause, having pledged everything they held dear in its behalf. But now they rode in the line with men whom they had once fought desperately and the most cordial feeling of amity and fra-

ternity were exhibited on both sides. It was not strange that the crowded avenues and squares thundered and roared with applause when the fine specimen of manhood and martial grace, Gen. Fitzhugh Lee, of Virginia, rode by, for he is a man to command the warmest respect. He was one of the first of the Southern leaders to respond to the overtures of Northern sentiment for the renewal of old time relations of fellowship between North and South. Perhaps it is not known as broadly among Americans as it should be how his warm heart responded to such an overture on a public occasion soon after the close of the terrible conflict, although the bearer of the palm branch was one whom the South had regarded as their most bitter enemy. Henry Ward Beecher, the pastor of Plymouth church, had gone South to lecture, and it was in Richmond that he appeared before a large audience mainly composed of men and women who were ready to stifle his voice with hisses and excreations. Prominent among them sat Fitzhugh Lee and several Confederate generals who had come out of curiosity, and who probably had no thought of manifesting any approval of what he might say.

Mr. Beecher before he began his lecture quietly surveyed his audience, and recognizing General Lee he asked, "Is this General Lee?" The only reply was a chilling bow. Mr. Beecher advanced toward him with outstretched hand and said, "I want to offer you this right hand, which in its own way has fought against you and yours, but which I would now willingly sacrifice to make the South prosperous and happy. Will you take it, General?"

Amid the hushed surprise of the audience General Lee arose, stepped forward and stretched his arm across the foot-lights; and as their hands clasped there arose from that assembly such applause as the old hall had rarely heard before; and the abolitionist orator, who had done about as much as any man in the country to bring on the war that devastated Virginia, rode through Richmond next day amid cheers of the men who were ready to mob him a few hours before.

What a noble soul has the man who can smother a deep resentment and in the movement of proffered civilization show publicly his appreciation of the frank, courageous spirit of the man over his determined enemy! That act of Fitzhugh Lee did as much as the act of any other Southern man toward restoring friendly relations between the Northern and Southern people, and the brave Virginian can never regret it.

Our Mentorial 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.

ALWAYS write your full name and address plainly. If you use a pseudonym or initials, write your full name and address also.

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. Personal and private matters addressed to the Editor in the professional capacity of a physician will also receive his early attention.

IMPAIRED HEARING.—G. B.—It is probable that the membrane of the drum of your ear is thickened and does not respond, therefore, to ordinary sound vibrations. The cause may be of a different nature, however, and, to know surely, your best plan is to consult a physician who has experience in the treatment of ears. Any attempt at a remedy without knowing before the nature of the trouble would be unwise. The ears should not be trifled with.

PRIZES FOR STUDY.—B. D.—We do not altogether approve the indiscriminate offering of prizes or premiums for successful study, or, rather, recitation. As a rule, the mind that must be stimulated to exercise in legitimate ways by desire to secure a prize, will not exhibit much capacity. Desire for improvement for improvement's sake—which means substantial growth of the capacity—is the only true stimulus that is perfectly healthful. Benefit may arise from inducing youth to take physical exercise through the proffer of prizes, medals, etc., since the close student is likely to forget the needs of his body.

BRAIN WEIGHT OF THE SEXES.—M. C.—It is incontestible that the brain of men is heavier than that of women, but weight is but one factor in the comparison. Observers vary in opinion with regard to the influence of weight, although the majority insist that it must be taken as an important item in the estimate of capacity. Two leading French physiologists claim that *sex* has no influence on brain weight; it is merely a question of height and physical development. Tall, large women have large heads. We should like to institute a comparison on this ground, and ask our lady leaders who can give some attention to the matter to send the editor of the PHRENOLOGICAL JOURNAL the following measurements of any tall and large-propor-

tioned women among their acquaintances; circumference in inches of the head on a horizontal line covering the widest and largest diameters—say an inch above the ears; length of a line passed over the crown from one ear opening to the other; length of a line from the root of the nose over the crown to the bony projection at the lower margin of the back head; diameter of the head at its widest part, and the diameter from front to back. This is a method of brain comparison that has not been looked into sufficiently, and it has an important bearing.

PROPRIETARY MEDICAMENTS.—I. L.—Their name is legion, and it is extending. According to one who has looked into the subject, there are 563 manufactories of patented compositions called medicines in the country, employing a capital of nearly twelve millions of dollars. The output in bottles and boxes of the various stuffs is therefore enormous. What suckers the American people are, and how gullible!



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 the Author of "Ways of Life," etc.—In the May number of your excellent monthly there is an editorial on "The Down Grade," which is particularly happy and valuable. It is a just representation of human life indulging itself in little forbidden pleasures. The editor cites but a few cases to illustrate his point, but they are innumerable in the actual experience of men. Indeed, nearly all men get on the "down grade" sometimes, and would come to disaster if they did not "break up" in good time. But it is dangerous to trust to the breaks. The only safe way is to avoid the down grade. This down grade of the article is the "easily besetting sins" of the apostle. That phrase of the New Testament is one of terrific import, if we look forward to the literal catastrophes to which such sins lead men. Nearly all the great disasters of men come from these

ELECTRICAL TREATMENT.—F. A., Cincinnati.—You need a book describing at length the structure of batteries and the development of currents. Such a book as Haynes's or Amidon's furnishes such information. White's book relates chiefly to the application of electricity. We are acquainted with the battery you mention, but as a rule in the smaller instruments the positive pole is to the left and the negative to the right. You can tell by trying the electrodes which is the positive or negative, as the current is more strongly felt from the negative. The *primary* current is that produced simply by the elements in the jar or cell; the *secondary* is that produced by the coil. In the ordinary Faradaic batteries, such as are sold at low prices, the primary current is rarely used alone, but in connection with the secondary or *induced*. One who intends to employ electricity as a therapeutic agent should become well informed about it, otherwise more harm than good may be done.

trifling aberrations, in which they indulge without fear.

But as I read the article, this thought occurred to me: Are not these journals, and other monthlies, also, scattered through with gems of the first water, which ought not to be lost? Should not every publishing house have a gem-gatherer, with a fine eye and quick love for such things, to preserve and set in order these rubies of speech and spirit that now and then sparkle among the common things of journalistic life?

Was that the way the Proverbs of the Old Testament were gathered? We are losing much treasure. If once in ten years the publishers of the PHRENOLOGICAL would give us a volume of these gathered good things, it might contain the crown jewels of the decade.

I don't charge anything for this suggestion, but there are books and books mouldering in heaps of thrown-away rubbish.

Shall it always be so? Once we threw away the cotton seed, now we make choice oil from it.

Yours for preserving the jewels,

G. S. WEAVER.

PERSONAL.

SIMON CAMERON, Theodore D. Woolsey, and Maria Mitchell are among the distinguished Americans whose names have been added recently to the roll of the dead.

Mr. Cameron was ninety years and three months old, and for sixty years a public man. He was Adjutant-General of Pennsylvania in 1828, a friend, and counselor of Andrew Jackson, made James Buchanan Senator, and was Pennsylvania's choice for President in 1860, and Lincoln's Secretary of War. In fact, Simon Cameron was one of the most powerful men of modern times in American politics, and said to have been "the only one among President Lincoln's counselors who understood the magnitude of the Rebellion from the very beginning; and the first member of the Administration to declare that it was necessary to proclaim Emancipation and to employ colored troops."

The venerable ex-President of Yale College was born Oct. 31, 1801, in New York; was graduated at Yale in 1820; studied law, then theology, and, although licensed to preach, was a tutor, and, later, Professor of Greek at Yale. In 1846 he was elected president, and under his management the college made its best progress toward becoming a university. He gave much attention to political science and civil law, and published several books in those lines. He died July 1, last.

MARIA MITCHELL, of world fame as an astronomer, was the daughter of William Mitchell, the astronomer, of Nantucket, Mass. Born Aug. 1, 1818; she died June 23, 1889. She commenced the study of astronomy when a mere girl. In 1847 the discovery of a comet made her famous. In 1865 she became Professor of Astronomy at Vassar College, and remained there till her death. A member of several scientific societies, she was also interested in efforts for the advancement of women.

WISDOM.

"Thou must be true thyself,
If thou the truth would teach."

LIFE is not so short but that there is always time enough for courtesy.

Good nature disarms enmity, allays irrita-

tion, stops even the garrulity of fault-finding. It more than half overcomes envy.

It has been said, more in sadness than malice, that cotton sheets and newspaper sheets are alike in the respect that a great many people lie in them.

CAN it be expected, in the hope of a future life, that we will take with us from this life anything more than what we have wrought into our minds and characters?

It should be immaterial to a man whether he be proud of his ancestry or not. The vital question is, would they be proud of him?

ATTENTION is the intellectual, and intention is the moral attitude of the spirit; and both together are the complementary phases of all human activity.

IN MYSTERY.

WE see but dimly here God's will and purpose

We are but children groping in the dark,
Through fogs of doubt our highest intuitions,
Seeking for truth, find now and then a spark

That, magnified, distorted by the vapor
Of our own ignorance, we think the sun.
And straightway we proclaim "the morning dawneth,
Youth's heralds have arisen, our task, is done."

But we forget, though truths we may discover
And find a solar system in each spark,
That it will set, and leave us need of others
Which we must find or wander in the dark.
Truth hath no boundaries, it is infinite,
Yet owns a glorious galaxy of stars
That one by one arise, and from the heaven
Of highest thought shine out like jewel-spars.

With reverent awe and careful introspection
We watch the rays that struggle this one night,
Yet never dream what myriad constellations
Of heaven-born truths ne'er greet our mental sight.

The wisest learn but little tho' they wander
In quest of knowledge over all the earth.
The humblest child may puzzle and confound them,

A winged insect, or a floweret's birth,
But ah, the soul hath treasurers all unknown
Undreamed of by the sage of our time,
Triumphs of truth, and crowns of victory
Shall yet appear to make each soul sublime.

BELLE BUSH.

MIRTH.

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

BALKELY—"What's the matter, deah boy? Why don't you sit down?" Calkley—"Cawn't you know. Got on a standing col-lah."

STERN parent (to a young applicant for his daughter's hand): "Young man, can you support a family?" Young man (meekly): "I only wanted Sarah."

AN Irishman was planting shade trees when a passing lady said: "You're digging out the holes are you, Mr. Haggerty?" "No, mum. Oim diggin' out the dirt and lavin' the holes."

FIRST parson—"Yes, I'm off for the mountains; my hay fever date is next week. When does your attack begin?" Second parson, (sadly)—"I shan't have the hay fever this year—congregation too poor."

"You are Mr. Quezeen, the husband of the celebrated lecturess on cookery, are you not?"—"Yes, sir," replied the dejected, hollow-eyed man, "I am the man she tries her new dishes on."

I AM devoted to phrenology, and I love the study of literature, and am puzzled as which I should make my life work," said the student. "My dear boy," returned the professor, "why don't you toss a cent and decide the matter? Heads, phrenology; tails, letters."

PAT (gaping at the letters on a Hebrew butcher's sign): "Here, Mike, 'tis yerself has the foine l'arnin'. Can yez rade that now?" Mike: "I cannot; but if I had me flute here I belave I cud play it."

"It doesn't take me long to make up my mind, I can tell you," said a conceited fop. "It's always so where the stock of material to make up is small," quietly remarked a young lady.

"Who is your family physician, Freddy?" asked Mrs. Hendricks of the Brown boy. "We ain't got none," said the boy. "Pa's a homeopath, ma's an allopath, sister Jane is a Christian scientist, grandma and grandpa buy all the quack medicines going, Uncle James believes in massage, and Brother Bill is a horse doctor."



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 the Editor with recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

ZOOLOGICAL SKETCHES, and Contributions to the Out-door Study of Natural History, by Felix L. Oswald, Author of "Summer Land Sketches of Mexico, Central America," etc. 8vo., pp. 266, fancy cloth. Philadelphia: J. B. Lippincott & Company.

This is a very interesting volume, and was written some years ago, but its topics, belonging as they do to the field of nature, are very interesting to the student who loves nature. It need not be said that Dr. Oswald's style is marked for its clearness and fluency. When touching upon any interesting topic he is one of our most engaging writers. Ten chapters make up the book. In these he describes the ape and monkey family, sheep, the rodent tribe, bats, cats, and dogs, the pets of different lands etc. His book abounds in matter that is not to be found in the average book of its class. Thirty-six illustrations supply their additional attraction to the text.

INEBRIETY: Its Causes, its Results, and its Remedies, by Franklin D. Clum, M. D., Author of "Men and Women." 12mo, pp. 248. Philadelphia: J. B. Lippincott & Company.

The object of this book, as intimated by the author in his preface, is to give a clear and impartial description of drunken folks. The subject is treated mainly from the scientific point of view, and portrays the drunkard in colors that are true to life.

How is it that the unfortunate victim of the drunken habit gets into his miserable plight? How is it that he shows such feebleness of will, such want of conscience, such want of self-respect, and such lack of resolution to carry into practice any scheme that tends to warrant his improvement? Dr. Clum finds answers to these questions in the very nature of the alcoholic habit, and insists that the most confirmed and degraded drunkard can be reformed if his directions are faithfully observed. That "if" is a very important little word, as

specialists of inebriety will admit with almost humorous zest. Furthermore, he claims that the most poverty-stricken man can carry out his plans if there is an honest desire in his heart to reform.

Of course Dr. Clum is aware of the view taken by the specialists, that inebriety is a nervous disease, and for the most part accepts it, and that a greater or less degree of irresponsibility is attached to a drunkard's conduct, and therefore it is necessary for the production of any positive result in the reformation of a man that he should be under the control of an intelligent physician or friend. He is very earnest in warning those who drink at all against pursuing the habit, for in the end an irresistible craving for alcoholics is very sure to be formed. This book will be interesting reading for moderate drinkers. The style is not fanciful; there is no attempt at sensational or dashy sentiment. It is a calm, clear statement of facts bearing upon its terrible theme.

LECTURES ON BRIGHT'S DISEASE, by Robert Saundby, M. D., Edin., Fellow of the Royal College of Physicians, London, etc. 8vo, pp. 290. Price, \$2.75. New York: E. B. Treat.

Made up, as this volume is, of lectures by an eminent Scottish surgeon, it will be welcome and interesting to the progressive physician. Fifteen chapters cover the field of discussion, including the physiology, pathology, symptomatology and treatment of the disease. In the days of Dr. Bright, interstitial nephritis was an obscure disorder. With his and succeeding investigations it has been found to assume many different forms, and its symptomatology has correspondingly extended. The formularies and tests are very complete, and the suggestions with regard to treatment of the disease are comprehensive.

ROCKS AND SHOALS, a Novel, by Bella French Swisher. Paper. Price, 50 cts. J. W. Dillingham, New York.

One who reads this interesting story of life must feel that the author has, to a large extent, put herself into it. It is written more especially for the young; for those who are supposed to know little or nothing of the dangerous rocks and the treacherous shoals in the river of life, it will serve as a warning and a help. The different pictures of character show that the author has been a careful observer of social and domestic scenery, and that she has not always judged according to her own personal standing.

THE INTERNATIONAL ANNUAL OF ANTHONY'S PHOTOGRAPHIC BULLETIN. Edited by W.

Gerome, of Harrison, Eng., and A. H. Anthony, of New York.

This volume of nearly five hundred closely-printed pages is a valuable addition to the work table of the photographer, professional or amateur. It is an epitome of the recent developments in the art of sun design and natural painting. Beautiful plates illustrate the work.

PAINTING AS A FINE ART. This is the title of a neatly-prepared brochure, by H. J. Horn. It contains an analysis of the principles of art, and discusses many of the greater works of the color artist. J. W. Bouton, of New York, is the publisher.

SPAULDING'S LIBRARY OF ATHLETIC SPORTS. No. 16, is Warman's Physical Training for the care of the body. It is profusely illustrated. Price, 25 cts. A convenient little manual for the use of gymnasts. The exercises are simple, and the advice in regard to the care of the health appears to be sound, as a rule. We advise young people, who would take up any system of physical exercise, to do so under the direction of a trained teacher.

DR. WALLSTEIN'S WAY, by the Rev. T. L. Bailey, 12mo, pp. 320, price \$1.25. New York: The National Temperance Society and Publication House.

This "doctor," who is the principal personage in the story, and preached the doctrines of temperance, in his practice and out of it, does not appear to have had a very easy time in so doing, although as a physician the townspeople respected him. The story is written in a straightforward manner, and is simple in style. The book will do good to young people who are drawn to its reading.

PSYCHIC LIFE OF MICRO-ORGANISMS. A study in experimental psychology. By Alfred Binet, translated from French, by Thomas Cormack, 8vo, cloth. Price, 75 cts. Chicago: The Open Court Publishing Co.

A book by an associate of Prof. Charcot, and collaborator of Ribot and Feré, demands attention from the scientifically inclined, although the title at first look may appear even grotesque. The author has taken up a branch of biology, of which little is known or said. Of course he discusses those low forms of beings that are commonly termed germs, and from a study of their movements, he draws his inferences mental or psychological. In its general bearing we feel that we must regard the book as a pioneer in the field of its consideration. The author contests the theory of the distinguished English scientist, Prof. George J. Romanes, who assigns the first appearance of the

various psychical and mental faculties to different stages or periods in the scale of zoological development. To M. Binet there is an aggregate of properties which exclusively pertain to living matter, the existence of which is seen in the lowest forms of life as well as in the highest.

PUBLICATIONS RECEIVED.

THE BUREAU OF EDUCATION, Washington, sends us the following brochures, relating to American Educational interests, edited by Dr. Herbert B. Adams :—

THE HISTORY OF EDUCATION IN NORTH CAROLINA, 2 parts ; by Charles Lee Smith, of Johns Hopkins University.

HISTORY OF HIGHER EDUCATION IN SOUTH

CAROLINA, with a sketch of the Free School system. By Colyer Meriwether, Johns Hopkins University.

EDUCATION IN GEORGIA, by Charles Edgeworth Jones.

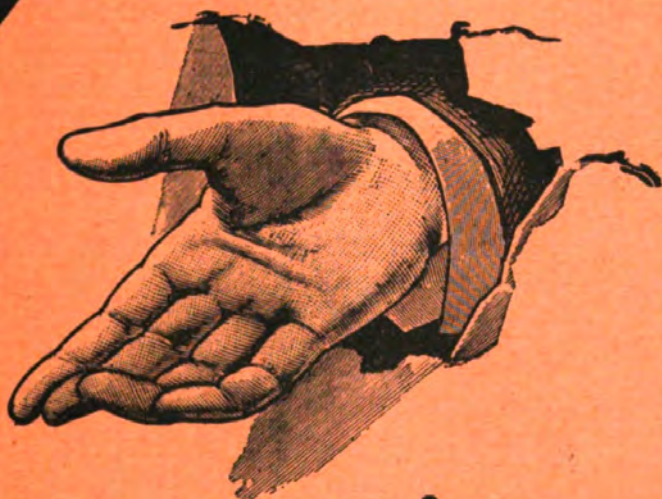
HISTORY OF EDUCATION IN FLORIDA, by George Gary Bush, Ph. D.

HIGHER EDUCATION IN WISCONSIN, by William F. Allen and David E. Spencer, University of Wisconsin.

These monographs are of value to the educator, as they trace the early beginnings of a system for juvenile instruction in the States thus far taken up, and show the later developments under both secular and religious auspices. The monographs are illustrated with engravings showing the more important institutions.

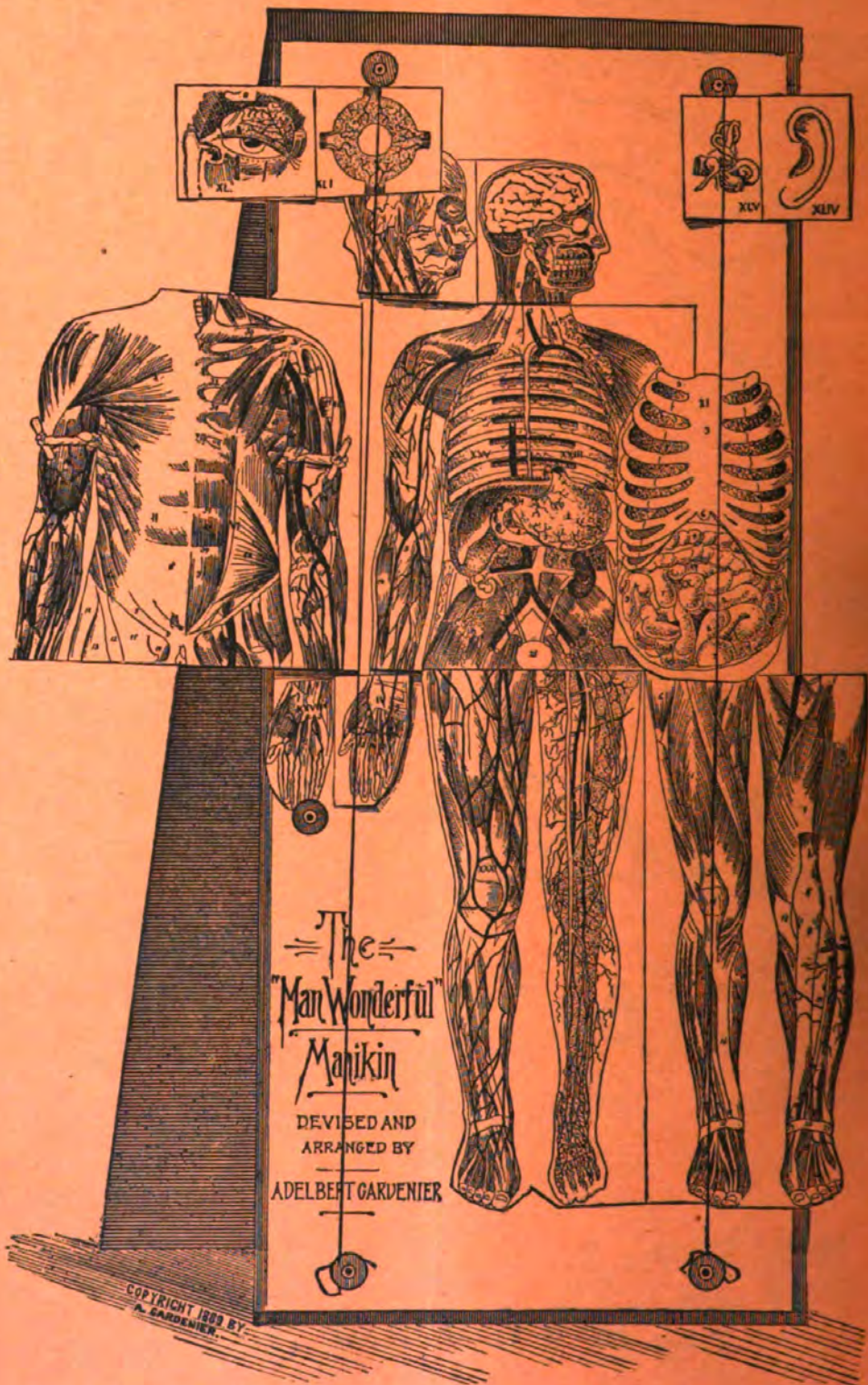


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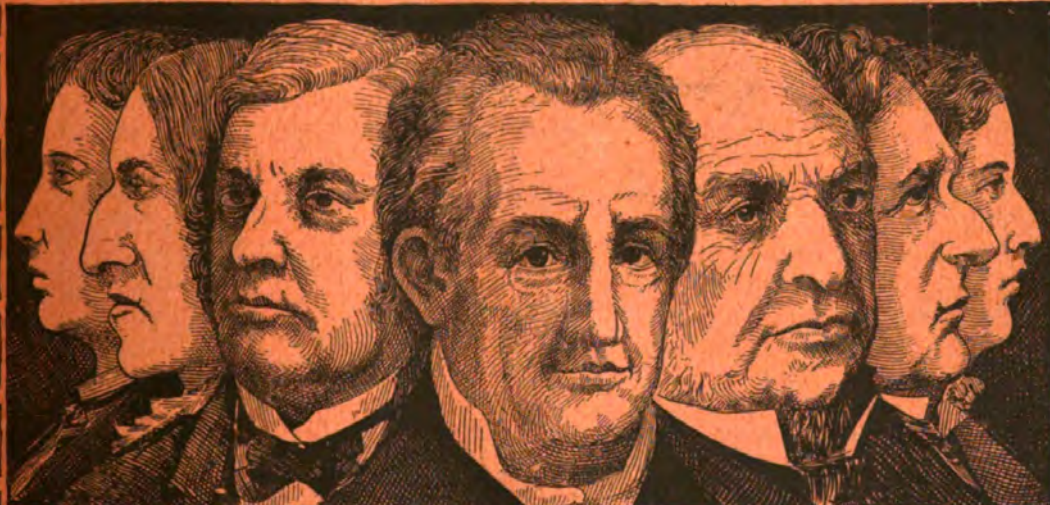
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Number 3.

Volume 88

THE PHRENOLOGICAL JOURNAL & SCIENCE OF HEALTH.



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ANNOUNCEMENT.

Among the heads selected for the pages of the October number, "General" Booth of the Salvation Army; Don Jose Zorilla, Spain's Poet Laureate, and Mr. George B. Roberts, the President of the Pennsylvania Railroad, will be conspicuous. We have also for the other attractive features a poem by George W. Bungay; a second article on the Delsarte Method or Idea of Expression, by a master of it; Population Restriction as a Necessity of the Future; Plutarch's views on Child Warning; An Old Maid's School for Mothers; Hyphnotic Suggestion vs. Inebriety, etc., etc.

The Phrenological Journal is published monthly at \$1.50 a year, or 15c. a number. To each new yearly subscriber is given either the Plaster Paris Phrenological Bust or New Lithography Phrenological CHART Premium, a new plate, 19 x 24 in., with ring for hanging. When the Premium is wanted, 15c. extra must be received with the subscription to pay postage on the JOURNAL and the expense of boxing and packing the Bust, which will be sent by express, at expense of the subscriber; or No. 2, a smaller size, or the Chart Premium, will be sent by mail, postpaid.

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THE
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AND
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NUMBER 3.]

SEPTEMBER, 1889.

[WHOLE NO. 609.



MARIA MITCHELL.

MARIA MITCHELL.

THE ASTRONOMER.

ENGLAND has her Caroline Herschel, and America her Maria Mitchell, thus giving to the Anglo-Saxon woman on both sides of the Atlantic high standing in astronomical science—a standing earned by diligence in study and lifelong fidelity to their chosen field of science. No one will dispute, we think, the right of Miss Mitchell to stand with Caroline Herschel, at least in the merit of a discoverer.

In temperament, Miss Mitchell possessed much of the motive, a characteristic usually found in the woman who takes up a pursuit that demands assiduous effort for excellence. Her face possesses the cast of expression belonging to an organization in which are the elements that contribute to energy, perseverance, and endurance. The forehead shows power of attention and memory of details, and unusual capacity to estimate the bearing and relation of facts. The eyes have that in their manner of outlook that intimates mental poise, and at the same time the disposition to examine a subject thoroughly. There was no flippancy in the methods of Maria Mitchell. The head was doubtless high, corresponding with the deep upper lip and firm mouth; and it can be inferred easily from these signs that she possessed very unusual power in the way of self-reliance and steadfastness. The observer must note remarkable breadth at the root of the nose, and also from the outer angle of the eye. This constitution of head is inseparable from great capacity in the appreciation of form, and also of size, while ability to enter into the minutiae of computation is also indicated. Looking at that head, as drawn by the artist, we are prompted to say that she ought to have lived much longer, for certainly the equipment of physical material given her by nature was liberal, and its judicious management should have extended the term of

her scientific labor. We infer from the little we know of the cause of her death, paralysis of the brain, that she had not been frugal in the expenditure of her vital resources, but had suffered her interest with the science she loved to exhaust them. She found when it was too late that it had been better had she for many years worked with moderation, and trusted less to the old conviction of her *strength* and endurance.

From an interesting sketch in the *Scientific American* we take the notes that follow:

She was born on the island of Nantucket, on August 18, 1818, where her father for many years was cashier of the Pacific Bank. He was a member of the Society of Friends, and was prepared for Harvard College when the war of 1812 broke out. This interfered with his studies, and he became a teacher. Meanwhile he developed a fondness for astronomy, and for a long time devoted his leisure to that science with a rude telescope, built for him by a clockmaker. In later years he was able to provide himself with a well equipped observatory, and continued his researches until his death. During many years he made systematic determinations for the work conducted under the auspices of the United States coast survey, and his son, Henry Mitchell, is to-day an assistant in that body.

Maria was one of the older children, and inherited her fondness for science from her father. At first he was her teacher, and as a child she made such rapid progress in her studies that she was soon able to assist him in his investigations. Later she studied under Charles Pierce, and became his assistant in the school at Nantucket. While a young girl her mother died, and much of the care of the home fell to her charge.

At the age of eighteen she was ap-

pointed librarian of the Nantucket Athenæum, which place she held for twenty years, and it was her proud boast that she had regularly earned a salary from the time that she was seventeen years old. While filling this post she continued her interest in astronomy, and all of her spare time was devoted to the study of the stars. She soon surpassed her father in the zeal and earnestness with which she made researches. Besides many careful observations, she made a specialty of examining nebulae and systematically searched for comets. She discovered several small nebulae, and finally, on October 1, 1847, discovered a comet, now known as Miss Mitchell's. At first she could hardly believe that she had actually discovered a comet, and requested her father to send an inquiry to Cambridge. A few days later Father De Vico saw the same comet in Rome, and it was subsequently seen by astronomers in Kent and Hamburg.

Some years previous Frederick VI., King of Denmark, offered a gold medal as a prize to any one discovering a telescopic comet. This medal was given to Miss Mitchell, and she was also the recipient of a copper medal struck in her honor by the republic of San Marino, in Italy. When the publication of the American Nautical Almanac was begun she was employed in that work, and continued so engaged until after her appointment to Vassar College.

In 1858 she went to Europe, for the purpose of visiting the leading observatories of Great Britain and the Continent. While in England she was entertained by Sir John Herschel and Sir George B. Airy, the astronomers royal. Leverrier received her in Paris, and Humboldt in Berlin, where she also met Encke. In Rome she met Miss Bremer, and became intimate with the family of Nathaniel Hawthorne, with whom she traveled from Paris to Italy.

During her absence abroad a fund of money was raised by the women of America, under the leadership of Miss

Elizabeth Peabody, and on her return she was presented with a telescope larger than that owned by her father, and which was set up at Nantucket. Later, when her father removed to Lynn, Mass., the telescope was taken there.

In 1865, she was invited to fill the chair of astronomy at Vassar College, with charge of the observatory. This appointment she accepted, and removed to Poughkeepsie, where she continued in the active administration of her duties until January, 1888, when she tendered her resignation. This the trustees were unwilling to accept, and passed a resolution giving her an indefinite leave of absence, and directed the payment of her entire salary until the board should take further action.

At that time one of her friends wrote: "Maria Mitchell is going from Vassar, yet leaves to the college more than she takes away. Her twenty-five years of influence have left indelible imprint upon the institution which she has helped to build up. She has not been conspicuous for administrative ability, and entirely lacks policy to successful diplomacy; but her sound common sense, her fearless frankness, her courage born of strong conviction, have always made her a power to be respected and feared."

On leaving Vassar she retired to Lynn. A reception in her honor was made a feature of the alumni meeting of Vassar Association in New York City, but she was unable to be present, and wrote: "I have noticed that the attempt to grow young is, at seventy, not often a success. It goes to my heart to say that I cannot come to the reception in New York, but I am tired, and after more than half a century am trying to rest." The rest she sought for was not long in coming. Scarcely a year had passed, when, on June 28, 1889, she died from disease of the brain, at her home in Lynn.

Miss Mitchell was the recipient of many honors. The degree of LL. D. was given her in 1853 by Hanover College, and in 1887 by Columbia. She

was the first woman to be elected to the American Academy of Arts and Sciences, and in 1850 joined the American Association for the Advancement of Science, of which she was made a fellow in 1874. She was prominent in the movement tending to elevate woman's work, and

was president of the American Association for the Advancement of Woman at the Syracuse meeting in 1875, and at the Philadelphia meeting in 1876. In late years her special studies were devoted to sun spots and the satellites of Jupiter.

MARGARET FULLER.

MR. HAWTHORNE called Margaret Fuller "a Humbug"—a most misapplied term in her case. A Humbug is one who *knowingly* cheats; who knows perfectly well that he has no right to the claims he makes; that in the background his pretense has nothing to justify itself. This was by no means the case with Margaret Fuller. She solemnly believed she was the greatest woman that ever was born; that, give her a fair chance, she could effect a total revolution in the human race. Sappho, Hypatia, Cleopatra, were mere babies compared with what she felt was latent in her own veins.

She was always boasting that she stood alone, and she was well aware of the volcano passions that burned within herself; so much deeper than those of other women she felt them to be, that she did not scruple to claim for them, as did George Eliot, exceptional criterions for judgment, and, if she mistook at last, and was consumed by her own fires, she would believe that she only anticipated the ethics of the future.

She had exhaustless faith in herself—the best thing possible for every woman to have. It is none the less true she has left nothing behind her commensurate with those pretensions, but she impressed others with a sense of her magnitude; therefore there was by this *consensus* the ground-base for all that she claimed.

I have no doubt the internal parliament of Margaret Fuller echoed and re-echoed with unspeakable eloquence, and with aspirations akin to those of a Hampden, a Milton, or a Cromwell.

What if these never found a voicing? Shall the scroll, shriveled, scorched, lost on the whirlwinds, be accounted as non-existent, because the sibyl found no comprehending brain to save the precious utterance from destruction? Margaret had no fair chance, no blessed opportunity to be what she might have been, such as the poorest masculine duldard finds ready at hand, and crowds of approving on-lookers waiting to give him a godspeed.

Balzac used to publish the titles of books formulated in his own imagination, which he never wrote, in spite of all his toil, and he used to plume himself upon these unwritten books, grow large, and proud, and happy, because of these tomes filling the vast unknown, where doubtless the best works are doomed to exist. Margaret had this witness within to indorse all she claimed, and if any one doubted the Cassandra voice it was simply a mistake, the standpoint of view taken from too limited a base. The titles of books never automatically existing by Balzac are preserved religiously by the admirers of the French writer, as they should be preserved; possibilities are realities to the true mind, and the reputation of Margaret Fuller, largely made up of the estimation of lookers-on, is a far more desirable record than that of hundreds of others, cut and dried, finished up and complete as platitudes or commonplaces can be easily done.

Margaret was devoid of grace and attractiveness, so often the bane to women of intellect, who are apt to question how much of their acceptance is due to

beauty and how much to superior mental caliber. Had Margaret been a sham, she would have had a touch of that egregious vanity which is as often found in a plain as in a handsome woman. When Margaret appeared in Paris with Mr. and Mrs. Marcus Spring, the first movement was to go to a modiste and provide suitable toilettes. It was a hard test for Miss Fuller to walk up and down a long hall before the critical eye and shaking head of the artist, but she did it, and submitted to unflattering comments without a murmur. When all was complete, and she walked the hall in her handsome and becoming gear, it was quite touching as she turned to Mrs. S., saying, "I did not know I could ever look so well."

Of the last few, sad years of Margaret's life in Italy, and that seemingly ill-assorted and suspicious marriage with Ossoli, I do not wish to say anything or pass any judgment upon it, any more than I would condemn George Eliot for what she did, or blame Thomas Carlyle because he failed to appreciate his noble wife until the solemn curtain of death, as by a divine reflection, gave back the writing. When shall we ever learn to accept genius as it comes to us—infirm in part, it may be, but glorious as a new utterance from the eternities!

If there existed the shadow of a humbug to stain the memory of Margaret Fuller, it will exist in the folly, the weakness, the sham of calling such a woman Countess. She was proud of her name, Margaret, a pearl, and had a pretty superstition, also, about names, as most of us have, as indicating destiny; and when the drear, engulfing wave closed over the brave heart, let us believe the Pearl sought its native element.

True, Margaret never found expression commensurate with her self-consciousness—what then? The writer who says the utmost of his thought has found his limitation; while the one who feels the unspoken power, the melody like that of Keats's nightingale, smothered by its

excess, is the one we long to hear speak, and mourn at their lack of speech. There is a prophetic pathos in a character that intimates so much and achieves so comparatively little.

It may be Margaret Fuller was in my mind when I wrote the following:

UNATTAINED.

Alone we stand to solve the doubt—
Alone we work salvation out—
Casting our feeble hands about

For human help—for human cheer,
Or only for a human tear;
Forgetting God is always near.

The Poet, in his highest flight,
Sees ranged beyond him, height o'er
height,
Visions that mock his utmost might;

And music, borne by echo back,
Pines on a solitary track,
Till faint hearts sigh, alas! alack!

And Beauty, born of highest art,
Slips from the limner's hand apart,
And leaves him aching at the heart:

The sweetest face has never brought
Its fairest look; the deepest thought
Is never into language wrought.

The quaint, old litanies that fell
From ancient Seers, great hearts impel
To nobler deeds than poets tell.

We live, we breathe, all unexpressed,
Our holiest, noblest in the breast
Lie struggling in a wild unrest,

Awaking fibers that shall leap,
And an exultant harvest reap
At Death's emancipating sleep.

Our onward lights eternal shine—
Conquered by no unmanly pine
We royal amaranths may twine.

The great God knocks upon the door
Ready to run our chalice o'er,
If but the heart will ask for more;

If hungering with a latent sense
We know not, ask not, how or whence,
But take our consecration thence.

The wine-press must alone be trod—
The burning plow-share pressed unshod—
There is no rock of help but God.

Genius has three great works to do in the world before it can make itself effective: first, to make itself known, then felt, and lastly, needed, in the world. Who, save Milton and Shakespeare, has accomplished all this? Yet our race has produced innumerable lesser lights, all beautiful and needed, as the universe has its great suns, and is flecked with planets, and finally packed full of star dust.

Great as was the utterance of Daniel Webster, he was himself greater than any expression he has left, and will stand in ages like Zeus among the fraternity of Olympus. He is one of those immortal made because of the great design in him—the triumph of a race—the perfection of a force. It is excess of folly to talk of what is left undone, when the very raising of the question indicates our belief in the capacity for achievement.

I believe Margaret was embarrassed, mazed, as it were, with the weight of her irresistible inward power, as was Daniel Webster; a sad consciousness of an unattainable something hindered by adverse causes, and in Margaret's by that deadening poverty against which it is so hard to struggle, and of which Cowper has said:

"Where poverty is felt the thought is chained."

I do not see it as a blemish that she drank tea, any more than in the great Dr. Johnson. Dull minds, obtuse minds, need nothing to alleviate them. When I gave my lecture in Boston, and spoke of this, I was contradicted somewhat rudely by an auditor, but it was not the less true from many sources of authority, most especially from Mrs. Cleverly, with whom Margaret boarded in Boston. The contradiction and denial, at any rate, seemed rather childish. I met Margaret not unfrequently in New York and Brooklyn, and we more than once enacted charades and proverbs together, but she was not inventive, and was not in the least humorous. I did not the

less approve her for this negation, being myself more inclined to the grave than the funny.

Margaret's egotism made companionship with her nearly impossible. She must be deferred to, yielded to, or she turned away in scorn. She detested the butterflies of fashionable society, and had no eye for the pretty graces that make such attractive; while the coquetries of young girls, as natural to them as to birds and squirrels, she condemned with a grim severity. Time and study and enlightenment are fast wiping out this stain upon the sex.

Margaret was naturally contentious; why not when she differed? Is a woman to ignore opinions for the sake of complacency? The only thing that would justify her in doing so is when the point at issue is of no comparative import. I have a holy horror, too, of silence when a truth is involved, which once brought upon myself a strong, playful remonstrance from John Neal. "Do not trot out an elephant to crack a flea, my dear friend," he said.

On this side of Margaret's character her power of dissent, her scorn and contempt had a devilish sort of magnitude about them, quite appalling to a trembling young man who had presumed to lift up his small pipe in her presence, as I once had the opportunity to overhear at a reception at Dr. Dewey's. I could not sympathize with this annihilating use of terms to an opponent, and fear it looked not only cruel, but foolish. We were both of old Puritanic blood, and hence likely to see everything in a grave light. My own tendency to toleration and forbearance was a snare and trial to me. Margaret was troubled with no such scruples, but bore down like a Dutch galleon upon all weaker craft.

Margaret attracted and repelled me by what I considered her lack of justice and consideration for others. My husband went one evening to one of Margaret's conversations at the house of the Springs, and on his return home I nat-

urally asked him what he thought of her. "She is a mixture of pedantry and pretension," he replied, "with not a little, but a vast, opinion of herself." This was apparent to every one, and to me, seeing her possibilities, not so very objectionable. Women will not undervalue one of the sex who stands, as she averred of herself, alone; yes, alone in a sort of misty haze, a picture of some Mona Lisa, that suggests so much and tells so little.

As I before said, when I lectured upon Margaret Fuller in Boston my lecture was not well received, nor well attended. At the close many questions were asked me which seemed aggressive, but I found that Margaret's mother and brother were both present, with no unkindly sympathies, for they invited me to tea with them the next evening.

I found Mrs. Fuller a woman of the style of all the women of that generation—tall, large, statuesque (as was my mother, nearly a head taller than myself), with a judicial, self-poised bearing, sure to command respect. I said to myself, "This woman is greater than her daughter, as my mother was greater than I am." Both were without perspective, lacked shades, were not of the kind to make mistakes in life or shirk responsibilities. There was something fine in the broad, well-knit shoulders of Mrs. Fuller, in the firmly outlined waist never compressed by corset, and the bust of a Juno, without any sensual fullness below the girdle. I remember Mrs. Fuller bade one of her granddaughters take up her sewing, saying, "Remember your Aunt Margaret was never idle; she was careful of her time."

Margaret no more stood alone than other women, except as her disagreeable methods drove people away from her. At a brilliant Valentine party at Miss Lynch's, now Mrs. Botta, I remember Mrs. Osgood and I ran up to the dressing room with our hands full of tributes; Fannie had more than us all. As we neared the landing I heard a very heavy

sigh, almost a groan, and, looking up, saw Miss Fuller looking over the balustrade. Putting my hand on her arm, I said: "You do not care for trifles like these; your *one* was better than all others." "It leaves me alone as I always am," was the reply. I cannot recall the whole of her valentine, but it closed:

"And Venus, though divinely bright,
Is left without a Satellite."

In New York, Margaret, without beauty, always self-conscious, and without repartee, preferring a monologue, was apt to be given a wide berth. I remember one evening, while talking with a pleasant group, I observed Margaret seated on a lounge quite alone. Addressing Mr. C. F. Hoffman, as the most courteous as well as chivalrous member of my surroundings, I whispered: "Transcendental is quite alone." "To hear is to obey," was the response.

I naturally watched the result, and that was the only time I ever saw Margaret Fuller look absolutely handsome. She gave me a quick, woman's triumphant glance, and then was replying to his agreeable badinage, as he knocked her theories good-naturedly right and left. Of course she never knew the little ruse I had put in action.

ELIZABETH OAKES SMITH.

THE NIGHT COMETH.

Terrible night to those with task half ended,
Who revel careless through the rosy hours;
Leaving the corn, the goodly corn, untended,
To gather in the flowers;
Which close, or droop, or die when eve advances,
And lo, the sorry harvest withered lies;
And phantoms of lost hope, lost time, lost chances
Out of the gloom arise.
Not so comes night to all. Sweet sleep will strengthen
Toilers with burden of the day oppress;
To whom the evening shadows, while they lengthen,
Bring peace and hard-won rest.
Oh, welcome rest for weary hearts and aching,
And wounded feet all travel-stained and sore;
Welcome the rest,—thrice welcome the awaking,
Never to need it more.

NOTABLE PEOPLE OF THE DAY.—No. 23.

WILKIE COLLINS,

The English Novelist.

THIS gentleman acquired reputation as a writer of sketches and novels when a comparatively young man, and with unremitting industry he has kept himself prominently before the public since, few other writers of fiction being able to maintain so strong a hold upon the English-speaking masses.

In his general organization the English type is marked; the contours of head and face would at once impress an experienced physiognomist with that fact. The development of the forehead is striking, the lower half being of extraordinary fullness, and indicating special talent for observation and memory. Language is also a marked trait. The temperament does not appear to contribute to that liveliness and resilience, that quick susceptibility that one would expect in a popular novelist, but rather to deliberation, method, and good nature. One unfamiliar with his writing would not expect to find startling "situations," over-drawn pictures of character, and sensational diction in it, but carefully planned and well balanced narrative and natural incident. There is too much of the practical in this mental constitution for its owner to indulge in sentimental superfluities and frothy commonplaces. He would be likely in most cases to entertain a purpose in writing, and work it out as an essential element of his book. He does not strike one as brilliant or dashing, but as an industrious, steady-going man—one of those who do not write according to inspiration or when the mood takes them, but systematically, "putting in" so many hours a day and patiently going on from the opening to the finish.

Physically considered, such an organization requires not a little out-of-door exercise to preserve a healthful equilibrium; and too much confinement at the desk in-doors would be likely to produce

organic derangements of more or less troublesome nature.

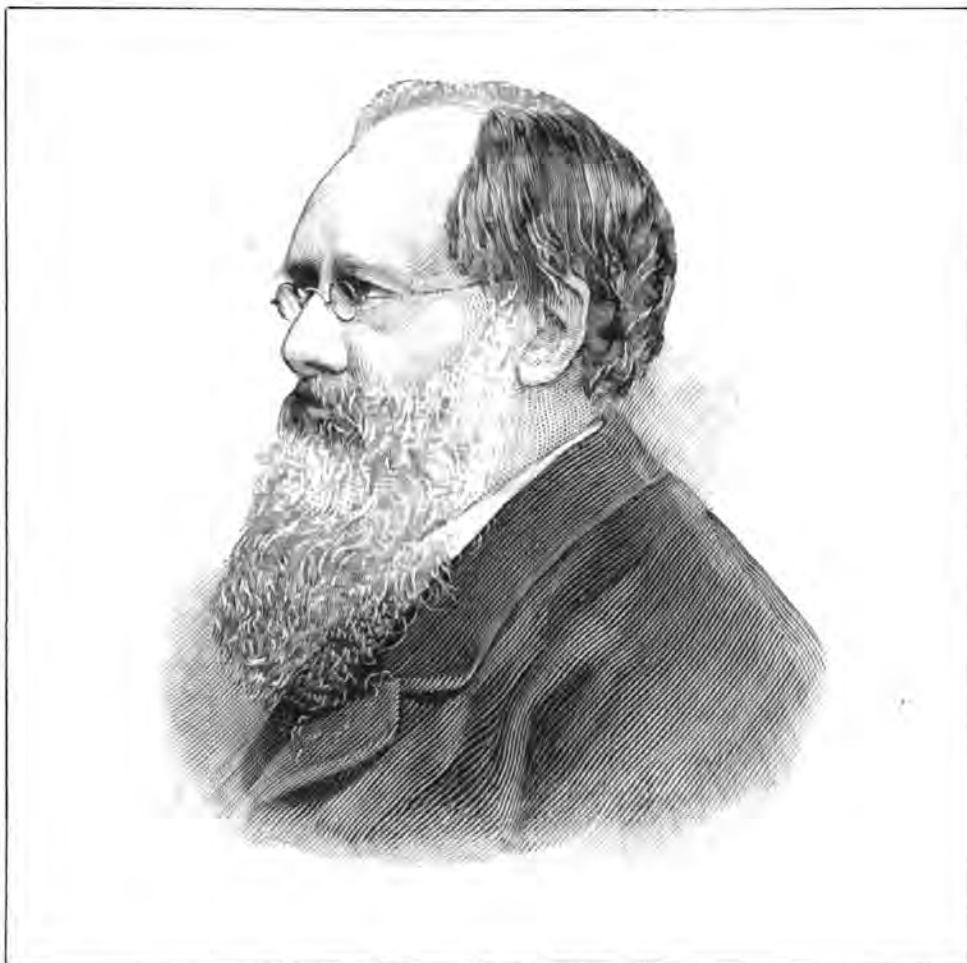
William Wilkie Collins was born in London in the year 1824. His father, William Collins, was a member of the Royal Academy, and his mother a sister of the portrait painter, Mrs. Carpenter.

He was educated at home and also studied on the Continent. After a few years spent in commerce he was entered as a student at Lincoln's Inn, but he found literature more to his taste than law, and first ventured in that field by preparing a biography of his father, which was published in 1848. Two years later he made his first attempt as a novelist, but achieved only a moderate success. In 1851 he published a volume of picturesque writing entitled "*Rambles beyond Railways: a Narrative of a Walking Tour in Cornwall.*" Having secured some amount of attention, Mr. Collins became connected with Dickens in *Household Words* and *All the Year Round*. He was perhaps the only prominent associate of Dickens who did not sedulously imitate him. In 1856 he published "*After Dark*," in 1856 "*The Dead Secret*," in 1858-9 "*The Queen of Hearts*." These books showed skill in the narrative, art, and general literary craftsmanship. In 1859 "*The Woman in White*" appeared, being first published in *All the Year Round*. This story gave him a high place among authors, and it is said: "Such grasp of a central idea, so much power in detail, such hold of interest and marshaling of incident, and, above all, so much art in withholding the key to a mystery, had not been shown by any living English novelist." In 1866 "*Armadale*" appeared, for which the author received very large remuneration; but he did not repeat his former success until he published "*The Moonstone*," in 1868.

It were hardly too much to say that

in sheer ingenuity of construction "The Moonstone" has no superior, and perhaps no equal, in fiction—English or foreign. In 1873 "The Magdalen" appeared, being first published in *Temple Bar*. The idea crystallized in this book was a very old one, liable to offend all sticklers for the conventional in social

read there two of his short stories, "The Frozen Deep" and "The Dream Woman." He has had a career as a dramatist, and has even played in person. His first drama, "The Lighthouse," was privately played at Tavistock House, and afterward brought out at the Olympic Theater. "The Frozen Deep" was dra-



WILKIE COLLINS.

discriminations. But the nobility of the author's motive was deemed sufficient to override all minor shortcomings. Of his many other books those entitled to mention are: "The Law and the Lady" (1875), "The Frozen Deep," "My Lady's Money," "Jezebel's Daughter," "The Legacy of Cain." In 1873-4 Mr. Wilkie Collins visited America, and

matized, and Dickens played in it. "The Moonstone" and "The Woman in White" were produced at the Olympic, but did not succeed.

When preparing to write a story Mr. Collins tells us that his first aim is to get hold of a central idea, "the pivot of the story." He then builds up his plot, characters, and incidents, somewhat like

a machinist, who first has to decide what end the machine he means to build is designed to accomplish, and then constructs all its parts and fittings so as best to further this. In "The Woman in White" the dominating idea is the substitution of one woman for another in a lunatic asylum; in "The Moonstone,"

ries grouped as one. Sometimes this principle has led him to write out the latter part of his work first, and the first almost last.

Wilkie Collins has never married, and lives in easy circumstances, occupying a large house in Gloucester Place, London. He has been, as we have inti-



CAROLINE SCHULTZE.

the projection of an Eastern talisman with the superstitious devotion of its attendant priests into modern civilized society. Owing to this unity of idea a leading characteristic of his is that he gives us one continuous story, constructed with relation to a given end, instead of two or three alternating sto-

ries grouped as one. Sometimes this principle has led him to write out the latter part of his work first, and the first almost last. Wilkie Collins has never married, and lives in easy circumstances, occupying a large house in Gloucester Place, London. He has been, as we have inti-

CAROLINE SCHULTZE,

The Young Russo-French Physician.

STIMULATED by the success of their American sisters in entering the walks of professional life, many women in Europe have made their way to public recognition as physicians. Not long since an account was given in the PHRENOLOGICAL of a plucky Dutch lady who persistently fought her way to success—overcoming many obstacles of usage and prejudice—until the Faculty of Medicine accorded her full authority to practice as a physician. Now we are pleased to print here some account of a Russian girl who has received the reward of perseverance from the University of Paris. Mademoiselle Caroline Schultze, whose portrait is given herewith, in the costume deemed appropriate to the French licentiate in medicine, is of Russian birth, and but twenty-two years of age. She was born at Varsovie, in a family of musicians, and at the age of 17 desired to give herself up completely to scientific studies. Finding that under the Russian law she could not have access to any school of medicine, she went to Paris to pursue her medical studies. Less than five years have been sufficient for her to finish her task well and obtain the diploma of "Doctor." Armed with this title, she will establish herself in Paris, calling France her adopted country, and with the intention of devoting herself exclusively to the diseases of women and children.

In her thesis, delivered on the occa-

sion of her graduation, Mlle. Schultze chose as her subject, "The Female Physician of the Nineteenth Century," and claimed, with a brilliant display of argument, that, in the near future, woman would have an important place in the medical world, and that the female practitioners would take their stand with the male practitioners. "The second half of the nineteenth century," she said, "has been marked by a general movement of intellectual and professional emancipation for women. All civilized nations have formed their feminine contingent in the study and practice of medical sciences. Everywhere women, who have fought the advance guard for their intellectual and professional emancipation, have had difficulties of all kinds to overcome; but everywhere, up to the present at least, they have been victorious."

Prof. Charcot, the distinguished superintendent of the Salpetriere, complimented the effort of the young doctor, and gallantly said: "Mademoiselle, you are beautiful, you are young, you are well informed, you are courageous, you have everything in your favor. Although I do not share all the ideas which you advocate, I render justice to the talent with which you defended them."

The face of the lady is certainly eloquent with the spirit that has carried her through the course of study and preparation for her responsible duties. It shows spirit, feeling, pride, self-reliance, and talent. We wish her success in the noble mission to which she has devoted herself.

EDITOR.

MARRIAGE AND OTHER CONTRACTS.

THE near connection between the psychical and physical is recognized, discussed, written upon, but it would seem rarely appreciated as a fact; that is, not often considered in the momentous events of life. If we build a good house we take into consideration the contingencies of fire; hence we make

it as invulnerable to the element as possible. Fire being a demonstrated fact, we fear it and guard against it. The ship, also, is built with a view to proving superior to the formidable ocean it rides, water being as inexorable a foe as it is a kindly friend.

But in forming partnerships and the

life-long tie of matrimony, how little profound attention the average man and woman give to what seems of so much moment, namely, matter's relation to force, spirit, soul, each in its place dependent upon matter's fuel—that electrical atmosphere through which every thought and act are accomplished!

The question, Is this individual I am about to link with myself constituted to blend and harmonize with my own nature or to clash with it? may arise, but how rarely does the participant in such association search deeply or investigate in the proper field for a solution to the problem. How often is the soul retarded, weighed down, nay, *obliterated* (for this life), by some brainless hulk dragging upon it through decades, perhaps! And why is this? Because, forsooth, we have no abrupt physical shock, manifesting that the trouble resulting from such intimacies is the effect of the transgression of spiritual law. What so all-important as the judicious observance of the laws which govern the soul, the better part of the human organism, the *only* portion of that complex organism which is immortal—which *must* be immortal if it be at all!

Setting aside all considerations of the flesh, the replenishment of its fires, "Nature's sweet restorer," sleep, there is the inherent temperament. In friendships, in marriages, the all-important point to be considered, and which is oftenest overlooked, is that question of soul affinity. It may appear a simple question to ask *what is soul?* We speak of the heart as bearing upon the common, emotional nature of the fleshly, human anatomy, but *soul!* Have not all of us a distinct and purified ideal of the significance implied by the word?

Yet what is soul? Is it not that condition which is receptive of thy ideal? That spiritual condition to which the human nervous organization is sometimes raised when the purest and finest of all things, human and mechanical and vegetable, seems pleasing, gratify-

ing, and elevating. This study of *soul* seems a feature left out where so many other things are pursued. Of how much moment to-day is the study of the world's different modes of verbal expression, language; yet is it not simply a means for the transmission of idea? It is not the idea itself. I think that the same amount of time devoted by the studious to the consideration of the one little word *soul*, with its significant meaning, would doubtless lead to that millennium expected by the mass of people as an accident to be effected through supernatural agencies. The common term marriage, to-day, means everything but soul fraternity. People with large eyes, set widely apart, with perfectly formed lips, mobile and expressive, decided noses and harmonious proportions, will wed consorts with small eyes, insignificant noses, and lank, ungainly, or stunted figures. We all know why this is. It is the result of circumstance rather than reflection. A man and a woman meet: The one is world-worn—a wearied business man, we will say; the other is a young, smiling woman—one who has learned it is best to smile on a tired-out man. He is gratified, rested; wonders why all women are not as sensible as that one. Presently they are married; and presently again they are separated or divorced. And why? Because he was egregiously deceived. Because, instead of studying the *motives* of this human being (motives the outgrowth of the spirit, its perfumed blossoms or its rank weeds), he thought only of what was agreeable to himself. Instead of analyzing characteristics, so easily discovered by the thoughtful observer, in the human face divine—instead of questioning whether that brow, eye, and mouth bespoke frankness and generosity, or the reverse; whether that gaze, that turn of the head, that movement of the body were studied, or the spontaneous action of impulse—he dwelt only upon the physical proportion of the face and the pleasure it gave him to find an

agreement with his every word, a *bon mot* for his diversion, with no thought of the motive his companion had in thus flattering him.

In calling motive the outgrowth of the spirit, I am considering spirit as a moral force acting through the physical. Spirit is active; soul is passive. Spirit comes to the front; the soul remains aloof from the spirit's action, but dictates its best performances. When its messages are accepted and acted upon through the animal forces, the outgrowth is flowers whose fragrance penetrates far and wide. We speak of spirit in common association with certain animal conditions; when amusement, intelligence, are keenly exercised; when emergencies require steady nerve; of soul in association with sublime inspiration, or the exercise of self-abnegation. The spirit is subject to soul while being closely allied to it. The spirit may act in the midst of discord; the soul prevails, and can dictate only through harmonious conditions, which conditions the spirit may help to achieve.

The expression of habitual action is more reliable than facial expression, which may be transitory. Often are we deceived by the expression of a face, which, under certain conditions of satisfaction, indicated an admirable nature. Rarely are we deceived in like manner when influenced by habitual action, normal expression, and, I would add,

the relation of feature and form, when the observer is a profound one. No such reader can mistake; he will single out the man of brains with feeling from the man of brains devoid of feeling; the narrow from the liberal; the sly and cunning from the open and honest. To a close student the proportions of the human head and the relation of the facial features are infallible in exposition of character. Far safer than expression as a guide, because unchanging.

The soul can not thrive save in harmonious atmospheres. It will not succumb, will not descend in the least degree; it commands harmony, or its presence is not there. Look, then, in man or woman not alone for what soothes or pleases our immediate condition, or seems to meet an immediate need. Study, rather, the physical proportions of that person's anatomy; the physiognomy, with the relative position of its features; the action, the speech, the voice—whether all harmonize. If with one thing you are pleased (upon protracted observance), with another fretted, be sure there is a discordant chord within that nature that bespeaks a fault. And as none of us are infallible, it is for us to discover the fault; be prepared for it, to compare it liberally with our own weaknesses, and by no means to scorn its possessor, unless it prove so grave as to become its owner's moral death-warrant. M. R. M.

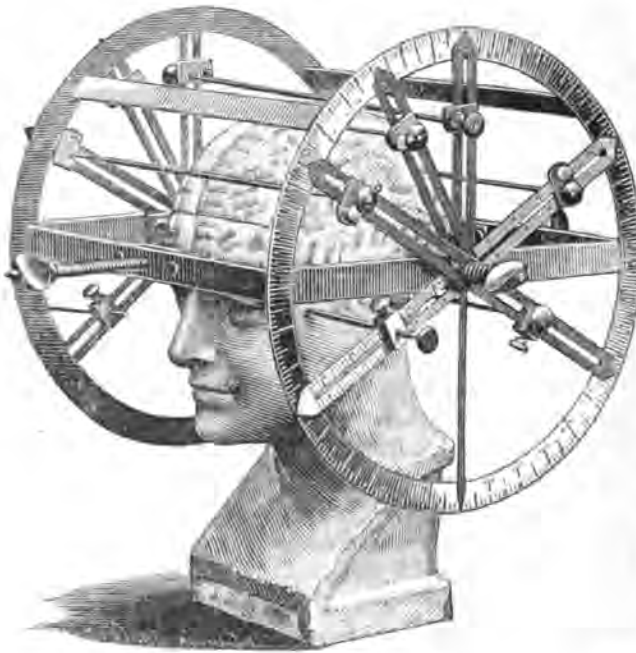
A NEW CENTER OF MEASUREMENT.

I HAVE invented an instrument for a new method of head measurement which is herein described. I consider the measurement from the ear center to be an error; it may be the mental center, but it is not the geometrical; for, first, according to Geometry, the center of a figure must be within its perimeter. Second, the convolutions at the base of the brain have to be considered; they would radiate to a certain extent upward, so the measurement from

the tragus of the ear to the surface of the head would be a diameter instead of a radius. Third, many criminals have a greater measurement from the tragus of the ear to the top of the head than people with equally large brains noted for their moral lives. Thinking over the last reason, it occurred to me that criminal heads are remarkable for mass of brain situated below a line from Individuality to Philoprogenitiveness, and the extremely moral have the greater

portion of the brain above this line; I therefore concluded that on this line, or near it, was situated the true radial center.

There was some difficulty in finding a head sufficiently symmetrical to experiment upon; a practiced eye can readily see a deviation from a right angle, even when a square of ordinary accuracy can scarcely detect it; so an experienced phrenologist should be able to discern a symmetrical head. Vago's large bust being suitable, I have used it in my experiments. After patient investigation



SHERIDAN'S CRANIOCENTROMETER.

with Bridges' phreno-physiometer and other instruments, I collected sufficient data to warrant me in concluding that I had discovered a better center than the ear tragus.

The Craniocentrometer. — This machine is made on the principle of parallel planes. There are two circles, each of 12 inches in diameter, divided into degrees and placed exactly parallel. In the center of each circle are movable pointers, connected in pairs by means of

rods; the rods work in a slot cut along the middle of the pointer, and the distance from the center of the circle is marked on the pointers in inches and tenths; by this means a longitudinal plane is obtainable parallel to the medial section, also a transverse and a horizontal plane, by changing the position of the instrument.

The results obtained are what I expected. In the model head is revealed a center of equal radii and of equal angles, situated at the intersection of a

line drawn from near the top of Individuality to a little below the center of Philoprogenitiveness, and another line drawn from the tragus of the ear to the front of Firmness; from this center to Individuality is 3.8 inches; to top of Comparison, the same; to back of Benevolence, to front of Firmness, front of Self-Esteem, below Continuity, middle of Philoprogenitiveness, all are 3.8 inches.

The angle containing the perceptive is 30 degrees, the angle comprising Eventuality and Comparison the same, as also the angle measuring from top of Comparison to nearly the back of Benevolence,

then to back of Veneration, back of Firmness, front of Self esteem to bottom of Continuity, to near base of Philoprogenitiveness, to junction of neck and Amativeness, each 30 degrees.

This appears to be a natural grouping; the first 30 degrees contain the organs of perception; the second organs, relating to environments and conditions of existence; the third, the philanthropic organs; fourth, religious; fifth, moral; sixth, governmental; seventh, those re-

lating to the family ; eighth, procreative. The angle between eighth and first is a longitudinal section of the region which phrenologists suppose to have control over the bodily organs, and may be measured by this angle with the depth from the center to the tragus of the ear.

The transverse section of the head shows a division from the medial line to the top of Cautiousness of 40 degrees ; from there to top of Destructiveness, 40 degrees ; then to bottom of Alimentiveness, 40 degrees. The space from Alimentiveness to Alimentiveness is the transverse section of the region of con-

trol of bodily organs, with depth from the new center to the tragus. This center shortens the length of fiber in some of the lower types of men considerably.

I have also tested the machine in measuring human heads, making diagrams from the bust. The machine was made to my design by Mr. James Watt, of this city, and I have been assisted in testing its correctness by Mr. U. Connor, President of the Phrenological Society of Tasmania, and Mr. Geo. Harbord, a member of the Society.

JOHN J. SHERIDAN.

Hobart, Tasmania.

A PALACE OF NINEVEH.

THE illustration supplies a view of the appearance of one of the great palaces of the city of Nineveh in the days of Assyrian glory.

The excavations which were made by Mr. Layard some years ago, and recently by Mr. George Smith, on the site of the ancient city of Nineveh, have rendered it possible to form a good idea of what must have been the beauty and style of its royal palaces. They appear to have been built on artificial mounds varying in height from thirty to fifty feet above the surrounding plain. These were in some cases constructed of regular rows of bricks, and in others merely of earth and timber. The former prevail at Nimrud, and the latter at the group now known as Kuyunjik. A solid wall of masonry protected the face of the mound, and majestic flights of broad steps led up to the palace itself. Some of the mounds were of enormous extent, looking in the distance like natural elevations rather than the work of human hands. The palaces erected on these mounds or platforms were of two or more stories, and were built of huge beams and sun-dried bricks faced with slabs of alabaster.

When Assyria was overrun by the Medes, assisted by the Babylonians,

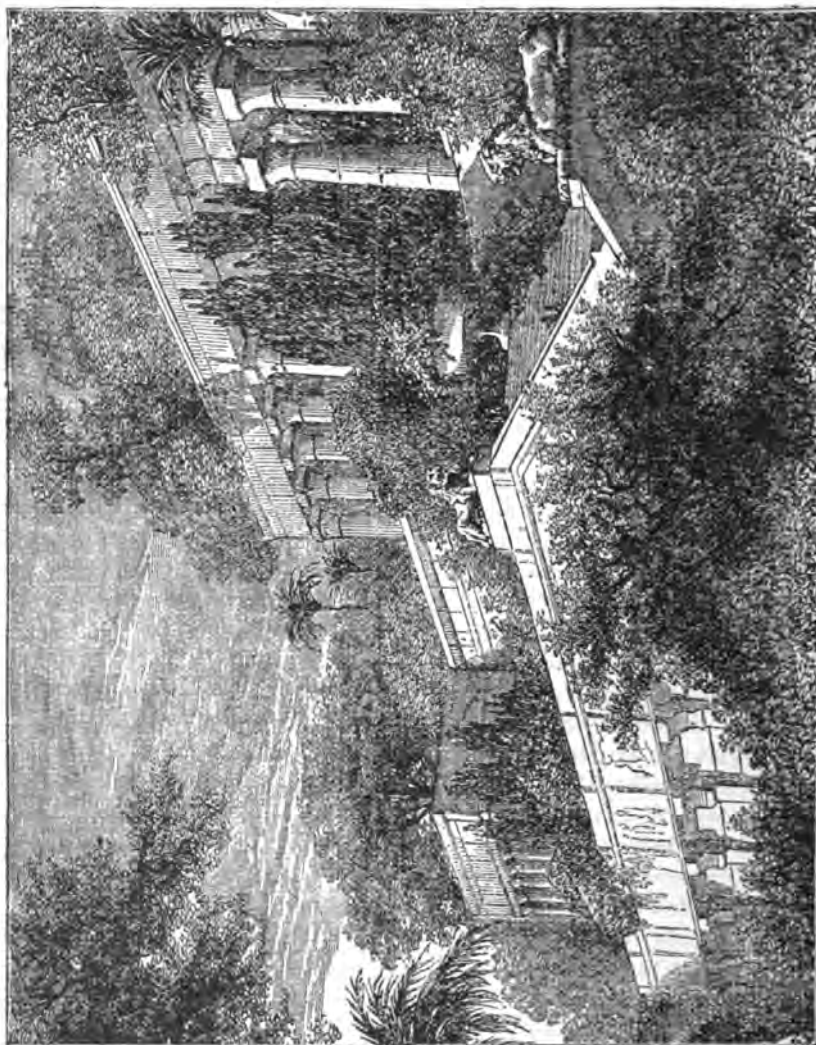
about 656 B. C., Nineveh, its capital, was utterly destroyed, and its people made captive. Happily, when the chief buildings were overthrown, the beams and material of the upper stories protected the contents of the lower stories, and these were further preserved from decay, through exposure to wind and rain, by the accumulation of rubbish under which they were buried. In some cases this layer was twenty feet thick.

In 1845 Layard succeeded in penetrating to the ruins under the rubbish, and still later Mr. George Smith continued the search. The reward repaid all the toil and danger. A large number of tablets—nearly ten thousand—were found covered with inscriptions. The writing had been done on terra-cotta clay while it was soft, and the tablets, which were about a foot square, were then subjected to heat until they were hard. They were then set up against the walls of the rooms in the king's palace, and formed the library. One collection was commenced by King Shalmaneser about 860 B. C., and was largely increased by Sardanapalus, his successor. After immense labor the writing has been deciphered, and it is found that the tablets contain a continued history of

the reigns of these kings. They also bear records of current traditions. Very remarkably, there are two records substantially confirming the Mosaic account of the Creation and the Deluge.

The early history of Nineveh is involved in much obscurity, although there is reason to think that it was one

yond doubt. In 401 B. C., when Xenophon led the 10,000 Greeks in that celebrated march which he recorded, he passed over the territory on which Nineveh had stood. Alexander the Great, about seventy years later, fought the battle of Arbela in the vicinity, and none of his historians mention the fact of the



A Restored Palace of Ancient Nineveh.

of the cities founded by colonists from Arabia during the later period of the Cushite civilization. It is mentioned by Herodotus, Strabo, and other classical historians, in terms indicating that its origin to them was scarcely known, and that its great antiquity was a matter be-

nearness of the site of the Assyrian Capital to the place of conflict. What remains have been since disclosed show a relation to the Phœnician type of architecture, which was derived, like the general customs of those commercial people, from the ancient Arabians.

was near his end, he desired to make up their quarrel and die in peace, which was accordingly agreed to. But the excitement of the conversation aroused the sick brother for the moment, and made him feel comparatively strong; and as his visitor was about leaving him, he remarked: "Now, mind, if I die, the difficulty is settled; but if I get well, the old grudge holds good."

Most readers will remember that more wrangling is had over real estate than over any other bargains of equal value, for this kind of transaction relating to land evokes the action of Firmness, Inhabitativeness, and Acquisitiveness, while a bargain of equal value about something trivial or perishable only affects Acquisitiveness.

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MENTAL MECHANISM.—No. 2.

IN our first article on this subject in the August number we called attention to the Perceptive faculties. We spoke of Individuality as the power for recognizing things without regard to their qualities, and said that the grammatical name *noun* embodied everything which Individuality recognizes. We spoke of Form, Size, Weight, Color, and Calculation as qualities or conditions of matter, and said that the name *adjective* in grammar is employed to express those qualities.

We proceed now to take the next group, which are sometimes called the Literary faculties.

The first faculty of this group is Eventuality. This relates to historic facts and transactions, or the action of things or of things in action, and the term *verb* expresses such action. We may speak the name horse. Individuality recognizes the idea merely as horse, and not of any identifying qualities. We may speak of the beautifully *formed* horse, or the *large, heavy, black* horse; and yet he may be regarded as fixed and doing nothing; but when the horse moves, when he gallops, it is action. It

is an event, and this event is recognized by the faculty called Eventuality. It relates to doings and transactions, and belongs to active life and stirring affairs. There are men who have excellent memories in connection with all perceptions. They see everything. They criticise qualities and conditions, but they have a poor memory of events. They forget what is done or transacted. In other words, they forget history. A man who is fond of telling stories, those who are fond of reading stories and of reading what people do and say and bring about, have large Eventuality. Some people are prolix in their conversation. They remember so many circumstances that they will give a long dialogue to reach a conclusion, and the listener is weary with the multitude of unimportant facts stated.

This organ, or the two organs, one in each hemisphere of the brain, are located side by side, nearly in the middle of the forehead. In children and others noted for an excellent memory of facts, that part of the forehead is full, and often protruding.

On either side of Eventuality is located the organ called Locality, which enables us to understand place, position, and the relative positions of things. If that faculty were blotted out, or were weak, it would make a wonderful want or vacancy in the mind. Imagine a person without any notion of where other places or things are in relation to self. This element of Locality belongs to the idea expressed by the term place. As no two objects can occupy the same place at the same time, the faculty of Locality gives us an idea where each thing is situated, whether above or below, or to the right or left, or to the front or rear. It is the faculty that knows where. Other faculties know what. Geography is the science of places, and thus those in whom Locality is well developed become expert in Geography, and are generally fond of traveling; always want to go somewhere. While not wishing to ab-

rogate home, there is a desire to see the homes of other people. Explorers, navigators, and pioneers are endowed with this faculty in a strong and active state. They rejoice in going somewhere. A person living in a village, who can not conveniently travel afar, enjoys roaming about the neighborhood, just making a call here and there. A lady will make a dozen calls in two hours. She may not have any particular errand to call her to a neighbor's house, but she feels an impulse to go somewhere, and makes the call an excuse for going.

Some animals have remarkable skill in finding their way home. It is said that when a rider crosses the plains or prairies and becomes confused by fog, darkness, or a snow storm, as to his locality or the direction in which he should travel to go to the desired place, if he then leaves the matter to his horse, it will take him to his place of destination, will take him home. Hunters are aware that young dogs that have never been in a given territory will go out with the master from camp, and, finding the track, will run among the hills and valleys and mountains all day after game, and when the hunt is finished and the dogs are put in leash, they will often pull and try to go in the opposite direction from which the hunters think is the right one to find the camp. An old hunter will tell a young man to follow the dogs, and, after a mile or two of tramping, the dogs leading and pulling, they come upon the camp and are astonished that the dogs should be correct, contrary to the opinion of the men. There is something marvelous about this faculty of locality. We read in the books of the early phrenological writers that a dog was taken from Paris to Marseilles, and then on shipboard up the Mediterranean, and then ashore into Austria, and in a few days or weeks the dog made his appearance at his own home in Paris, having made the journey overland. He had made a short cut, and had not tried to take the "back

track." Bees are said to fly in a bee line—that is, a straight line. When they get loaded with honey, though they have been buzzing about over two or three hundred acres of field, will make a turn or two in a circuit of a hundred feet radius until they rectify their thought as to the proper direction, and then fly in a straight or bee line to the hive.

The homing pigeons or carrier pigeons will go from one country to another. Armies take carrier pigeons with them to the field of war. They carry them in cages. When they desire to send news home quickly across the military lines, and over the heads of the opposing army, they attach to the bird a message made on light paper, and perhaps in cipher, and set the pigeon free. He will rise high in the air, and take a turn, and then start as straight for Paris as a rifle-ball would go. From this city pigeon fanciers took birds to Ohio or North Carolina that were never there before. They were carried by train, and did not see an inch of the land on the way. They were set free at a given moment, the time being telegraphed, and people at home watched for their return, knowing the hour. They flew straight home to their cote. In that way there is a species of gambling and betting carried on among sportsmen as to what pigeons will get home first.

When I was traveling as a lecturer in different sections of the country, I everywhere heard remarkable stories of pigs finding their way home. One pig was carried from East Hartford, Conn., in an empty flour barrel. He might have been six weeks old. It was a mile or two north of the Connecticut River bridge at Hartford. The route was south until the bridge was reached. The wagon went through the city of Hartford, winding around at different places while the man transacted business. Then he drove northeast several miles to W. Hartford, and put his pig in the pen. In the morning he found that the

pig had dug out under the bottom of the pen. He went to one of his near neighbors to see if the pig had come to their house to make friends with their pigs. A man there wiser than himself asked him where he got his pig. He said at W. Hartford; he brought him home in an empty flour-barrel in a wagon. He told him to go where he got his pig and he would find him, or find him wearied out or dead on the road; that the pig would go in a straight line from his house to the place where the pig came from. "But," said the man, "the river is between us." He sat there a moment and considered what would be a straight line, and then went into the meadow. There he found in the tall grass a path, where the little fellow had wallowed, in a direct line toward home. He crossed the turnpike road and went into another field, and then across a corn-field. When he came to the Connecticut River the man saw where he went down the bank and across the sand into the water. He got a boat and crossed over, and found that the pig had drifted down the stream, in going across, nearly half a mile, but when he struck the shore he made, in a northeast direction, straight for his home. When the man reached there he found the poor little fellow thin and weary, but happy, in his old home. He did not go across the river bridge and then go straight north home, but he took a bee line. Other incidents quite as strange respecting the sagacity of pigs in regard to locality were certified to by elderly and most respectable men.

A person with this endowment can find his way in a strange city. He does not get lost, but, after making a circuit in different directions, takes as nearly as may be a straight line for his home or hotel. A person who can teach Geography skillfully will train the students to think, as they are looking at their maps, in what direction Boston or Montreal or Philadelphia or Chicago is from New York. He will have each pupil study these directions on the map,

and then the next day, with the maps closed, he will insist on the pupils pointing toward the cities he wishes to name. Then he will try another lesson, and will move his pupils mentally to Cincinnati, and then ask them where Boston, Montreal, Buffalo, Chicago, New Orleans, and Philadelphia are in respect to Cincinnati. His pupils will show wonderful skill in readjusting in their minds the location of specified places from a new place. Then he will ask his pupils to imagine themselves in Chicago or Memphis or Savannah, and think in what direction all of the places are from the one in question.

In every family there are one or two persons who can go all over the house, and when a party comes in will say, "Stand right where you are; I will strike a match." That person knows just where to find the match-box, and how to avoid things that may stand intermediately.

A person with Order and Locality can send a person to the proper bureau in a special drawer at the right hand or left hand, or the front or rear corner, to find a roll of flannel or anything else that may be needed. A housekeeper who may be confined by illness will tell the nurses just where they may get anything they want. A person who is deficient in Locality will turn down the street when he ought to go up, and will go east when he ought to go west, and has to have some particular method of finding position. We know a lady who remembers that at such a corner she has to turn toward her ring finger or opposite from her ring finger, and then she finds her place. So she manufactures a kind of artificial method of finding places, and thus remembering how to return.

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Correct Examinations from photographs can be made. A circular called "Mirror of the Mind," explains the kind of pictures and measurements required, and is sent on application to all who desire it.

CHILD CULTURE.

WHO IS TO BLAME?

A WRITER in the *Weekly Tribune*, of New York, writes: "Among the habits formed in children necessary to their success in life, one of the most important is that of logically connecting cause and effect. A child runs against a door and hurts himself. The fond and injudicious parent beats the door by way of punishing it for the hurt. The wiser parent will not do that, but will make the child aware that if he runs into a door, he must be hurt; if he plays with fire, he will be burned; if he doesn't avoid evil, it will come upon him, and that the blame is not in the things, but in *him*. As he grows older, the parent will point out to him clearly the inevitable results following certain courses of conduct, the rewards of fidelity, of industry, of integrity; and the penalties that as their shadow follow idleness, association with evil companions, profanity, intemperance, and vice. Some children seem incapable of learning these lessons. Somebody else is evermore to blame for all the trouble that comes to them. And there are plenty of grown people who never learn them, but ascribe all the calamity and misfortune that befall them to something or somebody beside themselves. It is very hard to help such people. When a man by the violation of the laws of life and health gets sick, and the doctor cannot restore the vital power he has wasted and make him well again, is the doctor or the patient to blame? When a man by the violation of the laws of the land gets into jail, and his lawyer can't clear him, who is to blame, the man or the lawyer? But this new point is not always taken by patients and criminals.

" 'Man is born to trouble as the sparks fly upward.' Because of our ignorance, our perversity, our ill-regulated impulses, and our imperfectly directed volitions, we are always bringing down troubles of one sort or another upon ourselves and others when our intentions are of the best, and for these no one is to be blamed. They are the necessary results of what we are, of the 'way we are made,' of the conditions of our lives, and they are permitted, must we not say ordered? that we may learn how to overcome our ignorance, to control rightly our impulses, and to bring our volitions into harmony with the laws of God written in all His works. Accidents that cannot be foreseen or provided against continually befall us; disappointments come to us; and evil in its innumerable forms presses in on us on every side. We are, like children who must cross a busy street, thrown in among the great forces of nature everywhere at work around us, and compelled to find our way safely among them as we can. Flood and fire, earthquake and storm, the provident overtake and the improvident alike, and the only thing we can say in the presence of such calamity is among the oldest recorded utterances of man. 'Shall we receive good at the hand of the Lord, and shall we not receive evil?' Thus shall we not 'charge God foolishly.' Our problem is to endure and overcome; to be patient, submissive, industrious, hopeful; to learn by what we suffer how to avoid such conditions as bring suffering; to bring about, so far as we may, those conditions that insure prosperity; to rise to the knowledge of the laws that

govern matter and mind, and bring ourselves into harmony with them, so they will work for us and not against us. A very complex and intricate problem, surely, and one of which few have found the solution. But the mental discipline gained in trying to solve problems is what students are after, far more than the satisfaction of 'getting the answer' to them.

"There are those who blame themselves

for a thousand things they have no responsibility for; who are always picking up burdens they are not called upon in reason to carry, and wondering if the failings of their children and friends are not in some way the result of negligence on their part. If these good people could only divide with those who never call themselves to account for anything, the golden mean in the distribution of blame would be attained."

APPROBATIVENESS IN DOGS.

THERE are some traits of character possessed by human beings that are especially noticeable in the animals we train for our pleasure and use. The dog can lay claim to this in a large degree. It has been often said that "a man can be told by his dog." If he is of noble heart and life, his dog will be friendly and kind; but if he thinks only of himself, it will be reflected in the character of this household pet. Dogs are susceptible of receiving good and bad impressions the same as children when young, but in a very short period of time it is found to be quite difficult to "teach them new tricks." Jealousy and revenge are easily aroused in their combative natures, and will assume control unless great care is taken to teach them differently. Pussy's right to a titbit is often disputed, but if the puppy is taught to respect her tastes as well as his own, they can eat side by side without trouble or watching. Our young Shepherd dog is an active, mischievous fellow that understands about all I say to him. When he fails in this I can tell by his arching his ears and turning his head sideways, looking me full in the eye, as if listening intently. I had only to roll him over twice and feed him to make him know that food followed that particular action. The next day he whirled round and round and barked, but did not reach for the bit in my fingers; he evidently felt that he had not quite hit the mark. I repeated the words I had previously

used—"Good Carlie rolls over." He looked for a few seconds, as if trying to think, and, to our astonishment, over he went. And over he goes at our will now. He is by nature very lawless—into everything, biting and tearing. No shoe dealer can unbutton a lady's shoes as deftly as he, taking three buttons at once. "Mustn't bite!" is a household word, and we thought him mostly through with the bad trick, but the other day he was worse than ever, biting my feet whenever I moved, snatching my dress or work, at the wood or stove. After a while he coughed, and out flew a little tooth upon the carpet. I examined it, and found a nicely drilled hole in the center. Calling the little fellow, I opened his mouth to see where it came from; this was easily found, and there was the new tooth that had pushed it out. The gums were much inflamed and swollen, and had, no doubt, been painful. When I said, "Did it hurt poor Carlie?" he laid his head upon that side on me and gave a peculiar whine, as if he appreciated my sympathy. He kept drinking water, and after two or three hours the redness had disappeared around the new tooth. I gave him an apple to bite, which he used a long time. When I say, "*Lie down.*" he frequently braces his feet, as if saying, in defiance, "Come on, now!" But when I say, "Good doggie, lie down," he usually will at once go to his place and remain until something attracts him

away. I am sometimes compelled to use the whip, or to ask where it is, but quite as often I appeal to his love of praise, and commend his goodness. "Good doggies mind," gives great satisfaction, as his winsome face, his sparkling eyes,

and wagging tail indicate. As soon as he obeys I usually say, "Carl is good now, for I wish him to desire our approval in the time to come, when he will be sent to drive out cattle and sheep.

L. R. DE WOLF.

A SCHOOLBOY OF ANTIQUITY.

IN the Abbott collection of Egyptian antiquities, in possession of the New York Historical Society, is a bundle of wax tablets, looking not unlike schoolboys' slates of our day. They were the tablets (serving the same purposes with modern slates) of the schoolboys in an Egyptian school in the Ptolemaic period. How they came to be placed in the tomb we have not time now to conjecture. Perhaps they were an offering to a dead schoolmate. They are the record of many interesting things; but I am writing now about the perpetuation of records of little things; of small thoughts, trifling and unimportant mental actions. One of the boys had a copy, a line of Greek, set by the master across the top of the tablet. (Young readers may need to be told that the tablet was wood, covered with a black waxen composition, in which the boy could make marks with a sharp stick, like a pencil, and he could erase a mark by smoothing down the wax with the blunt or flattened end of his stick.)

This boy had worked along just as modern boys work in their copy books. Probably he got to be weary. At all events he came to a point, as many a boy has done, when the pencil would go wrong in spite of him. He misspelled a word. He carefully erased it, smoothing down the wax, wrote it again, and it was again wrong. He smoothed the wax and wrote the word once more, and once more his wearied brain and his pencil went wrong. What did he do? Just what you, my boy, might have done, I fancy. Some of you would exclaim, "Confound it!" Some boys in the up country might say, "Darn it!"

The small Egyptian not only said, but with his pencil scratched a Greek word (*phthazesthe*, it seems to be) meaning just about what one means who says, "Deuce take it!" And there it is to-day, the record of a schoolboy's little quarrel with his own perverse brain, in the days before Cleopatra was born.

W. C. PRIME.

DOING ANOTHER'S DUTY. — Unconscious self-betrayal is the most powerful of witnesses in determining social rank. The true lady shows her training in every word and gesture, but the pretender is too often found napping. A little girl, shopping with her mother, one day, was sitting contentedly on a counter stool, and watching the people as they came and went.

Presently she saw a lady elegantly dressed, who stopped at their counter and handed a waterproof and umbrella to the young girl in charge. "Take care of these things till I call for them," she said in an autocratic tone, and sailed away.

The bright eyes of the child followed her. The little face wore a look of distress. "Why, mamma," she whispered, "she didn't even say 'please'."

Sooner than she had expected the lady returned. "I will take my things," she said. There was some little delay in finding them.

"I hope you haven't lost or misplaced them," she said to the young girl. The articles were soon found, and, taking them without a word, the lady walked away. This was more than the child could bear. Leaning over so that her face came close to that of the clerk, she said, graciously, "Thank you!"

A LITTLE MISCHIEF.

THESE two pictures tell their own story, and need little remark on our part. In the first, both are in high glee over something that has been said by father or mother, and the unsuspecting little one is enjoying himself with all the hearty frankness of infancy. But

will be chided sharply by the parent who can read her cunning face.

♦♦♦

"DON'T!"—There are some systems of family government which all seem to be comprised in the one word "Don't."

They are systems of restriction. It is



ISN'T IT FUN?

his older sister wears a mischievous, cunning smile that is significant of her disposition to play a prank when she has the opportunity, even at the expense of the baby. In the second picture we have a denouement that is much as we might have expected, and the scheming rogue who has made baby-brother cry

"Don't do this!" and "Don't do that!" from the time the child can first understand the word until it grows either into a negative nonentity, or, breaking away from all bonds, goes forth where it will not even listen to the "don't" of its own conscience.

It is like putting a child into a room

of beautiful and precious things, that appeal to every sense in its being, and then saying "You must not touch any of these things."

As if there were not enough of sweet and pleasant and helpful things in the world for a child to do, as to make it almost forget the things that it must not do.

inculcate right habits. The little ones fall into errors and get into bad ways largely because they are permitted to do many improper things they see others—both old and young people—do, merely as imitating them, and are not directed by careful eyes and tongues. Is it not almost as easy to inculcate good



I DIDN'T TOUCH HIM!

This was not God's method of governing the only two of his children whose training He did not intrust to others. His command to them was, "Of all the trees of the garden thou mayst freely eat," and there was but one "don't."

The best way is to teach children early about what is proper for them to do, and

habits as bad ones?

Mothers and fathers, take pains to find things that your children *may* do. Allow them, whenever possible, to do the many things that they desire that are not absolutely harmful, and do not fret and irritate them with an everlasting and hateful "Don't."



IF YOU WOULD LIVE LONG.

THE first lesson you should learn early is—that all disease is the result of broken law; that much of it might easily be avoided by the observance of the principles of health; that much more, which is beyond the reach of individuals, might be prevented by the combined efforts of communities and the State; and that those diseases which are entailed upon this generation by the law of heredity, might by obedience to law be gradually stamped out of existence, and future ages be freed from their curse.

The next thing to be taught is the laws themselves—and with the laws, and of even greater importance, the habit of obeying them. Most of us know a great deal more than we put in practice. This is the fault of the common modes of health teaching. Our newspapers and periodical literature contain a vast deal of popular instruction in these matters. They are treated of in an abundance of well-written books which are within easy reach of all who care to read them. Our schools are taking hold of the good work, and instruction in hygiene is fast coming to be recognized as an essential part of even an elementary education. But all these do not reach the evil, or if they do, they only touch it on the surface.

Our schools are full of good grammarians who do not use respectable Eng-

lish in common conversation. So, too, they may be full of glib reciters of the laws of health, who do not observe carefully a single one of the laws they have learned. The main point is to secure obedience. The greatest criminals are usually well versed in the laws of the land; but their knowledge does not always avail to keep them out of the penitentiary when they have broken these laws. Neither will a knowledge of the laws of health keep a man from being sick, so long as he does not live up to his knowledge.

We are creatures of imitation. Example counts for more than precept. The parent knows the law, and the child knows it too. When the parent keeps it, then the children will keep it also. It does little good for a child to learn at school that the food should be properly masticated, when three times every day at home he sees a hungry group crowd about the table like pigs around a trough, and bolt their food as nearly whole as it can be made to go down. The child whose mother gives it a bite of something to eat every time it cries for it will not be in a condition to profit from an understanding of the law that food should not be taken between meals, until it is too late for the knowledge to be of much service. The law of pure air and proper ventilation may be taught ever so plainly in the text-books, but to the boy

who is brought up to sit and sleep in a close, unventilated room, foul with the breath of living beings, and to shun fresh air as he would a plague, the knowledge will be of little avail. While his father's cellar is filled with decaying meat, vegetables, and all manner of filth, and the cesspool smells to heaven from beneath the kitchen window, all the teachings of the schools will not prevent his having typhoid fever, or diphtheria, or some form of filth disease, when the summer sun calls into activity the germs of disease which are latent there. If liquors are kept upon the side-board, and wines are served upon the table in his home, not all the teachings

of all the temperance text-books in the land can be relied upon to produce in him habits of sobriety and total abstinence.

It is the practice of the principles of hygiene in our homes, and this alone, which will lessen the rate of disease and death to-day, and develop a stronger race to-morrow. The child who has learned the laws of health from his father and mother, by seeing them continually and persistently applied, will come to follow them in his own case, as naturally as he will conduct himself properly in good society, if good society has been his birthright, and gentlemanly conduct has become habitual.

A NOTE ON HAY FEVER.

WE are about entering the season when that malady so peculiar in its nature and so exclusive in its selection of victims, announces itself. In England it is most prevalent in June and July, but in this country the latter part of August is the time when it breaks out. There are a few cases that show an eccentricity of occurrence in winter or spring, and have obtained the name of "idiosyncratic catarrh."

The nature of the disease is an altered nervous condition that renders the mucous membrane abnormally sensitive to irritation, so that small particles, such as pollen, dust, odors, and other emanations from drugs, animals, etc., excite an inflammatory action. As in one whose nervous system has become fatigued or exhausted any little exposure may produce neuralgia or rheumatism, or the symptoms of a cold or influenza, so in another it may develop the condition of hay fever, the susceptibility being dependent upon the special character of the neurosis, or the particular nerves affected.

Observations made during the past seven or eight years have determined the nidus of the trouble in the majority of cases to be the inferior turbinated bodies

and the lower and back part of the nasal septum. In a few, more of the nasal mucous membrane is involved, and in rare instances the sensitive tract extends to the pharynx, and, possibly, to the bronchial mucous membrane. In some cases the middle turbinated body, and anterior parts of the septum, and lower turbinated bodies are also involved. The sensitive points may be in either one or both nares. The principal changes, therefore, are located in the branches of the spheno-palatine ganglion and nasal nerves, yet the nature of these changes is not yet discovered, but seem to be analagous to the condition in neuralgia and hyperæsthesia. The causative irritants also affect the vaso-motor nerves, as shown by the sudden swelling of the erectile tissues in the nares.

The first *symptoms* are like those of a cold in the head, attended by frequent sneezing and burning pain, with profuse secretion from nose and eyes, which soon become red, swollen, and tender; the temperature is usually slightly elevated; nasal respiration is interfered with, and often asthmatic attacks add to the discomfort. The first symptoms are rarely referable to the naso-pharynx and fauces, but the interior of the nose

and the parts bordering on the frontal bone appear to be the center of disturbance. During the height of the attack the discharges frequently cause soreness of the nostrils and upper lip, and there is much inflammation of the Schneiderian membrane that may involve the eyes, ears, throat, and extend down into the bronchi.

The principal points of *diagnosis* from an ordinary cold are, the periodicity of hay fever, its sudden accession, the sensitiveness and swelling of the nasal mucous membrane, the asthmatic symptoms and obstinacy of attack, as compared with an ordinary cold. Its recurrence from year to year of course settles the matter of its character.

The treatment that has been tried has been as varied, almost, as the number of physicians who have exercised their wits upon it, but local applications and internal dosage have generally failed to furnish more than temporary relief. Cocaine muriate has proved as effective as anything, when applied in powder or solution, to relieve the pain and irritation. But it is necessary to repeat the applications with more or less frequency to maintain the anæsthetic effect of the drug.

The galvanic cautery is spoken of with much favor as producing results that are very encouraging, but numerous "sittings" are necessary to relieve the

excessive hyperæsthesia, and whether the cautery leaves the membrane in anything like a healthy state, may be doubted. Cocaine is used in connection with this treatment to render the membrane insensitive to the electrode.

Change of residence to a high level, where the atmosphere is pure, cool, and dry, is considered the best course, and consequently it has become the custom of chronic sufferers here in the East who can leave home, to go to points in the White Mountains on the appearance of their enemy, and remain there until quite cold weather has set in.

Recently a method of treatment has been tried that promises well. By the use of a narrow ice-bag applied to the nape of the neck, and perhaps extending down more or less over the spine, a reaction is produced that affects the blood supply of the nasal membrane in such a way as to reduce the local turgescence and hyperæsthesia, and with lasting result. The form of bag used is known as Chapman's, which can be obtained of different sizes.

The diet of a person subject to hay fever should be carefully regulated, simple, nutritive articles being taken only, and excessive indulgence of the appetite rigidly avoided. Bathing regularly, and exercises conducive to activity of the general functions, are also important helps toward recovery or prevention.

H. S. D.

A FRAGMENT ON THE SUBJECT OF HEALTH.

CIVILIZATION proclaims herself as the great teacher of the world, and truly she should be so, but the greatest teachers and the loftiest minds are always ready to learn from the simplest and most unpretending sources. As we stand on the heights of our 19th century civilization let us pause for a moment in the breathless pursuit of knowledge, in our reading, studying, and following of tracks and pathways of great minds; let us listen for a little while to the deep voices of nature,

which, if we interpret them rightly, always tell us the truth and nothing but the truth.

If we consider what are the most serious questions which interest society at the present or in any other age of the world, we find that the subject of health stands in the foremost ranks. Other subjects of interest come and go with different generations, but health, which stands next to religion, is always of vital interest to the mind of man. We find all around us an uneasy, restless

multitude, crying with uplifted hands, "What can I do to be cured?" In the present condition of society, with its various imperative requirements, it is of little use to reply, "Alter your ways of living in this way and that, and you can be well by simply growing into health." But to look the matter squarely in the face, that would be the only way by which, for many sufferers, health could be obtained. But the invalid immediately inquires, "What are the ways in which I must reform? I live as carefully as possible, and avoid all unnecessary exertion. I am moderate in all my desires, and care nothing for pleasure in itself." My friend, take my hand and go with me to the field and wood, and there let us learn one simple lesson on the great subject of health. If a man wants to get his health, let him for a while live as far as possible in accordance with the simplest laws of nature. That is the way the animals live, and they are very close to nature. Let him eat the plainest food, as much of it uncooked as is compatible with health and constitution; drink nothing but water, and that in moderation; do not load the body with heavy clothing; go to bed with the sun and rise with it; don't think; don't read; live under the trees and out of doors as much as possible. Let one put himself, if he can, in an attitude of mind similar to that of the horse, which, freed from the harness, gallops to the field, where, in the soft, cool grass, he lies down for a refreshing roll. Many are the cases of chronic invalidism which yield to this mode of treatment as they never would to courses of drug treatment, and out of weak, nerveless wrecks of humanity arise vigorous men and women, fairly athletic in mind and body.

Perhaps the only harmful effect of this natural way of living is that to those who really become enveloped in its subtle influences it has a charm which makes one long to continue it even after health is restored and the

imperative demands of life force one to return to the hot breath and artificial atmosphere of society as it exists at present. We do not hold that a purely natural life is altogether good for man, who, being endowed with mind, is placed at once and forever far above the level of brute creation. A natural life is only valuable so far as it will restore and preserve health, and tend to restrain the great physical, moral, and spiritual evil of luxurious living. The savage man abuses his opportunities of living a natural and healthy life. The educated man abuses his opportunities of living a wise and intelligent life. The educated and Christian man should be qualified by his light and knowledge to unite the benefits of simplicity of living with the advantages of mental cultivation, which education and high civilization give us, and from both evolve a scheme of life of a standard higher in mental and physical development than anything yet attained by man. This reform would involve a great change in certain solidly fixed habits of society, and the most serious difficulty in the path of the reformer would be to prevail on those pleasure-loving souls who would fain live well and take their ease, to renounce those seductive delights of sense and stomach which, like sirens, steal away the better gifts of mind and body, and in 99 cases out of 100 produce the unwelcome result of ill health, like the mocking laugh of a demon after the pleasure is fled. "Eat, drink, and be merry, for to-morrow we die," is the jocular motto of the world at large, and how unwelcome is the voice of the faithful teacher who would advance a different doctrine.

"Renounce, forsake, abstain," are the watch-words which we would put forth in letters of flame on a banner of gold, to warn a heedless generation in a self-destructive course. But in a world of pleasure for flesh and sense on every hand, who wants to be called on to live as if such pleasures did not exist? Truly, only by those who have their minds fully

fixed on making the best use of all their faculties and abilities, mental and physical, and living not only for their own gratification, but, by the energy and capacity which come with a healthy

and well-balanced condition of the whole system, to be of material service to others in their age and generation, is such doctrine heeded.

M. JACOT.

HOW TO WALK WELL.

A WRITER who has given considerable attention to gymnastic training gives some practical suggestions to those who would become good tramps :

While we are very young, a great deal of attention is paid to our tongues and our legs, and everybody is anxious that we should learn to use both skillfully. But as they knock about the world, they grow often rough or silly, and lose their manners ; so that our speech gets to be a jargon which our English-speaking relatives are still kind enough to understand, and our gait develops into a business of slouching and mincing and toeing-in which must make cats, for instance, who walk beautifully, think sarcastic things of us.

"Practice," Mr. Emerson said, in one of his sharp sentences, "is three-fourths." That will make a very pretty proverb. Whatever you do most, you do best ; so if you walk much you must, in time, walk well. Everybody parades the streets on stumps or spindle-shanks ; but real walking on real legs is a fine art, and a rare one. Society has next to nothing of it, and the stage has all it wants. Actors do much of our orthodox talking and walking, and imitate us, often, as we ought to be.

The main thing to remember, in our career of reform, is to walk with the whole leg, from the hip ; to hold the head up and the shoulders back, and to let the body poise and balance itself from one foot to the other. Our dear friend, Doctor Holmes, has pointed it out somewhere that one step is a fall, and that the second step, close upon it, is a recovery ; so that as we make our mortal way we are forever running a risk, and forever being saved. The step itself should

be long and swinging for long legs, and shorter and more decided for short legs, which can often walk the faster. In any case, push downward every time from the ball of the foot, just before the same foot goes forward ; when that becomes habitual, you have your diploma as pedestrian. You know that a fine runner will never touch heel to the ground ; in walking, too, the heel should almost be counted out, and, above all things, never strike ground first. Mount once the smooth pavement of a rather steep hill, standing erect and keeping your heels up all the time ; and if you reach the top you are either a Spartan or a born walker.

Constant and careful walking, like military drill, will give a good carriage to anybody (a fig for a carriage of the commoner sort in comparison !), and it trains the whole person to quickness and grace. Flapping arms and big feet belong to the walker ; whoever has a prejudice against these elegances had better stay indoors. If arms hang loosely by the side their natural impulse is to swing, while the legs do ; and feet, certainly, with their rising muscles, will broaden and deepen if the boots worn in the beginning are honest boots, and give them a chance.

A great deal depends on shoe leather, if we would get comfort and avoid injury. We are in a lively climate, which does not encourage us to wear the beautiful, sensible sandals of the Greeks and Hebrews. It was the advice of an forgotten young soldier to our marching volunteers of the Civil War : "Trust in God, but keep your shoes easy." We must not have errors in our premises ; a corn is a fatal error to a walker. There-

fore take to square low heels, wide soles, and ample toe room. (We shall have an excellent company on the road, because all the vain people will be scared away.) Wear loose, short, warm clothes if the weather be cold; but heavy ones, never.

Light flannel is capital, all the year around. Caps are better than hats, by land as by sea, for the wind can not catch at them. One's stockings are apt to bunch and feel uncomfortable on a long tramp. But if before starting you soap your feet, fore and aft, so that they are cased in lather, they will keep cool and easy under you from morning till night. "Break an egg in your boots!" said James T. Fields, who was a boy all his life. But whichever you do, you will find it a great help and convenience,

though the prescription may seem queer to a novice.

When you start off of a brisk morning, on a fair road, with a luncheon, perhaps, for baggage, what do you want to see, and how far do you want to go? Think it over, and figure it up; it is great fun to walk on system. Of course, if you are bound on a Maying excursion, or on a stroll, that is a different thing. You can best enjoy scenery, or buildings, or what not (except a street procession), from the ground. The eye is twice as clever, to make a bull, on foot. The true travelers are men like Bayard Taylor, trudging it through Europe and meeting life on its own level. Horses and bicycles are very jolly, no doubt; but to be your own hoof and wheel is a haughtier luxury still.

POPULAR ERRORS.—THE APPETITE.

NOTWITHSTANDING the fact that the appetite was designed as a guide to the human body, in relation to the real demand for food, with which to restore constant waste, the result of physical and mental activity, there are those, far too many for the credit of our fallen humanity, who affect to believe that food must be taken at regular periods without much regard to the real demands of the appetite. Under existing circumstances an unusual amount of exercise, physical or mental, produces an unusual waste of the tissues, for the restoration of which a corresponding amount of food is demanded, indicated by an increase of the appetite, and usually attended by an increased activity and power of the digestive organs. And, since a large part of our food is appropriated to sustaining the temperature of the body—which must be sustained at about 98.5 degrees, Fahrenheit—about one-third more food is demanded in cold weather as compared with that of the summer, and that of a more carbonaceous character; the appetite ordinarily indicates this change, the digestion cor-

responding with the demand. In sickness the appetite is modified, often utterly suspended; in acute diseases, a thirst substituted. Much sickness is caused by errors in diet, the system becoming so overloaded that the digestive organs are unable to dispose of the usual amount of food, when, as an act of mercy, the appetite is diminished, that the needed rest may be secured. During this rest nature makes an effort to dispose of the superabundance of accumulated nutrition, the appetite reappearing as soon as it is needed, it always being as good as it ought to be, under existing circumstances. When utterly suspended, as in fevers, etc., the digestive juices are not secreted, without which good digestion is impossible.

If the first caution, a flagging appetite, with no special desire for food, and the absence of the usual relish, is not heeded, a total loss of it frequently results. So, food often becomes tasteless, uninviting, is thrown up by vomiting, and if these warnings are unheeded, an absolute nausea may be added before the more stupid are able to understand Na-

ture's teachings! There are many, however, who contend that one *must* eat, at any rate, or gain no strength, ignoring the fundamental principle that food which is not digested can produce no strength, can be of no possible advantage, but a constant source of harm, the undigested portions fermenting, *rotting*,

and contaminating the system, preparing it for malignant disease.

It might seem strange that such persons are unable to reason in the matter, and will not learn wisdom from the brute, since even the swine, as low as he is in the scale, is too wise to eat when sick!

DR. J. H. HANAFORD.

HOW TO TREAT BURNS.

ONE who was severely burned all over the body while engaged at a fire, gives the following particulars of the treatment of his burns, and the suggestions he offers may be useful. He says: "I shall not attempt to picture the suffering I endured, as any work on surgery gives a good description of the symptoms. I shall simply allude to the treatment, which I found very defective. Carron oil, as an external application failed to give me any relief. After suffering twenty-four hours, an old lady advised me to use fresh slacked lime. This suggested an idea, which we acted upon at once. Lime and distilled water were mixed together to the consistency of thick cream, then equal parts of linseed oil were added; this mixture relieved the pain. This dressing was continued until suppuration set in. We then used an ointment composed of—Acid carbolic, one drachm; vaseline,

six ounces. Mix. This was continued as long as any dressing was required. The following facts I learned from my painful experience: 1st. When called to treat a severe burn, give morphia subcutaneously to relieve pain. 2d. Official aqua calci (lime-water) does not contain enough lime to make the first dressing for a burn. 3d. Do not puncture blisters, or remove the burned and detached skin. 4th. During suppuration keep parts clean, and change dressing often; never use liquids; a soft piece of old linen, pressed gently upon the parts, will remove the matter; avoid rubbing, as it will not only cause pain, but damage granulation. 5th. Watch the granulations carefully. Should they raise up above the surface, touch them with nitrate of silver. 6th. As soon as soreness will admit, use splints and bandages, to avoid the contraction cicatrization is liable to produce.

HOW IT MAY BE.

THE time may come that the opinion of Alcott and others, that sickness is sin, will be regarded as a principle in civil law, and they who are found ailing in any way, because of carelessness or indiscretion, will be punished by judicial authority. Somebody illustrates the principle and practice thus amusingly:

Judge—"What is the matter with the prisoner?"

Officer—"Found him sitting on a stoop holding on to his head."

"Where were you last night, prisoner?"

"I was at home. I don't drink. I had been walking in the sun and felt dizzy."

"Where was your umbrella?"

"I haven't got one, sir."

"Don't you know that it's against the law to walk in the sun without an umbrella? You may go this time, but I caution you to buy an umbrella or keep on the shady side in the future."

"Next!"

"Found this man clinging to a lamp post and groaning."

"What's the matter, prisoner?"

"I had just been to dinner at Robinson's restaurant, and felt sick."

"What did you have for dinner?"

"Beefsteak and mince pie."

"Officer, did you make a microscopic examination of the mince pie at Robinson's?"

"I did, sir; there was no fungoid growth; visible under a power of 240 diameters, the fat used stood Margarine's test, and the record showed that the pies had not been made for more than four days. The prisoner him-

self ate a whole pie of legal dimensions."

"A whole pie! Don't you know, prisoner, that it's against the law to eat over two cuts of mince pie at one sitting? I fine you ten dollars, and will give you sixty days if I see you here again; there is getting to be too much sickness in this district. Clerk, if that cholera case is able to stand up, send him in here for trial."

OUR MATERIAL CONSTITUENTS.

ONE of the most interesting collections in the National Museum at Washington is that composed of specimens and charts illustrating the composition of the human body, and of the foods which nourish it. These specimens and charts were explained in a lecture by Prof. W. O. Atwater. Upon the platform were arranged a large number of bottles. These, the lecturer explained, contained specimens of the chemical elements and compounds of which bodies are made up. Oxygen forms one-fifth of the air, and about sixty-two per cent. of the body, so that the body of an average man, say a man weighing one hundred and forty pounds, contains about ninety-two pounds of oxygen.

The quantity of hydrogen in the body of such a man is about fourteen and one-half pounds, and in the form of gas would fill about twenty-six hundred cubic feet, in other words, the hydrogen in a man's body, if set free in the form of gas, would fill a room twenty feet long, thirteen feet wide, and ten feet high. The same body contains about thirty-one pounds of carbon. These three elements, therefore, together make up about one hundred and thirty-eight of the one hundred and forty-eight pounds.

The principal compound is water. More than one-half the weight of our bones, three-quarters of the weight of our muscles, and seven-eighths of our blood, or about three-fifths of the weight of the whole body, are

water. Besides water, muscle, bones, and skin contain what chemists call "proteine" compounds. These consist mainly of four elements: carbon, oxygen, hydrogen, and nitrogen. The albumen, or white of eggs, the caseine—curd of milk—and myosin, the basis of muscle, are proteine compounds.

When country boys chew wheat, and get what they call "wheat gum," they make a sort of chemical analysis in their mouths, separating out the starch and sugar, and some of the other ingredients of wheat. The residue, which they call wheat-gum, consists chiefly of gluten, a proteine substance. A bottle containing about twenty pounds of tallow was shown to illustrate the fat in the average man's body. Fat forms about fifteen per cent. of the whole weight of the average adult. The bodies of stout people have more fat, and those of lean people less.

Our foods, like our bodies, contain water, proteine, and fats, and also two other classes of compounds—carbo-hydrates. Vegetable foods, such as wheat, corn and potatoes, contain a large proportion of carbo-hydrates. In meats the proportion of carbo-hydrates is small.

There are small quantities of carbo-hydrates in the human body. Thus igosite, sometimes called "muscle sugar"—a substance somewhat similar to ordinary sugar—is found in the muscles and other parts of the body. Our bones and teeth contain a great deal of phos-

phate of lime and other mineral matters in all parts of the body and in all our foods.

TREATMENT OF LOCK-JAW. — Prof. Renzi, of Naples, records several cases of tetanus (lock-jaw), successfully treated by absolute rest. The method advocated is as follows: The patient's ears are closed with wax, after which he is placed in a perfectly dark room, far from any noise. He is made to understand that safety lies in perfect rest. The room is carpeted heavily in order to relieve the noise of stepping about. The nurse enters every quarter of an hour with a well-shaded lantern, using more the sense of touch than sight to find the bed. Liquid food (milk, eggs in beef tea, and water) are carefully given, so that mastication is not necessary. Constipation is not interfered with. Mild doses of belladonna or secale are given to relieve pain. This treatment does not shorten the disease, but under it the paroxysms grow milder, and finally cease. Numerous physicians attest to the value of this treatment.

This is certainly reasonable—the avoidance of all exciting influences in the great nervous strain, incident to the disease, should be an important element in its treatment.

WHAT TO DO IN GAS ASPHYXIA. — At a recent meeting of the American Gaslight Association of Toronto, the following rules were given for the recovery of men overcome by gas: 1. Take the man at once into fresh air. Don't crowd around him. 2. Keep him on his back. Don't raise his head nor turn him on his side. 3. Loosen his clothing at his neck and waist. 4. Give a little brandy and water—not more than four tablespoonfuls of brandy in all. Give an ammonia mixture (one part aromatic ammonia to sixteen parts water) in small quantities, at short intervals—a teaspoonful every two or three minutes. 5. Slap

the face and chest with the wet end of a towel. 6. Apply warmth and friction if the body and limbs are cold. 7. If the breathing is feeble or irregular, artificial respiration should be used, and kept up until there is no doubt that it can no longer be of use. 8. Administer oxygen.

BARNUM'S ALCOHOLIC EXPERIENCE. — Mr. P. T. Barnum is a great showman, and as such long ago said that there was much humbug in the trade; but a late statement of his may be relied upon as true. In his vigorous old age he is an embodiment of the principle. He says:

"I drank more or less intoxicating liquors from 1837 till 1847. The last four of these years I was in England, and there the habit and my appetite for liquor grew so strong from month to month that I discovered that if continued it would certainly work my ruin. With a tremendous effort and a most determined resolution I broke the habit square off, and resolved never to practice it again. I have religiously kept that resolution for more than forty years. Had I not done so, I should have been in my grave a quarter of a century ago, for my health had already begun to be affected by alcohol. I was so delighted with my own escape that I traveled thousands of miles at my own expense and gave hundreds of free temperance lectures in every State between Maine and Wisconsin, besides Missouri, Kentucky, Louisiana, and California. I have gladly expended thousands of dollars for temperance. I have built numerous houses for moderate drinking workingmen on condition that they would become teetotallers, and they subsequently paid for the houses with the money and extra strength so gained."

SPRING water only differs from rain water in having percolated through the earth and, during its passage, either imparted some of its particles to the soil or taken up soluble matter.

NOTES IN SCIENCE AND INDUSTRY.

First Discovery and Use of Natural Gas in This Country.—The first recorded discovery of a natural gas well in the United States resulted from borings made within the present limits of the city of Charleston, S. C., in 1815, but in this case the gas does not appear to have been put to any use. In 1821 natural gas was discovered issuing from a spring at Fredonia, in New York State. This discovery was made by a woman who had gone to the spring, one dark night, to draw some water in a pail. In order to aid her in doing this, she put down a lantern, when the gas, which was rising from the spring, took fire. This alarmed the woman, who, hastily dropping both pail and lantern, ran back to her home as fast as possible. This gas was first collected by excavating and covering the spring. It was then conveyed into a small holder made of copper, and from thence to one mill and several stores, where it was used for light. This was the first practical use of natural gas in the United States. When LaFayette passed through the village in 1824, the hotel, called the Taylor House, was illuminated with this gas in honor of this distinguished man. The well is said to be producing yet, and Fredonia is still lighted by natural gas.

Dust Particles in the Air.—An ingenious method has been devised by Mr. John Aitken for counting the dust particles in the atmosphere. It was found that when the moisture is condensed in a rarefied atmosphere, each raindrop has a dust particle for its nucleus, so that by sweeping a measured portion of the air into an exhausted receiver, by means of pure air, and counting the number of deposited drops, it is easy to calculate the number of dust particles in a given volume of the impure air. The counting is managed by having the silver plate in the receiver divided into millimetre squares, so that it is only necessary to count the drops on one square millimetre. Mr. Aitken showed that the air of a hall contained 400,000 particles to the cubic centimetre, while a specimen of air taken near the roof of the hall gave 3,500,000 to the cubic centi-

metre. In Edinburgh, on a fine day after snow, the number of dust particles in the cubic centimetre was 75,000, but in pure country air the number is often as low as 5,000.

Imitation of Wood Carvings.—Old oak or other carvings in low relief, it is said, may be very effectively and easily imitated, almost in fac-simile, by the following process: "Procure some "basil" leather and wet it thoroughly in warm water in which a small quantity of size or glue has been mixed; wipe it as dry as possible with a cloth, then cut a piece sufficiently large to cover the carving and allow a small margin; lay it upon the carving and press with the fingers all over, in order that the leather may take the shape of the carving as much as possible. Next, with a smooth, pointed tool made of bone—say the handle of a tooth-brush, filed down till it assumes a blunt knife shape—go over the surface carefully, pressing the leather into all the interstices of the design, and smoothing the larger or bolder portions until you have succeeded in bringing out all details. Of course, this process can only be applied to carvings, etc., which are not undercut.

Fine Flavor in Fruit.—As the period for the ripening of large fruits is at hand, it may be well to remind inexperienced cultivators of the importance of high culture for the development of the finest quality. Some years ago, two St. Ghislain pear trees bore fruit so unlike that they would not be recognized as the same variety. There was almost no similarity in flavor. One tree, bearing poor fruit, stood in a thick grass sod; the other, with excellent pears, was kept well cultivated. Early pears, as well as early peaches, on crowded trees, which ripen first on the tree, are much inferior in flavor to those which come later. The first are grown so thick on the branches that they cannot sufficiently mature; those which ripen later, after the early portion of the crop has been removed, have plenty of space to develop their fine quality. Hence the great advantage of early thinning crowded trees. Take the Summer Doyenne pear,

for instance. Those which are first ripe on densely crowded limbs are about half the size of those which ripen last, and strikingly inferior to them in quality. So with early peaches—the last scattered ones on the tree are commonly observed to be greatly superior in flavor to the first which ripen. These facts teach the importance of good cultivation, and of thinning the fruit on crowded trees, both of which operations will always repay the grower in large, beautiful, and excellent fruit, instead of small, knotty, and flavorless specimens.

Modern Cave-Dwellers.—In southern Chihuahua, Mexico, cave-dwellers are found in great abundance, and as wild as any of the Mexican tribes at the time of Cortez's conquest. The abodes they live in are exactly similar to the old, abandoned cliff dwellings of Arizona and New Mexico, about which there has been much speculation. It was almost impossible, said Schwatka, to get near them, so wild and timid were they. Upon the approach of white people they fly to their caves by notched sticks placed against the face of the cliffs, if too steep, although they can ascend vertical stone faces, if there are the slightest crevices for fingers and toes.

These cliff dwellers are sun worshippers, putting their new-born children out in the full rays of the sun the first day of their lives, and showing many other forms of devotion to the great luminary. They are usually tall, lean, and well formed, their skin being a blackish red, much nearer the color of the negro than the copper-colored Indian of the United States.

Schwatka claims that nothing has heretofore been known about these people except by the half-Indian mountain Mexicans, and thinks his investigation will be of immense anthropological and archaeological value. He estimates the cave and cliff dwellers to be from 3,000 to 12,000 in number. They are armed only with bows, arrows, and stone hatchets.

Type Composition by Machinery.—One of the most ingenious inventions that was ever devised is the linotype, which

could be called a type setting machine but for the fact that it makes the type as it goes along. The compositor sits down before it as before a piano. He touches a key, and a little brass band, with the mold of a particular letter on the further edge, drops from one of the many tubes in front of him. After the molds of a whole word are standing on a slide in sight of the compositor, he touches a special key, and a space band comes down to keep this word separate from the next. As soon as the line is complete, the machine clasps the little molds tight, and pushes them backward to a disk which has a long window just where the molds come. Suddenly the machine throws some liquid type metal through this open window, and thus into the molds. In a moment or two the line of words is cast, and is carried to the proper place. Finally, this almost human mechanism takes the molds back to their original position. Meanwhile the compositor has been playing on the keys and putting another line of molds together. It is by this method that nearly all the "copy" for the New York *Tribune* is "set up." A compositor with the linotype can do more than twice the work he used to do with the "stick" and his fingers, at less than half the cost.

A Physician's Knife.—The illustration supplies a very fair view of the convenient physician's knife recently brought to public notice by the Western Supply Co.



of Kent, Ohio. It is a combination of instruments that readily serve the practitioner for a variety of purposes. For instance, it has a good, strong blade, a spatula, a gum lancet of excellent steel, and an ingenious curette of fine malleable metal that is gauged and adjustable for removing foreign bodies from the nose or ear. This last instrument is a specialty that gives the knife its best value, but the whole combination is neat and strong, and obtainable at a very

moderate price—that of a first-class three or four bladed knife, as ordinarily made.

A Woman's Anthropological Society.—The Women's Anthropological Society is an unique organization that embraces in its membership some of the most cultured women of Washington. Mrs. Tilly Stevenson is credited with the origination and organization of the society which at first consisted of twenty-one women. The object was "to open to women new fields of systematic investigation, to invite their co-operation in the development of the science of Anthropology." Mrs. Stevenson served as presiding officer for three years, and since her retirement Mrs. Sybil Augusta Carter, wife of the Hawaiian minister, has filled the presidential chair. Mrs. Stevenson traveled extensively with her late husband, and shared in his work with an intelligent and enthusiastic sympathy. Many of the most interesting specimens of native pottery in the National Museum bear her name as collector. Mrs. Carter has contributed much to the interest of the meetings with her papers on the "Hawaiian's domestic life." She presides with much dignity, and is as much at home in the "chair" as in her drawing-room. There are two vice-presidents, Mrs. Mary Parke

Foster, wife of the ex-minister to Spain, and Miss Alice C. Fletcher. The corresponding secretary is Mrs. Melissa A. Bryan; recording secretary, Mrs. Anita Newcomb McGee; treasurer, Miss Florence P. Spofford, daughter of the librarian of Congress.

Suggestions About Oil Lamps.

—The oil reservoir should be of metal, rather than of china or glass. Wicks should be soft, not too tightly plaited. Wicks should be dried at the fire before being put into the lamps, and should be only just long enough to reach the bottom of the oil reservoir. They should be so wide that they quite fill the wick-holder without having to be squeezed into it, and should be soaked with oil before being lit. The reservoir should be quite filled with oil every time before using the lamp. The lamp should be thoroughly clean, all oil should be carefully wiped off, and all charred wick and dirt removed before lighting. When the lamp is lit the wick should be at first turned down and then slowly raised. Lamps which have no extinguishing apparatus should be put out as follows: The wick should be turned down until there is only a small flickering flame, and a sharp puff of breath should then be sent across the top of the chimney, but not down it.



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THE STANDARD VARIABLE.

A LITTLE study of the Greek models of sculpture that survive, show that the classical artist was governed by certain principles in his distribution of form. He had a standard or model of perfect

excellence, which was kept before him as he worked, and, whatever the subject or idea he would represent in the marble, he adapted it to that standard. A system of rules of proportion was of great help to the ancient sculptor, as it would be to the modern artist, because it enabled him to vary his effects of attitude and expression, while the perfect embodiment of form would not be lost sight of. His figure remained beautiful in its harmonious relation of parts, and coarse variations and unhappy exaggerations were avoided. Modern sculpture, says an eminent artist of our day, is defective because of its tendency to literalism and imitation of individual models. "When compared with the best antique

work, though far more elaborate in its execution, and more finished in its details, it is far inferior in character, dignity, and style. In the antique the forms are scientifically disposed, according to a certain established scale or harmony of proportion, and the details are subordinated to that distribution. The type is never lost sight of; it dominates all the parts. * * * * Modern sculpture, on the contrary, is full of accident. It is domineered over by the model. It is founded on no system, and on no scientific basis. It has no absolute standard of proportion for the human form; it is governed by no law, and seeks through imitation of the individual model to supply this want."

This statement confirms what we have said in another place of the want of a physical standard, and also of the impossibility of establishing one that could be regarded as the highest expression of beauty and physical capacity. The ancient type of man in either the male or female form was simple as compared with the modern. The differentiation of character in the modern is greater commensurately with his civilization, and his physique corresponds with it. Instead of one type of beauty, there are several, temperament and color imparting their diverse qualities to the composition of these types. There is the full-chested, strong-limbed, Juno-like type of woman, for instance, and there is the slim, lithe figure that inspires the sense of grace and liveliness: the facial lines of one may be strong and even irregular; of the other, delicate and symmetrical.

We have known opinion to hesitate long—if it could not decide—which of

two women of marked difference in physical mold was the more beautiful.

The standards of Polycleitus and Lysippus are quoted to-day as matters of curiosity, not for observance, because the artist who would attempt to follow them in his mold of a statue designed to perpetuate in marble a Venus of English or of American society, would earn only ridicule for his pains. The waist of an Athene or Diana would be deemed suitable only in conjunction with the coarse face and heavy limbs of the fish-woman or laundress. The trim and supple artists of the trapeze and circus-ring would be indignant at being represented with a torso of such barrel dimensions.

The modern European of Western Europe and his emigrant brother of the New World is a complex man as compared with the ancient Greek or Egyptian, and in his complexity a single type can not be made to apply in either a physical or mental capacity. Our estimates can at most be comparative; never absolute.

Many years ago we attended an exhibition given by professional gymnasts. There were a dozen or more performers, and of these two appeared to be of about equal skill. One was above the middle height, slender in build; the other, about five feet seven inches, with full, round body and limbs, much heavier than the other. Whatever one would do, the other immediately followed, and with success. In the high jumping from a spring-board the stout man won our admiration by the grace of his movement; he would bound up ten feet or more in the air from the elastic plank, like an india rubber ball, and alight on his feet

with a certainty that was most refreshing. In the race upon the sanded track his slim antagonist won only by a hair, despite his marked advantage in point of weight. The stout man had the olive complexion and black hair of the South, the slim man the sunny hair of the North. Either would have served for an artist's model, while so very different in constitution.

Size, *other things being equal*, is the measure of power. Hence it is not the larger limb that may be the more muscular; it is not the broader chest that may contain the greater extent of lung. As a rule, indeed, it is the man of slim, free build that possesses the better muscular fiber, the compact, tenacious tissue that will do the best service. One of the most active and enduring men in the whole breadth of our large acquaintance is one below middle height, with a chest measurement of but twenty-eight and a half inches, a weight of but one hundred and ten pounds, but the temperament is *nervo-sanguine*, the frame slim, the muscular fiber fine and dense, and the tissues solid and compact all over. We have known this man, when the requirements of an exacting profession made more than usual demand upon his attention, to go almost without sleep for several days, and yet, at the end, appear fresh and buoyant. We have known him, after a week of hard work, to mount his ranch pony, and ride twenty miles at night over rough mountain roads to do another a service of friendship or benevolence. Were circumstances to force him to appeal to his muscle for safety against the attack of a professional slugger, we are very sure that this small man would astonish his

assailant, and perhaps magnetize him into submission by the rapidity and force of his onset. This man is what we find him to-day—robust, active, free, enduring above the average, not so much by inheritance, for he was a feeble child, and later judged consumptive by physicians, but by means of systematic physical culture, aided by unconquerable moral determination.

THE PLYMOUTH MEMORIAL.

THE descendants of the Pilgrim fathers and mothers have been celebrating the two hundred and sixty-ninth anniversary of the departure of the Mayflower from the historic Dutch port, Delft Haven. At Plymouth a memorial in "living rock" was on that occasion dedicated with fitting ceremonies, in which North and South united in harmonious enthusiasm to accord honor to those heroic souls who left home and country to found a State in the American wild, where freedom of moral and religious conviction could be exercised. Nearly forty years ago the resolution was taken to build this monument, and its final completion, therefore, was properly an occasion for rejoicing among those who had given it their personal interest.

The entire height of the work is 81 feet, of which the granite statue of Faith, the central, overshadowing figure, takes 36 feet. On the four buttresses below the pedestal of Faith are seated figures representing Freedom, Education, Law, and Morality. In the horizontal facing of the pedestal are set large tablets, in the polished surface of which are chiseled scenes and inscriptions descriptive of events in Pilgrim life. The statue is

placed in the center of large, open space, from which are visible points of special interest to the patriotic New Englander.

A Southerner, Mr. Breckenridge, of Kentucky, delivered the oration, and the well-known writer, Mr. John Boyle O'Reilly, read a poem in the dedication ceremonies, thus contributing to the affair a combination of civil and religious sentiment that helped greatly to make it national and popular.

The Pilgrim Society is to be congratulated for having carried to completion an undertaking of which every American should be proud.

A HEALTHY MIND.

THE healthy mind is even-toned, symmetrical, cheerful, hopeful, optimistic. To it the future has a promise of better things, and with its age, even when the frost is thickening in the hair, and the eyes need strong glasses that they may see, there is no loss of its bright forelooking. Mr. Lossing, the aged writer, said, in a recent letter to a friend: "I see humanity progressing with marvelous strides toward a higher plane, and I believe in the preponderating goodness of human nature when properly developed. I walk serenely amid God's works of every kind, and accept as true His fiat at the creation that all was good, and very good."

How much of encouragement there is in such earnest words, coming as they do from a man of much experience in lines that relate to human activity; from the man who has studied men, and made their history a special field.

We have a valued correspondent, a lady who once stood among the leaders

of New England thought, and who now in old age, because of pecuniary misfortune and family bereavement, lives in an obscure country village, where scarcely a tithe of the comfort and ease, to which she was accustomed from childhood, falls to her lot. Her aged limbs are weak, and her eyes dimming year by year, but the lines she pens from time to time are always instinct with cheer. No sorrow, no deprivation, can rob her spirit of its upward look; her mind is calm, and its outlook seems chiefly to dwell upon the bright and pleasing phases of her narrow situation, and finds much real enjoyment in little things that to most people, with but half her culture, would appear most tame and dull.

A healthy mind, what a treasure! How few possess it! Yet it is the reward of diligence in self-education which the many may acquire.

A PROPER AMBITION.

THERE is a just ambition to meet all duty, to bear all burdens imposed by our obligations to God and society; to stand before both as an exponent of sincere righteousness, of self-demonstrating truthfulness, always and everywhere. If a man can do this at the head, or near it, or any of the controlling interests of the land, he should not shirk the responsibility. But it is a bargain that none can afford—to get a position at the cost of deceit—the sacrifice of an honest heart. Ambition has no gift to offset the loss of self-respect—inward truth and honor. The forfeiture of these is the wreck of character—and millions in bank or bonds cannot compensate for that.

Our Mentorial 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.

ALWAYS write your full name and address plainly. If you use a pseudonym or initials, write your full name and address also.

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. Personal and private matters addressed to the Editor in the professional capacity of a physician will also receive his early attention.

THE ELIXIR DE BROWN-SEQUARD.—J. U. —We are not ready to pronounce judicially on this much-talked-of novelty, but must express ourselves as very skeptical regarding any positive virtue alleged to exist in the substance itself as administered. There is a flavor of antiquity in the composition itself, and we should expect as much of the compositions of the "famous" Chinese "doctors." If any of the stories of wonderful benefit derived from the "elixir" are to be credited, we think that magnetism, say in the way of "auto-suggestion," is at the bottom of the apparent effects as much as anything. If the newspapers, and some of the medical publications of the day are to be believed, there are many wonderful medicaments available to the public for the cure of rheumatism, catarrh, consumption, etc., etc., and not a month passes but we hear of some "new discovery" that is trumpeted with the full blare of assurance of its infallible operation upon the moribund constitution. How very soon these marvels of therapeutics blow out! It will probably be so with the new vital elixir from Paris. Macbeth's witches' brew is revived in such potencies.

MANAGEMENT OF A BAD BOY.—The boy who has inherited an unfortunate combination of faculties, and who has been permitted to run wild at home must always be a difficult subject for the teacher; often it is most discouraging for one to attempt anything like correction. At this day physical punishment is frowned upon by public sentiment, so that those cases where the whip would seem to be the only recourse demand most serious consideration. We think that the thorough teacher, and by "thorough" we mean not only the one who can teach so much geography, history, mathematics, Latin, and so on, but the one who understands human nature, rarely needs to use physical force any way. He has the tact to manage. When he comes in contact with a rough, sullen, combative, mischievous, malicious pupil, his ability to comprehend the basic causes of that pupil's disposition, helps in planning how to go to work to modify their influence upon the young character. Much can be done through reason. The shrewd, cunning terror of a school usually possesses intelligence; he can understand the teacher's serious talk. We have heard of cases where a teacher had a regular physical set-to with a hard pupil, and having pretty thoroughly whipped him made a good student of him ever after. But that teacher had the tact to make his physical superiority a point of departure for wise mental guidance. No effort should be made to crush the spirit of a child, but rather to strengthen resolution on the side of right and against wrong doing. A troublesome pupil has sometimes been given a place of responsibility by a teacher, and through the exercise of self-reliance and dignity led to show foresight and authority. In that way traits of self-control, and respect for authority have been developed, and the character much changed for the better. We think that by a careful study of almost any case a parent or teacher would obtain hints and suggestions that would help him to manage what may appear to be an incorrigible subject. Recognizing the better parts of a child's disposi-

tion, we can work upon them, and that is the wiser way to secure the more certain results.

SUCCESS IN PHRENOLOGY.—S. A.—In reply to your questions in regard to the extent of one's preparation before entering the field of a lecturer and consultant we should say, that no other profession has need of more information, general and special, than this. One can not know too much. He has to view human nature on all its sides, and the more one knows of the science that relates to human nature the better. A young man who can go to college and pursue a thorough course there, and afterward take a thorough medical course would be the gainer, and the advantage of such training would be conspicuous in his after career. The phrenologist comes in contact with people of all classes, from the most ignorant to the most cultured, and if he has the culture that would adapt him to varied positions, his success will be the greater, and the results in themselves as affecting individuals and the community will be far more satisfactory.

THE MYSTERY OF LEVITATION.—M. K.—The mystery of this procedure is more apparent than real. The method that is pursued deceives even those who are concerned in it. One person sits on a chair or lies on a table full length. Four persons, two on each side, stand close to him, with their fingers beneath his body. All five fill their lungs with air, and then slowly expel it, doing this three or four times, in succession at nearly the same time. At the last inspiration and before the air is expelled, the four simultaneously bear up the one prostrate and do it with seeming ease. You know that when a man is going to exert his best muscular power he unconsciously takes a deep inspiration, and it is while the lungs are inflated that his force is exerted. So these four persons, in raising the fifth, are really exerting considerable strength, but their powers being exerted in close unison, appears to have but little to do.

The one who is levitated may or may not join the others in breathing; we think it would not make any difference whether he held his breath or breathed in the usual way.

POSITION FOR LADY PHYSICIAN.—M. C.—

The only place open at this writing to competition is that of assistant physician in the Westborough Insane Asylum. If you desire to study forms of alienism here is an opportunity that might be secured by prompt application. Dr. N. E. Paine, is Superintendent of the asylum. Our other lady readers who are physicians may be interested in this matter.

ELECTRICITY AND INDIGESTION.—L. O.—We do not think that the battery will do much for your dyspepsia. You must regulate your diet; eat good, easily converted food, and avoid over-eating in all cases. Get plenty of out-door exercise also.



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

My Dreams.—The article on a dream and its fulfillment, published not long ago in the PHRENOLOGICAL, moves me to send you a statement in regard to some dreams of my own. Some of the events that have been of incalculable benefit to the world had connection with dreams, were the results of them, and, I believe, were mankind guided oftener by them there would be more happiness. Not that *all* dreams are of importance. The immortal Pollok says: "Some dreams were useless, moved by turbid course of animal disorder; not so all: Deep moral lessons some impressed that naught could afterward deface." And oft in dreams the master passion of the soul displays its huge deformity concealed by day, warning the sleeper to beware, and Ah, who that dreams but can testify to the "master passion of the soul" troubling their sleep?

I had a gold locket containing the miniature of a dead friend, the only one in existence, and, of course, prized by the family. It was attached to a cord which also had upon it a gold pencil with an amethyst stone in the top. I usually twisted this cord around my belt once or twice and tucked the locket beside it. This possibly explains the way in which it was lost. I was visiting and wore the locket on a Sunday night, and on retiring *thought* I put it as usual on the

top of a dressing case in the room. On packing my trunk to go home Wednesday, I looked for the locket and it was not there, and a thorough search of the house failed to find it. Saying that I would look no longer, and was sure it was in the pocket of one of the dresses in the trunk and I should find it when I got home, I finished packing and returned, but a search of the trunk and contents did not reveal it, for instead of leaving it on the dressing case, as I believed, it must have slipped from my belt into a hod of coal I had carried up stairs.

Of course I felt the loss deeply, and dreamed almost every night of it. Twice I found it in the room I had occupied, defaced and in pieces. In the third dream I pulled it by one of the pieces from the ashes that was thrown in the garden. I then wrote to my friends that it was there, and I wished a thorough search made.

A letter in reply contained the ring of the locket, which being of coarser metal had not melted, and the top of the pencil with the stone in it.

I once dreamed of receiving a large letter, and on opening it found a square of black silk. The next day the letter came exactly as I saw it, but instead of the black silk, contained a long obituary, cut from a paper, of a friend who had recently died. Thus I saw "through a glass darkly," but the black was surely significant of the death.

Lately I woke from a dream in which I was conversing with a niece, who seemed just as she did years ago, and I said to my daughter, "you will hear from them to-day, and I think some of the family have been ill." At night the letter came, the writer was the niece, and she had been ill for a month. In this case my impression was that it would be her father. But why should I see these things just before they occur, and invariably just before I open my eyes in the morning, when I am, in no sense of the word, asleep certainly? Has the spirit eyes, that see more plainly just before the outward ones open? And have you, wise ones of the JOURNAL, of the medical profession, any reason to give why, in the majority of my dreams, I am always at the undignified—and by housekeepers dreaded—occupation of house cleaning, and usually of other folks' houses? Wherever I may

be in my dreams, I find something that needs repairing or cleansing. My most persistent dream that drops in somewhere very frequently, is of caring for the children of others. I sometimes think if I am so blessed as to attain heaven, I may be placed in charge of "the little ones" there. Is it not strange how one class of dreams persistently intrudes when the soul seems dominant over the body? I often wonder how those people who tell me they "never dream" feel.

Pooh! says a practical reader, who drops asleep promptly and nothing disturbs his repose, "Medical men tell us that we are *not* altogether asleep when we dream." Well, then, how little complete sleep a good many have in this world, some, who like me, perhaps, have to shut out the moonlight and have the house dark and still in order to close "an eye;" as Peggotty said, "As though they had a dozen."

I could relate many dreams as singular as these I have, but spare the reader the inflictions, but one other thing I will mention. My daughter, who sleeps on another floor from myself, often comes down relating a dream precisely like one I too had that night. Is there any solution for this as well as for minds of authors acting the same, though far apart? Truly we are "fearfully" as well as "wonderfully" made. Shall we remember beyond? If so, why do we so lose this memory as we near it? Shall we have any use for it in a spiritual state of existence, the mortal form cast off?

Doth the bright butterfly all lightly winging
Its airy way

Remember how a loathsome worm once
clinging

It crawled mid clay?
And shall these spirits, breath of God,
dissevered

Forever from the chain
Of our mortality, their home recovered,
Look back again?

Ah no, from glory unto glory,
To clearer light,

Forever learning some sweet heavenly story,
Faith lost in sight.

What need of memory to recall the crosses
That purified,

Enough if mortal care and grief and losses
Have sanctified.

Cousin CONSTANCE.

True Nobility.—The civilized world across the Atlantic agrees that we of the

United States have far more satisfactorily solved the great social and political problems of human life than any European country has with its centuries of growth. Our civilization has pre-eminently favored the lower orders of society, has socially and intellectually elevated the poor, the downtrodden, and oppressed; in this lies its excellence, its superiority.

But the true patriot, exult as he may over the glorious achievements of the past, cannot help lamenting that in these later times there are great and growing qualities of character that are injurious to people and government. Our development in one respect has taken on too much of the rigid, inflexible, Carthaginian spirit. We measure everything by dollars and cents. Services are adjusted according to the pay received. "If you pay me well I'll serve you well." has become our motto. The prevalence of such a spirit absolutely prevents the highest development—the development which produces scholars, bards, philosophers, and statesmen.

The atmosphere in which great men thrive is where the spirit prevails that asks not "Am I doing too much for the money," but "Is my work well done?" Such a spirit unconsciously obeys both human and divine law; it carries the law within its own breast; it is true to the law, to humanity, and to God by being true to itself; it fulfills its task, not for the dollars and cents it brings, but for the pleasure and enjoyment there is in it; for the means it affords to develop talents and character; for the opportunity it furnishes as a stepping-stone to something higher, greater, grander, nobler.

Another outgrowth to be deplored is the common want of deference shown in all classes for superiors, and especially toward parents and teachers. Instead of complying with the demands of true nobility, and treating all, even the most humble, with courtesy and kindness, we recognize no distinction nor elevation, but treat even the most worthy with flippancy or indifference.

True nobility is humble, reverent, unpretentious: it seeks not for monument, position, honor, or fame; its vital expression is not in words but in deeds; it makes every excellence a part of itself, and lets men read

its talents and character in what it accomplishes.

I know of no other man that was so nearly perfect an embodiment of all the crowning virtues of true nobility as was the Father of our Country. Subordinating everything to the building up of character, he entered whole-souled upon every work he undertook regardless of remuneration. Seven years he served the American people at the hazard of his life, without accepting a cent for his services. He was without morbid egotism or pretension; simple, modest, reverent, dignified, and refined. He entered public life, not for the pleasure of exercising power, but for the satisfaction of performing duty. His genius was the genius of character and action, which is the highest expression and the last result of greatness of mind. Neither danger nor difficulty, neither success nor defeat, neither praise nor censure could turn him aside from his exalted purpose. Under all conditions and circumstances, with "Do your duty though the heavens fall," for his motto, he stood firm like the pyramids of Egypt. He won, without seeking, a crown of undying glory.

If ever our civilization is to attain to highest excellence it must be pervaded with such a sentiment as animated Washington. When such a sentiment shall animate our people, then will American civilization become the brightest star in the firmament; scholars, bards, philosophers, statesmen, and great artists will everywhere spring up, and our nation will be not as a house built on sand but upon the everlasting rock, standing for all time to come the proudest structure ever erected by human hand.

J. S. ROESLER.

PERSONAL.

LEOPOLD, King of Belgium, does not use tobacco, is a vegetarian, dislikes music, and acknowledges other eccentricities. One of these is an aversion to wearing his hat in the open air, as he believes the action of the wind on his head is beneficial. He is nevertheless a rare linguist, an enthusiastic amateur painter, and a man of real strength and character.

LOMIA KOSSUTH is still living, and at

eighty-eight, we are told, "is enjoying not only good health for one of his age, but preserves all the faculties of his mind." He lives close to Turin, in a pleasant villa, surrounded by a handsome garden, which he planted himself and has cultivated with great care.

Dr. KIDD, the distinguished "irregular" of London, writes of the "Last Illness of Lord Beaconsfield" in very interesting terms in a late number of the *Nineteenth Century*. It will be remembered that the great diplomatist regarded Kidd as his most skilful physician, and would have no other.

PERSONAL.

HENRY SHAW, "the best friend St. Louis ever had," died in that city on Aug. 25. He was in his ninetieth year. Born in England, he came to America at nineteen and made St. Louis his home. Going into the hardware business he prospered, at forty retiring with a competence. After a long season of foreign travel he returned and made the cultivation of plants and flowers his chief pursuit, finally opening to the public a splendid collection, which is now the property of St. Louis. The greater part of a large estate is bequeathed to that city, as he has no near relatives besides a sister and a cousin.

WISDOM.

"Thou must be true thyself,
If thou the truth would teach."

THE man who is satisfied in this world, if such there be, is dwarfed mentally.

THOSE who always love have not the leisure to complain and be unhappy.—*Joubert*.

EVERY living human being is essential to creation; he has a commission to fulfill, and just condemnation waits him who neglects willfully or runs away.

THE grand spirits that move the world do not originate in the halls of luxury, but in lowly tenements and cabins of hardship and want.

HE who has a cheerful spirit, who can laugh and sing, who has a soul open to the beauty and charity of the world, has an endowment that is worth more to him than gold.

"THERE are only a few swift years—Ah, let

No envious taunts be heard;
Make life's fair pattern of rare design,
And fill up the measure with love's sweet wine,
But never an angry word."

MIRTH.

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

"SHALL I sing for you, Tom?" "Have you a song with a refrain?" "Yes." "Well, then, please refrain."

"I SAY, my friend, where have you been for a week back?" "I haven't been anywhere," was the reply, "and I haven't got a weak back."

AN Irishman, having been told that the price of bread had been lowered, exclaimed: "This is the first time I ever rejoiced in the fall of my best friend."

BRIDE—"George, dear, when we reach town let us try to avoid leaving the impression that we are newly married." "All right, Maud, you can lug this valise."

"How old are you, Tommy?" "Nine when I am on my feet, and six when I stand on my head." "That's funny. How do you make it?" "Why, if you stand a 9 on its head, it's a 6, isn't it?"

"ARE they boys or girls?" asked the motherly lady, meeting a pair of twins in a baby carriage. "Wan of aich kind, mum." replied the nurse. "What are their names?" "Maxie, mum, and Minnie, mum." "Oh, I see. That's the long and the short of it."

HEREDITARY.

Miss FIVESUMMERS—"Say, mamma, was your grandpa a dairyman?"

MAMMA (with surprise)—why, no, darling! what makes you ask so ridiculous a question?

Miss F.—"Why, papa says you read so many milk-and-watery novels, you know!"

"ONE good turn deserves another," as the man said when he threw a somerset out of an upper window, on hearing that his uncle had turned over his estate to a younger brother!



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 the Editor with recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

MANUAL OF INSTRUCTION FOR SWEDISH MOVEMENT AND MASSAGE TREATMENT.

By Prof. Hartvig Nissen, Director of the Swedish Health Institute, Washington, D. C.
Published by F. A. Davis, Philadelphia.

This volume contains, in brief form, a description of the treatment noted. The author is a Swede, and, therefore, so far as the exercises and the movements called Swedish are concerned, he may be deemed competent to write on them. He has chosen to epitomize and condense his instruction rather than to expand and elaborate, as is the case now-a-days with most writers on subjects that involve technicalities. As a treatise, therefore, it will be all the more welcome to those practitioners of medicine who would know something of massage. Twenty-nine illustrations accompany the text. We are not of those who accept all the accounts of the marvelous results of muscle manipulation, but we know enough of the method to feel warranted in saying that massage, under the direction of a skillful operator, will obtain effects that are often more satisfactory and permanent than these following the old drug treatment.

PROCEEDINGS OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.
37th meeting. Held at Cleveland, August, 1888.

This interesting document will be welcomed by the members of the A. A. S. The editor has sought to put into moderate compass the transactions of the association. Those addresses only that were deemed important have been given much if any space. Everything that was deemed of value in the transactions is included in the list. Anthropology, as usual, is allotted but a few pages. The constitution and list of members occupies a particularly prominent place.

SIGNS OF PROMISE. Sermons preached in Plymouth Pulpit, Brooklyn, N. Y., 1887-89.

By Lyman Abbott 12mo, pp. 301. N. Y.: Fords, Howard, Hulbert.

This volume contains 18 sermons, which have been selected as worthy of that pre-eminence which the volume form signifies. Having been taken down in shorthand, and revised, they have therefore the characteristics of extemporaneous addresses, and are not wanting in freedom, ease, and pertinency. The first of the series, entitled "A Great Leader," very properly sets forth the character and work of Henry Ward Beecher; "The Law of Progress;" "The Religion of Humanity;" "Salvation by Growth;" "The Peace of God;" "The Spiritual Nature," are some of the topics that are considered in those sermons which follow. One is struck in looking over these discourses by the marked impression Mr. Beecher made upon the mind of his successor. Dr. Abbot cannot be said to possess the breadth of observation, that appreciation of the reality of facts, and of the greater movements in the everyday life of men that was so marked in the declarations of Mr. Beecher, but he has an unusual amount of reflective sagacity; besides being keen and critical in philosophy, never foggy or depressing, and clear-headed, sensible, and suggestive. If he does not get down so squarely to the life of common human nature as Mr. Beecher did, he discerns the spiritual needs of humanity, and aims to draw upward the thoughts of his hearers and readers.

PROMINENT INCIDENTS IN THE LIFE OF J. M. WIETING, INCLUDING HIS TRAVELS AROUND THE WORLD. By Mary Elizabeth Wieting. Illustrated. 8vo, pp. 221. G. P. Putnam & Sons, New York and London.

Dr. Wieting's death seemed to us rather sudden. Shortly before its announcement, we had met him in New York, and then he appeared to be in good health. He was a man of unusual activity and force and thorough going. We had associated with him many years of future life, and could scarcely realize that he was over 70 years of age. He had taken a warm interest in mental science and physiology from youth, and had done not a little of public service in connection with Phrenology. His interest in this respect may be said never to have declined. We could wish that the biographical matter of the book were more extended than it is. What the editor has included is interesting, and leads one to expect more. We are given the best glimpses of the man in his reminiscences of travel. His tour in the Old World did not vary much from the route pursued by the ordinary tourists, but here and there features appear in his notes that have their individual

character, not only expressive of the impressions that different scenes had made upon his observant and experienced mind, but significant of his peculiar tone of thinking. Many illustrations from photographs and views collected *en route* add their attraction to a well made volume.

GREAT SERMONS BY GREAT PREACHERS.

Published by the author of "Evangelical Landmarks." 16mo, pp. 354. Frank Boyer, publisher, Reading, Pa.

This volume is an attempt on the part of the editor to arrange, under one cover, a number of sermons by representative clergymen. The English clergy have the field almost entirely to themselves in the book, the editor presuming that Americans are so familiar with the sermons of their own great divines that it was not necessary to include more than one or two of our own great pulpit orators. What appears to have been uppermost in the editor's mind, when he made the selection of topics, was to compile those discourses that are free from sectarian bigotry and, at the same time, are distinguished by a healthful evangelical tone, purity of style, good reasoning and learning. These qualities in fine, commend the sermons to us. Among the preachers are Canon Liddon, George Horner, Thomas Guthrie, Frederick Robertson, Charles Kingsley, T. W. Farrer, Arthur P. Stanley, Thos. Chalmers, and E. B. Pusey. The reader is given an opportunity to compare these great preachers, so far as their thought, phraseology, and style are concerned.

PUBLICATIONS RECEIVED.

PROPHYLAXIS. A paper read before the New York Society of American Scientific Investigation. By Henry G. Hanchett, M. D., author of "Modern Domestic Medicine," etc.

This pamphlet of 18 pages is a plea in behalf of liberty in regard to the custom of vaccination. A strong argument is made against the persistence of the practice, statistics and personal observation and authority being called into requisition to support the claims of

the author that it is unnecessary and futile as a protection against smallpox. There appears to be a growing sentiment in England against the common method of vaccination, and Dr. Hanchett has put himself in the ranks of those on this side of the Atlantic who assert that hygiene and sanitation have more value as preventives of sickness and disease than any method of inoculation.

THE IRISH LAND AND LABOR QUESTION ILLUSTRATED IN THE HISTORY OF RALAHINE. By E. T. Craig, Secretary and Trustee of the Association, and author. London: Trubner & Co.

The history of Ralahine is a history of co-operation. The movement was inaugurated in County Clare, Ireland, in 1831. The incidents related have something of the character of romance, but Mr. Craig tells the story with such directness and sincerity that we can believe everything that is said in his book. The principles which were introduced in this form to illustrate fairness in practical life were philosophical and true. The failure of the enterprise, like many similar failures, was due to the incapacity of the moneyed interests to comprehend thoroughly their bearings. Yet there was a degree of success, and that in itself carries the demonstration of the later accomplishment of the movement for a true reform in the harmonious association of capital and labor.

THE HANDBOOK OF TREATMENT. By William Aitken, M. D., F.R.S., etc. Published by E. B. Treat, New York.

Notice in the July number of this magazine was erroneously quoted as to price, that being \$2.75, not \$2.

CORNELL UNIVERSITY.—BULLETIN OF THE AGRICULTURAL EXPERIMENT STATION.—HORTICULTURAL DEPARTMENT, VII. July, 1889.

A paper on the Influences of Certain Conditions, such as different temperatures, variable watering, dry seed or wet seed, light or heavy seed, etc.—on the sprouting of seeds.

PROCEEDINGS OF THE NEW YORK STATE STENOGRAPHERS' ASSOCIATION. Thirteenth Annual Meeting, Aug. 21 and 22, 1888.

An interesting account of a pleasant gathering of shorthand writers, representing all lines of professional relation. Of course it is done *verbatim et literatim*, and in the best style of the art.



"ECHOES" FROM THE CONSULTATION ROOM.

BY PROFESSOR NELSON SIZER.

IF one-tenth part of the interesting incidents which occur in our Phrenological Examination Room could with propriety be presented to the public, it would make a chapter as interesting as a romance, and as readable as a fairy tale. The wonderful "hits," as people call them, in describing character, and the counsel and guidance which they receive in reference to their health, and the right control and management of their talents, skill, force, and faults, and the openings and suggestions which we make to those who wish to improve their relations to life by means of better occupations, would fill volumes.

The writer met at a recent lecture of his in Brooklyn, a bright, energetic young man who came to him and said, "you do not know me, but I shall never forget an interview I had with you four years ago, and the advice you gave me on the subject of a suitable occupation. You told me I was capable of doing something better than I was engaged in; that I ought to be a man on my own account, have a business of my own and be master of it, and not be dancing attendance on some one else, and doing boy's work all my life in a store. You advised me to learn to be a builder, and to study the science of building, namely, architecture. I accepted your advice. I spent three years in learning the business, took lessons in architectural drawing, and now have a trade and a profession, a business of my own, and I am only twenty-two years old."

A few of his friends, we suppose, know what he thinks about it, but the 700,000 people in Brooklyn, with the exception of perhaps twenty people, do not know it. He could have used up the amount, which the advice cost him, in candies, cigarettes, and soda water, and not have been any better, but much the worse in mind, body, and pocket.

Three years ago a lady, healthy, vigorous, and intelligent, called for an examination to be written out in full. She desired to know what she could best do to earn a living henceforth. We said, "If you were not more than eighteen years of age we would advise you by all means to study medicine. You have the talent, the constitution, the practical judgment, the sociability, and the courage to fill the place well." At the close of the interview she said, "You examined and wrote out my character ten years ago, and advised me then, as now, to study medicine. I had never thought of such a thing

as desirable or possible, and I went away disappointed and angry. I would not tolerate the thought of becoming a doctor. But the subject haunted me, and the result was that in a few months I was studying for that profession, in due time graduated, entered upon successful practice, enjoyed the work, saw the great need of a hospital for women and children, and urged the plan upon the people of the city where I reside. A charter was obtained from the Legislature of the State; the hospital was built, and I have been placed at the head of it. During the years of its existence hundreds of patients have been treated, and the institution is very popular, at least among the ladies.

"Now I have come in to express my gratitude, to give you the encouragement which is your due, and to say that you have been the cause of my success. I wanted also to have another examination to see if you would say the same as you did before. It is the same, only you talk stronger now, if there is any difference."

There are men in this city of New York who, by means of a phrenological examination, have been taken away from a worthless business, and recommended and urged to adopt another in which new business they have acquired hundreds of thousands of dollars that they have saved. Occasionally one of these persons brings in his son for examination as to his future pursuit, and then incidentally tells us the story of what we have done for himself, attributing his choice of business, and the success he has derived from it, simply from following the unexpected advice he got from us regarding the matter.

It seems a little queer that men having thus been put on the right track should know it and feel it, and yet rarely take the trouble just to drop in and speak the truth to us with its encouragement; but when they come they expect us to tell them the whole truth just as they expect that a good physician will heal them when they go to him for relief, and therefore they do not consider it a matter for congratulation with us, though they fully appreciate the service rendered them and are happy in its benefits. They would as soon think of going around to see the engineer who surveyed their farm, or the mason who laid a wall, to thank him over and over for doing what they expected he would do and paid him for doing; so we have to consider it a compliment when they thus take it for granted that we know our advice is worthy to be followed. We get this much from these customers, however; they bring their sons and grandsons for us to "do likewise" for them, and it is only then that we find out how much they believe that they have derived from consultation with us.



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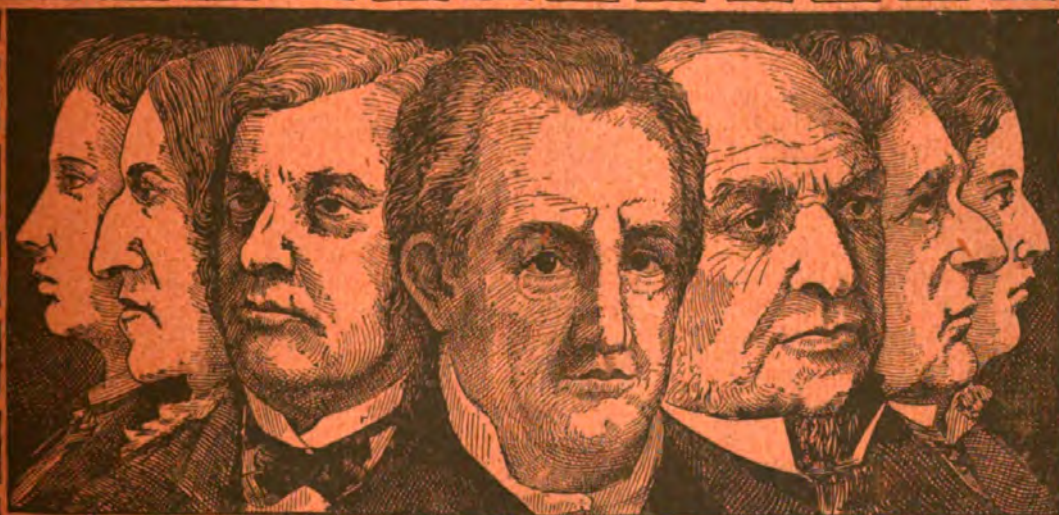
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E. Daesche

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The Phrenological Journal is published monthly at \$1.50 a year, or 15c. a number. To each new yearly subscriber is given either the Plaster Paris Phrenological Bust or New Lithography Phrenological CHART Premium, a new plate, 19 x 24 in., with ring for hanging. When the Premium is wanted, 15c. extra must be received with the subscription to pay postage on the JOURNAL and the expense of boxing and packing the Bust, which will be sent by express, at expense of the subscriber; or, No. 2, a smaller size, or the Chart Premium, will be sent by mail, postpaid.

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OCTOBER, 1889.

[WHOLE NO. 610.]



GEO. B. ROBERTS.

President of the Pennsylvania Railroad.

NOTABLE PEOPLE OF THE DAY.—No. 24.

GEORGE B. ROBERTS.

President of the Pennsylvania Railroad.

THE admirable management of the Pennsylvania Railroad has given it a high place among the railways of the world. We believe that every honest man in the service of the company is proud of his connection with it, and feels secure of his place; for in the language of the man who stands at its head, "Under our rules no man has any question as to retaining his position, so long as he is capable and properly performs the duties required of him; nor need he fear that he will be overlooked whenever an opportunity for promotion occurs."

Mr. Roberts is himself an example of the truth of the statement. Steadiness of industry, rather than any element of brilliancy in his mental composition, gradually favored his advancement, until he stepped into the chief place in its administration. Of him Prof. Sizer remarks from a survey of his portrait:

"This organization indicates positiveness of character, with energy and endurance. The Motive Mental in temperament seems to be the leading quality of his constitution. The motive gives endurance, hardihood, and that grasp of effort and decisiveness of spirit that are requisite to the labors, cares, and responsibilities of life. That face does not look as if life had been easy and smooth to him, but as if he had been compelled to begin early to take care of himself, and to work his way into positions of usefulness and responsibility. If we may say it, there is a kind of Martha look about the face; as if he had been 'careful and troubled about many things.' There is a sort of sincerity and seriousness about the whole expression; that one may suppose the locomotive engineer running a fast train on curves and amid dangerous surroundings would take on and wear.

"The Mental temperament gives broadness to the tophead and definiteness to the features, while the Motive gives massiveness and strength. If he had more of the Vital temperament his cheek would be more filled out, and he would look as if he enjoyed life to a greater extent. He appears to have clearness of thought, sharpness of perception, and power to co-ordinate facts and bring them into harmonious relation. The reader will see the breadth of the head at the region of the temples where the hair joins the forehead; that indicates Constructiveness, mechanical ingenuity, ability to combine thoughts and things, so as to make a good, efficient combination. While some men can run a single line of thought and purpose, but become confused with anything like complication, a person of this organization has all the positiveness and definiteness required to co-ordinate various forces, facts, and things with calmness and power. Multiplicity does not disturb him.

"That forehead shows excellent reasoning power. He has ability to think logically; can carry a large amount of responsibility, a world of details, and not get them tangled or confused. He ought to be known as a reader of strangers, as one able to study men at a glance, and know what to do with them. He has the faculty of touching lightly certain characters and avoiding conflict where it is unnecessary. He can, we think, inspire men with the idea that they should conform to his usage and judgment; he has a kind of a magnetism that makes him a leader. He uses words that have a clear and definite meaning, and employs enough of them to compass a subject without overloading it. He has not the defect of saying too much; does not put his hoop twice around the barrel when once will answer."

George B. Roberts was born in Montgomery County, Pa., on the 15th of January, 1833, and is now, therefore, in his fifty-seventh year. He is a graduate of Rensselaer Polytechnic Institute, Troy. His entire life has practically been passed in railway service, as he began as a rodman on the construction of the mountain division of the Pennsylvania Railroad in 1851, and was steadily engaged in the location and construction of various railroads, including the Sunbury and Erie, North Pennsylvania, Northwestern Pennsylvania, Allentown and Auburn, Mahoney and Broad Mountain, West Jersey and other roads, until 1862, when he gave all his time to the Pennsylvania Railroad.

His ability was noticed by Mr. Thomson, then President of the railway, and when an opportunity favored, he was appointed assistant in the President's office. In May, 1869, he became Fourth Vice-President. Four years later was appointed Second Vice-President, and on the death of Mr. Thomson, was elected First Vice-President. When Mr. Scott died, in June, 1880, he stepped into the place made vacant by that efficient officer.

It is said that his rapid advancement has been largely due to his ability as a negotiator. Under the administration of Mr. Thomson the policy of the Company was directed toward securing control of various minor roads which contribute toward the extensive "system" that the Pennsylvania Railway now comprises. To secure this, much discreet negotiation was necessary, and in this Mr. Roberts was remarkably successful.

Having devoted the best part of his life to railway interests the habits of business have doubtless greatly influenced his social temper, as he shows little interest in social matters. He was born in the Society of Friends, but is a member of an Episcopal church. In business enterprises outside of railroading he takes little share, not permit-

ting his name to be used as many wealthy men do on the official lists of corporate or private enterprises, such as insurance companies, banks, etc.

His family is of Welsh derivation, forefather from beyond the sea having as far back as 1683 found his way to Montgomery County, Pa., and bought the property that has been the Roberts homestead ever since.

None of this land has been sold out of the family, and the room in which Mr. Roberts was born fifty-six years ago is the same one in which all the children of the house have been born since the early date of its erection. The old house is his homestead now, and there he spends part of the year with his family.

WILLIAM BOOTH.

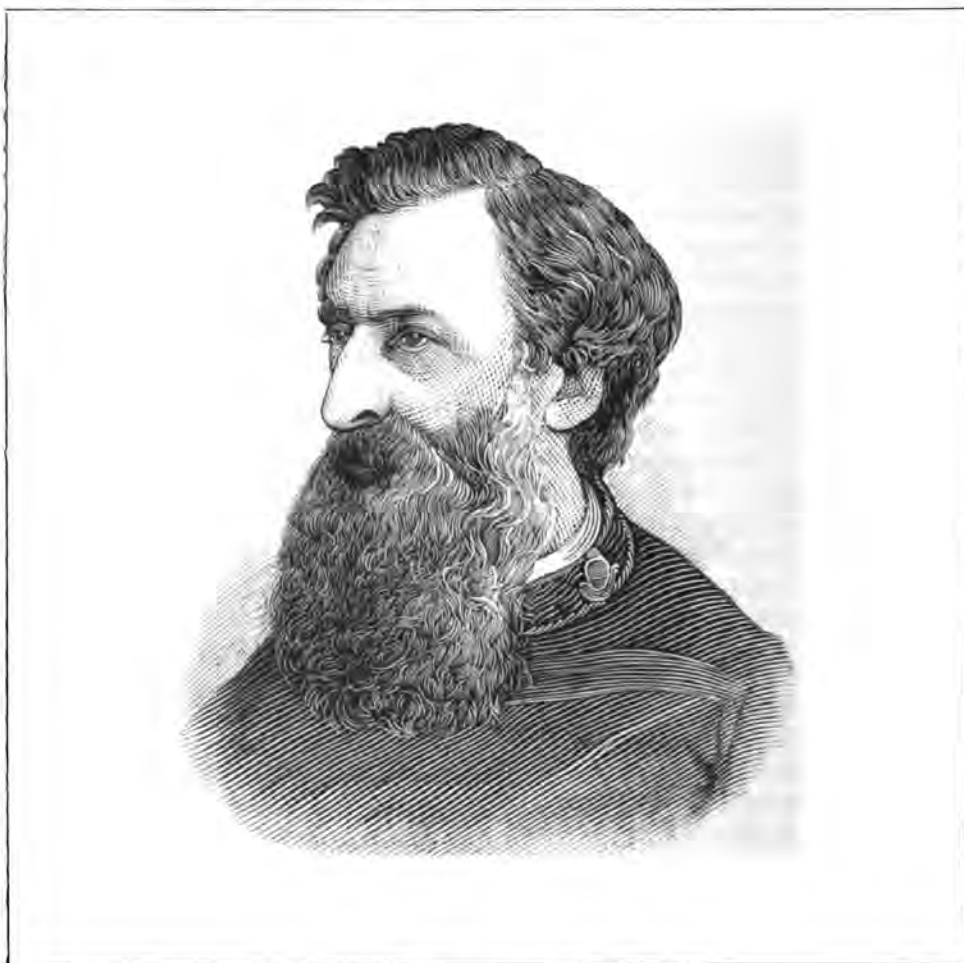
The Leader of the Salvation Army.

EVERY one has heard of the Salvation Army, for it has branches almost every where in the domain of Christendom. In the United States it has grown rapidly during the past few years. In all our principal cities we find its stations and regular organized workers. Go almost any where and we shall find the peculiar uniform affected by these workers. The leading characteristic of the movement may be said to consist in its military organization. From general down, all officers of an army are represented, and a company of Salvation Army people is not an infrequent sight on the street, marching in soldierly order, headed by their drum and fife band.

The man who has been most conspicuous in this organization from the first is William Booth. He is English by birth, Nottingham, Eng., being his native place, where on the 10th April, 1829, he first saw the light. He was educated in a private school, and later he studied theology with a view to entering the ministry of the Methodist church. From 1850 to 1861 he was a preacher in that connection. He withdrew for the purpose of entering upon home missionary

work. In 1865 he organized a Christian mission in the east end of London, where misery and vice are shockingly prevalent. Feeling the necessity for a method of doing the work that should be regular and positive, he adopted the military idea, and incorporated many of the principles of military training and dis-

and the enthusiastic energy of Booth. In a few years all parts of Great Britain were invaded by this army. Then delegates were sent to the Continent and centers of operation were established in different countries there. Later, America and India became fields of activity for these zealous missionaries. Not only Gen.



WILLIAM BOOTH.

The Leader of the Salvation Army.

cipline with it. This organization received in 1878 the name of Salvation Army. The members, as a rule, are required to wear uniforms and the leaders have regular official titles.

Perhaps the rapidity of the growth of this system is due to two things for the most part—the novelty of the enterprise,

Booth is interested in this work, but also his whole family, consisting of several sons and daughters, are devoted to it. In connection with it he has published several books and edits the army organ, the *War Cry*, which first appeared in 1880. Now it is said that editions of 400,000 copies are published.

There is no doubt but that a vast amount of good is done by this class of religionists. Penetrating into the lowest stratum of human life, they reach and rescue hundreds of the vice-burdened where all other means of grace and benevolence would fail. Indeed, the work of the Salvation Army extends into quarters where other moral or religious effort for the redemption of the wretched is unknown. Nothing daunts the Salvation Army man or woman. No criticism or jibe, no sarcasm, no sneer, no force can intimidate them. They calmly and steadily pursue their course, and manifest often, in a surprising way, the improving effects of the drill and discipline of the system.

Looking at the portrait of General Booth as we have it, we note as prominent a kind, solicitous expression, with much of the earnestness and pathos that belongs to devotion of purpose. The nose is a strong feature, and if its physiognomy is to be trusted, we could believe in the aggressive spirit of the man, in his ability to fight tenaciously for the objects that he may entertain. Like a Loyola, he is stimulated by opposition, his convictions of duty and philanthropy becoming the more assured the harder the contest for their maintenance. He has quickness of perception, and the executive order of mind, appreciating the value of facts as they relate to his work, and being prompt in availing himself of opportunities that appear to aid his cause.

JOSE ZORILLA.

The Poet of Spain.

SPAIN has given the world much of romance and song drawn from the history and life of her people. Possessing elements of ardor and buoyancy, the Spanish man and woman have that material in themselves that inspires the poetic muse, and with a history most remarkable for its diversified interest, its romantic tales of national prowess and glory on sea and land, its long Moorish struggle, and its many renowned war-

riors and navigators, who contributed so much toward the development of middle age civilization, it was but natural that the poet and romancist should have flourished in that cis-Apenine peninsula.

The poet has never disappeared from Spanish literature—as we may know from consultation with some of our best English writers. Irving, for instance, shows a deep regard for the poetry of Spain—and Longfellow acknowledges



JOSE ZORILLA.

The Poet of Spain.

much indebtedness to it for topic and suggestion.

Not long since an event occurred that drew the attention of the entire Spanish world. It was the crowning of Jose Zorilla as the national poet. Senor Zorilla is a native of the City of Valladolid, where he was born seventy-two years ago. He was educated for the law, but after two years decided that he was not in sympathy with that vocation but with literature, and for the purpose of trying his pen in that field he went to Madrid. He published a volume of poems when about twenty years of age, and for eight years afterward he poured out poetical and dramatic productions

with true Spanish fecundity. No less than ten volumes of verse and thirty dramas are to be assigned to that period. But his literary activity brought him more fame than money. He went to Paris, and there began publishing his longest and most famous poem, "Granada." Next came twelve years passed in Mexico, lost to poetry but filled with pleasant experiences. He had a period of successful lecturing, and at last was granted a pension by the government. Since then he has been living a quiet life in Valladolid, to be called forth at the near end of his days to receive, in memory of his former literary labors, the

nation's tribute of affection and honor.

The head of Senor Zorilla is broad enough between the temples and high enough to indicate the poetic constitution. Temperamentally he is active and strong—the association of an excellent physique with a susceptible and rather intense brain. His appears to be the spirit that must adventure in fields that are new, whether in the rhythmical measures of verse, or in lands that are strange and inviting. His yearning for mental activity, and that variety of scene and suggestion that feeds mental activity, has always been manifest.

EDITOR.

DO SEPARATE PSYCHOLOGICAL FUNCTIONS REQUIRE SEPARATE PHYSIOLOGICAL ORGANS?

[Extract from a paper on the subject read by Mr. B. Hollander before the Aristotelian Society of London.]

THOUGH the researches of physiologists and investigations made by pathologists have resulted in defining distinct regions for motion and sensation, we are still ignorant of the subjective side of these localizations. That the various elements of the mind have separate seats in the brain can, however, not be doubted; for the same movements, which occur during certain emotions, can be effected by applying galvanic currents to definite portions of the brain. In other words, the thought-current and the physical-current, starting from the same point, travel on the same line and produce the same physical effect. That there are thought-centers can also be judged from the effect produced by destruction of a definite region. For instance, the destruction of the visual region is followed not only by loss of sight, but also by loss of visual ideation and recollection, which means a distinct injury to the mind.

There is no doubt whatever that musical genius requires not only a good auditory apparatus, but also a highly organized auditory brain-center, and that the powers of a painter to distinguish be-

tween the shades of color are dependent primarily on a distinct nerve center of superior quality.

Without assuming special centers we should be unable to explain the transmission of peculiarities of character. Man has to thank his parents not only for the fortunes they bequeath him, but also for his organization. He is born with certain pre-dispositions, and though he can modify his nature, he can do so only to a certain extent. Viewed in his present state, man has such a complex psychical nature, that makes it extremely difficult to analyze it.

We do not know as yet what constitutes a genius. All we know is, that it is a gift of nature, and as it is generally partial, it must depend on the condition of definite organs. Why should genius be so closely allied to madness; why should a change of brain cause a change of character; or an injury to the brain disturb the manifestation of the faculties, unless the impulses, which form the elements of character, require definite brain-centers?

The question is of great importance to the student of moral responsibility, for if good dispositions can be transmitted so can be bad ones.

As long as mind was thought to be a substance independent of matter, speculations as to its nature were abundant. Recent researches, however, have limited the inquiry and prove not only the alli-

ance between mind and body, but also the fact that nerve-centers are the condition for the manifestation of thought, and that separate psychological functions require separate physiological organs.

DELSARTISM.—II.

THE publication in our July number of the article on the Delsarte System of Expression and Physical Culture, has elicited many letters asking for further information on the practical workings of the system, the nature of its gymnastics, the suitable age for study, etc. In this number we furnish a more explicit statement of the methods of the system, gathered from the lectures of Mr. and Mrs. Edmund Russell, the Delsartean exponents.

It is very difficult to write on gesture and motion; for gesture is a language by itself, not adequately translated into words, and it would be impossible to give exact rules, as they would be modified with each pupil according to his needs. In practicing the same exercise each pupil in a class might require a different criticism, according as this or that muscle or joint refused to obey the will.*

As stated in the first article, the object of the work is not to teach a special set of gestures or an arbitrary code of manners, but to train the whole body until it is an instrument of facile and natural expression. Most faces are but a mass of scars, the tide marks of life's ocean, the past worries and cares and sorrows indelibly stamped upon them; most bodies are so stiffened by the "left-over" pieces of past exertions or past repressions that the real nature finds hard work to express itself, and often gives up the attempt—"You must not

judge by his appearance and manners," we hear it said; "you will like him when you know him better."

Our daily work gives us command of the larger muscles. Blows, violent exertion, nervous jerks, angular motions, broken-down attitudes, rude expressions, and awkward manners, require but crude mechanism in their execution; but the rhythms which give calm and dignity, control to the nerves, expressive movements, good manners, and natural sentiment, require the whole muscular framework to act in perfect harmony.

The Delsartean teacher, in examining a pupil, usually finds that not more than one-half of the muscles are ever called into action; and that this lack of co-operative power is made up by using the heavy muscles in strained violence and broken rhythms.

The first exercises are all of a relaxing nature. The old gymnastic doubled up the fist and with great tension gave a blow which jarred the whole nervous system. Nature does not grow by violence, but by harmonious expansion from the simple to the more complex. Relaxing movements consist in shaking the whole arm and hand until the joints are loosened, the muscles gently put in action, and a tingling, magnetic feeling passes up and down the arm, which is then allowed to hang for some time quietly by the side as if dead. The effects are very much the same as result from the *massage* treatment. An awakening, as it were, in every part, a feeling both of repose and power at being able to control the whole machinery of the arm instead of only a few muscles—a greater power of endurance and an absence of the nervous

* Delsarte always insisted that the physical part of his training should precede the philosophical—and as the gymnastics are mainly for the correction of personal deviations from nature, they should never be printed as a series of rules to be applied to all.

tendency to "fidget" with our hands, or play with a button or our gloves or the fringes of the chair we are sitting in—"I know how to *rest* for the first time in my life," an old lady exclaimed after practicing these exercises. The arm hangs naturally relaxed at the side when not in use, not stuck out at the elbows like the dude, or tightened at the side in the manner of the conventional lady.

Exercises of similar purpose are given for other parts of the body—the legs and feet—a revolving of the head to take the stiffness out of the neck, a similar revolution of the shoulders and of the trunk. These are practiced until every joint is flexible, every muscle alive, and the body under control. Then we begin ceasing to express ourselves by nervous, angular twitchings of the extremities—the rest of the body being silent—or to repress ourselves by sitting bolt upright with a society smile, a stiffened neck, and rigid hands clasping a pocket-book.

An Oriental prince said to Mr. Russell in London that the English ladies reminded him of "magnificent antique torsos with movable heads," he had never seen their bodies move.

The first "decomposing" exercises do to the body simply what the cook does to the steak when she pounds it with a club before cooking it. The next are "recomposing"—the body being reduced to a condition of natural freedom and flexibility; the second steps are to learn how to make use of this greater mechanical compass. The instrument has been tuned—we must learn now to play. The fingers have been developed by exercises; we will now practice our scales.

Floating movements, curves, spirals, all executed in perfect rhythm in order to acquire calm control—all parts of the body moving in harmony obedient to the will until at last they will move in harmony unconsciously—the accord as firmly established as the discord was before. These motions are never practiced

simply for unmeaning grace, as in dancing or the Swedish gymnastics, the exercises with wands, etc., every curve, rhythm, and direction in space being in exact relation to our use of the body in natural expression.

The movements are very difficult for some people, and have to be practiced a long time before they "strike in." In an article on the "Art of Expression," published in the *N. E. Journal of Education*, it is recorded that Prof. Tomlins, after hearing a lecture given by Mrs. Russell in Chicago, asked: "How long must your student continue the practice of these exercises before the conscious mechanical motion can become unconscious?" The answer was, "To get automatic action of a high enough sort to make the body responsive to high impulses and emotions requires that these gymnastics be carried far enough for the student to become master of them. Each motion which is made in perfect system—perfect obedience to the laws of bodily growth and action—is made in harmony with many laws—complex and involved—hence its mastery gives power over many motions not apparently related to it. The essentials for the attainment of automatic action are these: The motions given must be few in number; they must be made in obedience to the laws of muscular and nervous action, and they must be in accordance with the great fundamental laws of expression."

Some people with quick intelligence appreciate the principles at once, while, mental in their methods, they find it very hard to relax the nervous tension of their bodies; but their patient study usually brings them more return than the easily acquired grace of a pliable body and sluggish mind. All degrees of susceptibility, mental, moral, and physical, are found in different kinds of pupils, but perfect balance is very rare.

The change produced by such study is often very striking, when, for reason of years of repression, embarrassment, bad

dressing, and narrow education, one who could not express himself fairly, now, for the first time, feels all that richness of nature pent up for years, which has only made him miserable, now striking out unconsciously through the new, though natural, avenues of expression he has opened for it.

All of the studies so far are mere gymnastics, daily exercises to oil the wheels of the machine, and get it in working order. Then comes the study of the service of the different parts of the body in actual life—how in walking the foot should be used as an elastic arch, the ball striking the ground first and not the heel. Of course this requires a more flexible sole than is usually worn. Mr. Russell has brought with him some Persian leather stockings as flexible as a glove, which are used in the house according to Eastern custom, the heavier shoes being left at the door. Orientals consider the way in which we come into a room with our clumsy, muddy boots, treading on costly carpets, positively brutal. (These stockings of leather are laced up the front and are in fact soft boots, and Mr. Russell considers them the finest foot-covering in the world. They are heavily embroidered in gold, and of course he only wears the originals with studio costumes, but has a repetition of them in plain dark leather for the platform and the street.)

The knees should bend as little as possible in walking—with some people they seem to give way with every step, an expression of a most feeble character.

The arms should hang flexible at the side, as pendulums, and swing from the shoulder and not from the elbow; above all they should never be stiffened with the elbows stuck out, as the expression is that of most vulgar self-assertion.

The chest should be kept raised and be the leading point in the poise of the body—the head advanced gives a mental preoccupied look, nervous and searching if the eyes are open, unrelated to the world if the eyes are drooped; with the

stomach leading, the manner is vulgar and physical.

In the best Greek and Egyptian statues the chest is always on a line with the front part of the foot.

The tight high collar of the period is of course, very injurious to natural expression, which demands, with control at the center, perfect freedom at the extremities. The collar should never come higher than the point where the neck and body join. Of course, too, it goes without saying that the wearing of corsets is strongly disapproved by all Delsartians, as control of the breath underlies both gesture and voice. A sunken chest gives an appearance of contemptible weakness, and our centre of control must be firm or the flexibility of the body will seem unpleasantly "sloppy" and affected. In this point many Delsartean students fail; accomplishing the bodily rhythms, but not sufficiently understanding the necessity of "control at the center."

The bow must begin at the head and not the feet; must not be a jerk of one joint, the neck, or a bend of the hip, but should obey the law of "succession" and follow the path of all true expression, beginning with the eye and passing like a wave over the body, using every joint in its turn, any slip, break, or change of time affecting the truth of the expression. The articulation should make distinct use of the teeth, tongue, and lips, the throat being relaxed and the voice borne up by the controlled breath, be vibrant and resonant through all the cavities of the mouth and nose.

In fact, expression should obey all the laws governing the human body, and have its instrument kept in healthy natural condition.

Good food, fresh air, plenty of sleep, frequent bathing and rubbing, the steam room of the Russian bath, massage, all have great effect in keeping the body natural and free in its expression; and by these, combined with the careful physical exercise of the Delsartians, much of the

freshness of youth can be preserved or regained. Continual labor in any one direction, lack of exercise, embarrassment, tight clothes, and evil passions, all dwarf and deform, tightening their grasp until we live in the clutches of the past and are not free for the needs of the present.

Modern nations pay little attention to the culture of the body; the ancient Greeks had both their standards of beauty and their schools for attaining it. Speaking of their beauty compared with our physical degeneration, a contemporary writer says: "It was a beauty based on bodily health, on the grace and harmony and perfect proportion of every organic part. It was not confined to the face. It included every limb and lineament, every aspect of form and feature. It was a natural, wholesome, abiding beauty.

* * * It was a beauty that did not fade with the first freshness of youth."

The training of the prize-ring and college gymnasium aim solely at the production of force and muscle—the Delsartean recognizes the distinction between the motions of force and those of expression and trains for every exigency of life. Accompanying this general study and practice, there is specialized work, according to the needs of the student.

Edwin Forrest said shortly before his death: "The Delsarte philosophy has thrown floods of light upon my mind. In fifteen minutes it has given me a deeper insight into the philosophy of my own art than I had, myself, learned in fifty years of study."

If a sculptor, one studies the poses of the body in all their meanings; if a painter, the same, with the analysis of the meanings, and relations of colors and their combinations, the expression of lines, the relation of the line to the angle, the circle to the spiral, etc.

Mr. Russell, when asked the proper age for study, replied: "Of course the best time for such training is in youth; all of our public school teachers

should fully understand Delsarte's work, and I am pleased to say that my engagements with Major Pond will take me to some of the leading colleges and schools of this country. Mr. and Mrs. Russell have been engaged by Major Pond for a lecture tour of America, during the coming season.

Most children are born well formed, with beautiful voices and natural grace of expression—all of this, however, gets quickly knocked out of them at school in the strained mentality of our present systems and the purely artificial exercises that form part of the school routine.

In every school there should be a little good gymnastic practice to preserve the natural rhythms, and every teacher should know enough to correct a bad poise, a thumping walk, a hard tone, or clavicular breathing, without ever letting the students know that they were learning a "system"—which is an unpleasant word. *He* must learn the system and train them so well that they would never need it.

Delsarte discovered, he did not invent, and true Delsartean claim to have no patent on nature, but to have been assisted in understanding nature's laws by Delsarte's formulations. There is nothing in our modern education to preserve or develop personality. A teacher of expression has, of course, a very responsible position, and must know thoroughly his work.

In reply to "How long is it necessary to study?" Mr. Russell said, "A great many ideas can be gained as how to stand, breathe, walk, move, in a few lessons; but of course it takes much patient practice and study to really conquer personal defects. Many study several years, and about two hours a day is the rule for practice—I give more time than that to my own study. A good pianist would require as much to keep his hand in perfect condition, and this work is with the same object. In regard to his own practice, Mr. Russell said: "A lecture never exhausts me, I always feel

invigorated, alive, and ready for another. I never plan my talks, they are entirely impromptu, and I no more think of what I am to say before a lecture than I would think of what my conversation at the dinner table would be. I practice some relaxing exercises a few minutes before going on the platform, so I may be sure that there are no nervous contractions anywhere in my body resulting from 'stage-fright,' that I always feel for hours before. I take some deep breaths for control and then try as much as possible to forget myself in what I have to say, and am, of course, very much affected by the magnetism of the audience.

"Many people ask if the work would not make one self-conscious; that would be only the result if superficially studied, but the increased power in understanding and expressing one's self gives 'self-possession' rather than 'self-consciousness.' It always results in making a personality more interesting by giving it a wider range of expression than the mere rigidity of social etiquette.

"The poor body, cramped up, stiffened, unbending, uninteresting, or else wasting its nervous force in over-restlessness, must practice slow, regulated, relaxing rhythms until the sense of harmony is established, so that when a movement is made every part of the body responds, and the harmonious obedience by long practice becomes as much second-nature as the nervous jerks were.

"Of course, when a person thinks of a special way to move or walk he becomes self-conscious, attempting to affect an accomplishment his body cannot execute; but if the body be well trained, whatever it does seems natural and unconscious. Animals usually move in perfect grace—and are most particular in practicing exercises to keep themselves in good condition. By labor and ignorance man has been broken down to the level of a jaded old cart horse,—with a most cultivated intellect.

His education fails to develop all his powers. The *word*, the *tone*, the *gesture*, are designed to be his means of expression, his weapons in the fight, but he is only skilled in the use of word."

The subject is a very wide one and we have not touched upon the science of art criticism that has been founded on it, but we must close this article by giving another of those peculiarly suggestive definitions of art in which it pleased Delsarte to concentrate so much of his wisdom, and which are almost the only authentic fragments of his thought which he left behind:

"Art should interest by the true.
Art should move by the beautiful.
Art should persuade by the good."

Art should—
"Interest by the true to illumine the intelligence.
Move by the beautiful to regenerate the life.
Persuade by the good to perfect the heart."

W.

MAX MULLER ON RELIGION.—Professor Max Muller was not long ago entertained at dinner by the Glasgow University Club. In reply to the toast of his health Professor Max Muller said some who had heard his Gifford lectures in Glasgow were disappointed, because they were under the impression that the object of the lectures was to propound a new religion. This was not the sense in which he interpreted the will of Lord Gifford. Instead of propounding a new religion, Professor Muller thought that the best plan would be to expound the old religion, to show, not so much what religion should be, but what it had been. What was wanted was not a new religion, but a renewed religion, more especially when he considered that Europe was turned into a military camp, and that the best genius was spent in drilling and inventing new machines for killing our fellow-creatures.

A GREAT TALKER.

THIS title is often given to some one who has awakened admiration because of his or her facility of speech, but in the present instance it is spoken of a bird, a parrot that has become famous in London circles. We give a representation of him as it appeared in the *Illustrated London News*.

casian, saying so many odd things that his talk astonished every hearer.

Mr. Hay instructed his servants to be careful in their use of language, so that the bird should not pick up any bad words, and he became so proper in his talk that he was called "Deacon." Finally, it is said that the servants were



"DEACON," THE FAMOUS PARROT.

This talking bird was brought from Australia by a gentleman who had found it on a great sheep ranch in the wilds of New South Wales, owned by a Mr. Alfred Hay, and that gentleman presented it to him. It was in the height of the shearing season, when the ranch was a scene of much activity, and the parrot entered into the spirit of the oc-

casian, saying so many odd things that his talk astonished every hearer.

Among the party of gentlemen who greeted the parrot's owner on his arrival in England was one who sympathetically inquired of the parrot, "What do you want, Polly?" The parrot startled him by the reply, delivered in a gruff tone,

and with slow emphasis, quite unlike the rapid, rasping ejaculations of most talking parrots, "I—want—to—go—home."

The return voyage from Australia was made by the Pacific Ocean and the United States. While in San Francisco his owner stopped at the Palace Hotel, and he was hung out on a piazza overlooking the courtyard. As a colored servant was rushing by he shouted, "I say, you beggar, where's the sheep?" The tone was so gruff and peremptory, and the voice so unaccountable to the startled darkey, who hadn't noticed the parrot, that in his fright he dropped the tray and smashed the chinaware. "Rub it with oil," blandly remarked the parrot.

Deacon's appearance is impressive: instead of the usual green and yellow plumage of parrots he has a gray suit that is not at all handsome. His form is rather striking, however, as he is as big as an owl, and his head is

remarkably wide, making him look somewhat like a profound scholar.

At present he occupies palatial quarters in the office of a business house in London, where his fame for saying quaint things (when he feels like it) has gone abroad, and he has many visitors, some of whom he treats in the most civil and dignified manner, while others, we regret to announce, he treats most uncivilly. For instance, he will scream out to the carriers who bring orders to the office in muddy weather, "Wipe your feet, you lubber!" "Can't you see the rug?" But on the whole, however, Deacon is a model bird. His every wish and whim is anticipated by willing attendants, and while Deacon doubtless thinks, with Mr. Gilbert's obliging policeman, that the life of a parrot "is not always a happy one," his present existence is about as serene as that a parrot can be expected to have, and he no doubt thinks that his present career will, like Tennyson's brook, "run on forever."

POPULATION: ITS FUTURE RESTRICTION.

THROUGH the partial constitution of animals, and the absence of art in their operations, their geographical area is limited, and, in consequence, their reproduction is restricted. The frugivorous apes can subsist only where fruits are abundant. Defenseless and mild as many of them are, they could never establish or maintain themselves in a region destitute of forests. They are very sensitive, have a very decided aversion to cold, and die at an early age when removed from their tropical habitations. Their geographical area is thus limited to forest regions of the tropics, to accommodate which their reproduction is not rapid, and is much prevented through predatory attacks of other animals. The ant-eaters furnish another illustration of limitation. The insects on which they feed are sufficiently numerous to furnish their subsistence only in the tropical regions. They increase

slowly and are long in reaching maturity. They also fall a prey to the larger carnivora. Many other illustrations might be drawn, especially from the mammalia of the torrid and frigid zones, but the principle underlying all is so obvious that no more are required. Since the geographical area of species is limited, corresponding limitation in reproduction is necessary, and provided for in a short duration of life, one or few at a birth, prevention of bearing in those members on the outer areal limits, predatory attacks and other retarding causes, any or several of which may be present.

In a general sense this law of limitation applies to man, but there are several elements in his nature which greatly modify it. He is omnivorous, subsisting upon all classes of food, and the food-products, animal or vegetable, of each zone contain such elements as are

necessary to adapt him to its climatic conditions, the tropics producing cooling fruits; the temperate regions, the nitrogenous and carbonaceous grains, and the frigid regions, the animal oils. With the superaddition of art and contrivance in his constitution, he can arrange for food transportation, and make its adaptation still more nearly perfect. He can provide domicile and clothing to complete climatic adaptation. The geographical area of man is limited only by the sea, although with all his art and natural adaptability, he can never attain the highest state of existence in the heat and luxury of the tropics, or in the cold and want of the frigid zones. Longevity is great, the bearing period of good duration, and, though a weakling when compared with many of the larger beasts, he rarely falls a prey to them. Exempt from most retarding causes, population is increasing. It has not yet attained a maximum.

The whole land area of the earth, peopled as thickly as Belgium, or the denser districts of China and India, would contain twenty-fold more inhabitants than now. The extreme regions could never reach this density, and it may be doubted whether the middle regions will ever reach so far beyond it as to compensate their loss. Granting ten thousand years as the life of the race, it would require but two hundred thousands to attain the maximum number. Or, granting 6,000 from the last geological submergence, one hundred and twenty thousands. These calculations are based upon the average rate of increase for the whole period of racial existence, and are very misleading in fixing the period intervening between the present and the attainment of a maximum, for the almost continual intertribal wars among early peoples, and the devastating national wars which fill the pages of European and Eastern history with the execution of civil and religious criminals, and the ravages made by disease before the dawn of medical science, greatly reduced the

rate of increase in the remote past. The British possessions of North America are progressing very slowly, if at all. Greece is progressing. All Africa may be increasing rapidly, but estimates are too uncertain to determine the rate with exactitude. Afghanistan Beluchistan are perhaps stationary, or slowly increasing. Persia is rapidly decreasing. Offsetting the increase of these several states by the rapid depopulation of Persia, (which, however, is a probable error in favor of increase), we may base our calculations upon the increase in all other nations, statistics of which have been drawn from various census reports, and the "Almanach de Gotha." Taking the estimated actual increase of population for periods varying from eight to sixty-five years, and reducing them to a standard, we have an increase of 192,871,304 in fifty years. This is not an exact method, but furnishes a close approximation. The whole land area occupied by 491 people to the square mile would contain 25,755,062,773 inhabitants, which, if the present actual increase remained unaffected, would require a period of but 6775 years.

But progress is not by regular increments, or arithmetical progression, but by a sort of geometrical progression. The basis of population with its increase for any given period, together constitute a new basis for the succeeding periods, and so on. The present rate of increase is about 13 per cent. in fifty years, which, beginning with our present population, 1,437,417,780, as a first basis, would require about 1,200 years. From our extremely high estimate of the maximum, even this period may be reduced to 1,000 years.

And this rate may yet be augmented. There are several depopulating causes in operation, the estoppage of which would contribute largely to its advancement. Population depends primarily upon the excess of births over deaths, which, in turn, depends upon the num-

ber of births, and the degree of physical preservation and longevity.

The number of births depends upon the *number* and *prolificacy* of marriages. The number of marriages depends upon the desire for marriage, and this, upon the mental social status, health and normality, along with custom, social education, and public opinion. The social status in which originates the desire for marriage consists in excellent gender, surmounted by refined friendship, and a domestic, monogamic spirit. Excellent gender can exist only in an excellent hereditary constitution, and its normal activity can be assured only through health. It is needless to urge the physical weakness and deterioration of mankind. Its extent is perhaps never imagined, in consequence of the rarity of pattern men and women. Remedying this defect will contribute to the multiplication of marriages. The customs of married life in civilization at present are so fixed, and so expensive, that men of moderate means are often deterred from marrying, and few young men and young women reach maturity without losing something of their first high faith in each other, which contributes to celibacy by weakening or perverting the social instincts. *Prolificacy* depends upon the degree and normality of gender, and its mutual, conjugal expression. There should be more loving home associations. Instead of wife indulging in the weakening frivolities of fashion, to the neglect of substantial elements of life, and husband driving day and night in all-absorbing business transactions, to the exclusion of almost all social feeling, wife and husband should associate familiarly, lovingly, and naturally. Hotel life should be abandoned; for it deteriorates, leads to gossip and scandal, destroys the seclusion of home, and encourages flirtations and outside sympathies which engender alienations and antagonisms—to end, perhaps, in divorce.

Physical preservation and longevity

depend upon the inherent strength of constitution and the absence of causes tending to dissolution. With advance out of savagery comes cessation of intertribal wars. With further progress of humanitarian principles in government and politics comes the abandonment of all wars, and the substitution of arbitration in the settlement of all national differences, which avoids the sacrifice of the blood of thousands. Accidents may always occur; at present they are far above their minimum. Disease is no more necessary to man than to animals in their natural state, and is the result of imperfection, both in heredity and habits of life. Infant mortality is very great, but due mainly to weaknesses inherited from stimulated, narcotized, and debilitated fathers, and fashion-deformed, muscleless, nervous mothers, and increased by wrong nursing, over-nursing, or improper treatment in various ways. Adult mortality is due partly to hereditary weakness, but much to wrong habits. The dietetic laws are almost ignored, and all manner of physical mal-practices go on accumulating disease. This lessens individual longevity, and longevity is transmissible in decrease or increase, according to the existing vital status of the transmitter. If former ages present instances of longevity exceeding five centuries, and our own, through downward inheritance, but four score, it is possible through upward inheritance to attain five centuries in some future age.

With a maximum number of marriages and a good degree of productiveness, abandonment of wars, a minimum of accidents, absence of disease, and increase of longevity, the rate of increase of population will be vastly augmented,—more than doubled, for, in America at least, not one-half of those born reach maturity, not all of these marry, and by no means all who marry live to complete the reproductive period. And this, slightly modified, applies to other nations. This, the hope of the optimist,

is not all an airy dream of the ideal, for man is not a cyclical, repetitive, and unprogressive being. There is incorporated into his nature love of the beautiful, desire of perfection, and longing after the ideal. There is a power of applying causes, adapting means to ends. Art is there, the supplement of nature. There is love of right and obedience to the higher law. Longing after perfection and the ideal gives the motive to progress; reason and art, the means. Love of right insures moral elevation and right progress. In view of these active mental principles, and the rapid elevation and development which has characterized the last few centuries since the dawn of freedom, we are warranted in asserting the final re-enthronement of intellect, and the attainment of a human status touching upon perfection.

Like the fauna of geological ages, man must continue to exist until the life conditions of the earth render his longer presence impossible. There has been throughout the formative ages of the earth a direct correlation of life conditions and life types. The geological conditions which existed at the introduction of each type, and in which it flourished, passed away under the action of physical laws, and by virtue of this law of correlation, internal variation or typical accommodation occurred, only to be followed by depopulation and final extinction, when the limits of variability had been reached. This is the history of all extinct genera. Since man is correlated to the physical world by the same law which correlates animals, his destiny may be thrown forward in time to a very great distance. The race may yet be in its infancy.

Even if some great land-submergence, or great glacial era, or other disastrous phenomena, should occur in a few thousands of years, there must still be a long period latterly, in which each parental pair must but reproduce itself.

JOHN W. SHULL.

MY OLD SCHOOLMASTER.

A SONNET.

My old schoolmaster's thin and wrinkled face,
The crow's print near the corners of his eyes

Of blue, soft as the azure of the skies,
And lines upon his forehead where I trace
As on a map that there is nothing base
In his good heart—strong are scholastic ties
That bind me to the cultured man, and wise,
Above most men that move within his space.

Deep furrows score his venerable brow,
Where time un pitying drove his fateful plow.
Though dull his hearing, his good heart can hear;

Though dim his sight, he can discern the tear;
His feet may falter, but his faith and love
Give him new charters from the courts above.

GEORGE W. BUNGAY.

FORGIVENESS.

FORGIVENESS! what hath more sweetness?

The word softly falls on the ear;
Tender and gentle toward weakness,
Stanching the penitent tear.

When 'tis spoken
Then the token
That love rules the spirit benign,
Most human, yet wholly divine;

Forgiveness! the word symbols peace
That brother with brother should share;
Bids anger and murmuring cease,
And grief a cheery smile wear;

Virtue supreme,
Pure and serene,
Thou fillest with comfort the soul,
Ne'er scanty, thou givest the whole.

Sing, wouldst thou, praises to beauty,
Of honor exultingly sing;
Recount the merits of duty,
To truth a laurel crown bring?

Know the dearest
And completest

Grace of all is voiced most fitly
By the rhythmic, *I forgive thee*

Hope weaves dreams with sunny halo,
Faith inspires a sweet content;
Kindness sees in want a fellow
Mortal for whose help 'tis sent;

All these and more
That men adore

Can not Forgiveness' sources drain;
Its law is love with endless reign.

H. S. D.

Some will keep the time of day in the memory, or the day of the month and recall numerous dates in history, and always think before they look at the watch what the time is.

The next organ of this group is called Tune, with which we appreciate sound; not merely the sound of music, but every form of sound, from the pensive moan of the pine tree to the rushing of the tornado. We know each other's voices, and the voice of a friend which we have not heard for ten years is identified in an utterance of three words. The sense of sound also embraces all the realms of music. Language is greatly modified and qualified by Tune. It vocalizes thought. All birds and beasts have their sounds, a conversation by means of vocal utterance, which is definite and full of meaning among themselves. We learn by the peculiar whine of the dog the joyous tone that welcomes its master, and rejoices in victory. The hen, as she comes with her new brood of chickens, has a voice that they understand. If she chirps a quick, joyous note, they all rush to her to find what precious thing she has found for them to eat. The little fellows know it the first time they hear it. When she utters for the first time the shriek of alarm, in a twinkling every chick is out of sight; we look in vain to find one. There is a hawk overhead and his black shadow, in passing, has alarmed the mother and she bids her children hide, and they instantly obey. When danger is past she chirps a new sound and every chick is out from its place of concealment; it knows that it is safe to come forth.

Human language has also its inarticulate phase like that of animals. We have the laugh, the sigh, the groan, which are universal and know no nationality. A person was arrested in court, and an Irish lawyer asked him several questions, but received no response. Are you French? Are you Italian? Are you German? Are you Irish? Are you Russian? He turned

to the court and said: "Your honor, I can not make anything out of the man, I have addressed him in five different languages and I get no response." If he had sighed, groaned, or laughed, the stranger would have understood him, but when he used the articulate sounds of the English he was not understood. Different languages have different names for the same ideas. Therefore, articulate or artificial language is the foundation of names which give special sounds or names for the different ideas. The name horse in English is *cheval* in French, and something else in other languages.

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WHAT SHOULD OUR SCHOOLS TEACH?

MANY of our ablest writers have recently been discussing through the pages of the magazines the question: "What shall be taught in our schools?" Dr. Austin Flint and others have contributed able articles to the *Forum*, each one making a strong plea in behalf of the studies which find most favor in his sight. Some would make industrial training the paramount object of our school work. And they advance good arguments in favor of the position they have taken. Others hold that the elements of natural science should have the first place in our schools. Some contend that our common school pupils should be taught all that our schools teach at present, besides some of the higher branches, thus giving them really an academic course of instruction.

One writer insists that Physiology and Hygiene, or the laws of health, should be the leading branch of study. His article is full of valuable suggestions. This science gives us a knowledge of our bodies, and such knowledge is of inestimable value. But this, of itself, is not enough. The mind is the prime factor of life, and the body is its servant. In view of this fact, Phrenol-

ogy, the science of mind, ought to receive attention. That course of instruction which fails to impart to each pupil some knowledge of himself, mentally, falls far short of accomplishing all that is to be desired.

All persons are born with a certain number of faculties which are susceptible of almost unlimited development. But what that development is to be, whether in the direction of good or evil, depends upon the person's knowledge of his own faculties, and his desire to cultivate them properly. These faculties may be so cultivated as to elevate their possessor in the scale of being, and contribute to the purest happiness which mortals can experience; or they may be so perverted as to drag him to the lowest depths of vice and crime. An instrument, under the manipulation of a skillful musician, may be made to give forth strains which would send a thrill through the soul; while, in the hands of a novice, it would produce only jarring discords. The human mind is an instrument made up of many different faculties, which may be so attuned as to accord with the symphony of angels; or, through a base and wicked perversion, it may add harsher discords to the blasphemy of demons. To preserve this grandest of all instruments in perfect order, and to evoke from it its sweetest melodies, requires a thorough knowledge of the instrument itself, as well as a long and patient process of training in its right use.

Every human being, in order to reach the highest attainment which is possible to him, must acquire this knowledge, and must have this training. That all do not realize the full measure of their capabilities, though a deplorable fact, can not be gainsayed. About us, on every hand, we behold individuals who have perverted their God-given faculties to base and ignoble uses. Men who were created in the image of Divinity have suffered themselves to sink to the

level of brutes. Men who were made only a little lower than the angels, and authorized to exercise dominion over all the earth, have placed themselves in a worse than Egyptian bondage. They have become the slaves of appetite and unbridled passion; instead of which, by a right use of their faculties, they might be capable of leading their fellow-beings along the path of purity and virtue. Through inexcusable ignorance of their own natures, many fail to make a right use of the talents with which they have been endowed. It seems appropriate here to use the words of the inspired writer, "My people are destroyed for lack of knowledge."

It matters little what is added to or taken from the courses of study which are at present pursued in our schools; so long as they omit teaching the pupils to know themselves, that will fail to achieve all that they should accomplish. A person's mind may be well stored with the knowledge which is to be gained in our common schools, academies or colleges; his intellect may have had excellent discipline in grappling with intricate mathematical or philosophical questions; he may be well versed in the classics and ancient history—in fact, he may be what the world would call an accomplished scholar, and yet come far short of reaching the standard of excellence which he is capable of attaining. Too often, young persons, who claim to be educated, are asked whether they can demonstrate the problems of Euclid, or translate Horace and Euripides, or explain the philosophy of Aristotle; while it is considered of little consequence whether they can control their passions, and resist temptation to wrong-doing, whether they are pure in thought, in deed, and in principle. Yet, the latter is of far more importance than the former. While knowledge and intellectual discipline are much to be desired, the building up of right character ought to be the chief end and aim of education.

Without self-knowledge, and a knowledge of human nature in general, no person can adjust himself to the circumstances in which he is placed, nor secure for himself the success which he is ambitious to achieve. Many individuals blunder into wrong pursuits, and waste their energies in fruitless efforts to accomplish that which they are not able to do. The best years of their lives are spent in finding out that they have made a mistake; whereas, if they had studied themselves as they should, they might have spent that time in preparing for the work which they are best fitted to do, and laying the foundation for substantial success in their proper field of labor. That man who has chosen the trade or profession for which he is best adapted, is able to labor with the least waste of energy, to make himself a useful and respected member of society, and to secure for himself the means of comfort and happiness.

In the domestic and social circle, Phrenology is capable of shedding a light which will cheer and bless all who come within its influence. Lack of knowledge in regard to the social and conjugal relations has been the cause of discords which might have been avoided, and has filled the world with misery, vice, and crime. And so long as the self-styled "educated" world is content to dwell in ignorance of the Creator's laws, which are written in the human organization, but little improvement may be expected in either the happiness or the morals of the people. But when all are rationally educated upon this most momentous matter, and when they obey the laws which should govern them in their social relations, then we may look for happier homes, nobler specimens of humanity, and a purer state of society than the world has yet known.

It matters not what position a person fills, whether the sphere in which he acts be small or great, Phrenology may be made of inestimable value to him.

It will help the business man to adapt himself to the peculiarities of those with whom he has to deal, and thus increase his chances to achieve success in business; it will enable the lawyer to understand better the principles on which laws are based, and how differently organized persons are adapted to obey laws, as well as to make a favorable impression on a jury. The pastor, who ministers to man's spiritual needs, would find his influence and power greatly augmented by its study. It is valuable to the teacher, who has in his hands the care and culture of the faculties of the young. By its aid he may instruct and train each child according to its own individual wants, and increase the efficiency and value of his work many fold. It will help the anxious mother to train up her children in the way they should go, and to prevent them from wandering into the ways of sin and folly.

These are a few reasons why Phrenology ought to be taught in our schools. In the past it has been studied only by individuals here and there. Its truths are not known to all, nor are they fully appreciated where they are known. Instead of being studied by only a few persons, it ought to be disseminated among all. Its many valuable lessons should be taught to the young while their characters are being formed, in order that they may be able to make the most of the faculties which they possess, and to obviate, as far as possible, their imperfections.

When Phrenology shall be studied and appreciated as it should be, then we may expect better and grander results from the work of our schools; then will education fulfill its true mission—the development of the complete human being; then, and not till then, will be realized the truth which was uttered by America's greatest educator,—“Phrenology is the handmaid of Christianity.”

H. S. BARTHOLOMEW.

CHILD CULTURE.

PLUTARCH ON THE TRAINING OF CHILDREN.

THE following extracts from Plutarch lately appeared in an article published by the *Schoolteacher*:

To begin at the beginning, I should advise those who would be parents of worthy children not to marry anybody who comes along. To be of dishonorable birth, on the father's or mother's side, is a reproach throughout one's life. Euripides wisely says: "When the foundation of birth has not been rightly laid, descendants can not prosper." A noble treasure of freedom is good birth. It is Euripides, also, who says: "It makes a slave of a man, even if he be stout-hearted, when he is conscious of the misdeeds of his father or mother." On the contrary, children of distinguished parentage are often arrogant. The son of Themistocles used to say that the Athenians liked whatever he liked: for his mother always agreed with him, the father with his mother, and the people with his father.

In general, one may say of excellence, as he does of the arts and sciences, that three things must unite for complete right-doing: nature, reason, and habit. Instruction I call reason; practice, habit. The beginnings are the work of nature; progress, the work of instruction; usefulness, of practice; perfection, of them all. If one of these be lacking, the whole must be imperfect. Nature without instruction is blind; instruction without nature is defective; practice without both is incomplete. In farming, first the soil ought to be fertile, then the farmer ought to know his business, then the seed ought to be good. So, nature is like the soil, the teacher like the farmer, and his precepts are like the seed. Certainly these have united in

forming the characters of Pythagoras, Socrates, Plato, and all who have won undying glory. Happy is the man to whom some one of the gods has granted all these blessings.

We are much mistaken, however, if we think that the right kind of education can not make amends, in great measure, for lack of natural ability. Laziness spoils natural excellence, while teaching remedies its deficiencies. What is easy, quickly escapes the negligent, but difficult things are learned by taking pains to learn them. There are many examples to show the effectiveness of diligent labor: drops of water hollow out rocks; iron and brass are worn by handling; a chariot wheel or actor's staff, curved with great effort, cannot be straightened again. The unnatural has, then, become stronger than the natural. Countless illustrations could be given. A field is naturally fertile; if neglected, it becomes barren, and the better it was by nature the worse it is spoiled by neglect. But a field not so good, if properly cultivated, produces splendid crops. Trees uncared for grow up crooked and unfruitful, but if they receive the right kind of training they are productive. Bodily strength is weakened by carelessness and improper living, yet one who is naturally weak may become strong by exercise. Horses broken and trained while young are docile; if left untrained, they grow up stubborn and vicious. The wildest animals can be tamed by patient care.

A Thessalian, when asked who were the greatest of his countrymen, replied: "Those who cease to make war."

Character is habit long kept up. If one says that excellence of character is

the excellence of habit, he is not far wrong. For example, Lycurgus, the Spartan law-giver, took two puppies of the same litter and brought them up in entirely different ways. One turned out greedy and mischievous, the other a good hunter. One day, when the Spartans were assembled, he said to them: "Habit, education, and training of life are of great weight in the attainment of excellence, and this I shall make plain to you." Bringing forward the two dogs, he released them, placing before them a plate and a hare. One darted for the hare and the other for the plate. The people did not understand his meaning until he told them that the dogs had been puppies of the same litter, but one had been rightly brought up, the other not.

When the child is old enough to be placed under a boy-ward (*pædagogos*), I can not urge too strongly the importance of a careful choice. The way in which people act nowadays is very absurd. Of their good slaves, some they make farmers, others sailors, others traders or overseers; but they put any slave, who is drunken, and worthless for every other employment, in charge of their children. The *pædagogos* ought to be like Phœnix, who filled that office for Achilles. Most important of all, parents should seek for their children teachers who are blameless in life and character, and who are the best by experience. A well-directed education is the fountain and root of all that is noble and good. Farmers put fences around their growing crops; so good teachers hedge in their pupils with careful precept and instruction, that their characters may develop rightly. One has no respect for fathers, who, before inquiring about the fitness of those who are going to teach their children, through ignorance or it may be through inexperience, give them into the keeping of worthless teachers. If they do this because of inexperience, it is less ridiculous; but sometimes, although they

know well the character of certain teachers, they intrust their children to them, because of flattery or to please friends who beg them to do so. This is just as bad as if a sick man should give up a doctor who by his skill could make him well, and, to gratify a friend, choose one who will kill him; or, as if one should select a bad pilot instead of a good one, because a friend begged him to. Is a man worthy to be called father, who counts the favor of friends of more value than the education of his child? Old Socrates said that he would like to go up to the highest part of the city and cry out, "What is the matter with you, that you use every effort to get money, but pay no attention to your sons, to whom you will leave all?" Such fathers are like those persons who think much about their shoes, little about their feet. Many fathers love money so dearly and their children so little, that, to save expense, they choose teachers who are worth nothing, looking out for cheap ignorance. Aristippus took down rather neatly a father of this description. When the latter asked him what he charged for tuition, he replied, "One thousand drachmæ." "That's a tremendous price," said the father. "Why, I can buy a slave for a thousand drachmæ." "Do so," said Aristippus, "and then you will have two slaves, your son and the one that you buy."

LITTLE MARGARET.

ALL the flowers together met
 Claiming little Margaret.
 Bluebells nodded, Daisies smiled,
 When they saw the lovely child.
 "She is mine," said Violet-blue.
 "See, her eyes are my own hue."
 And the Blush-rose urged her claim:
 "See my leaves—her cheeks the same;"
 While her sister Red-rose cried,
 "In her lips my crimson tide."
 When the maiden's father came,
 Listened all to hear her name,
 And the Pansy sweetly smiled
 As he said, "My little child,
 "Loving ways will always please;
 You are surely my Heart's-ease."

EMILY PEARSON BAILEY.

AN OLD MAID'S SCHOOL FOR MOTHERS.

WHY does not some one start a crusade for the children? I, Hetty Deane, spinster—"old maid," if you like—get a heart-ache every day of my life over their wrongs. I do not mean so much the waifs of the street, the curl-tangled, unwashed romps that sturdily block your passage along the sidewalk, or skip around you with naked feet and legs, unaware of a playground in the world more beautiful than their section of pavement and gutter. No, their lot is hard enough, heaven knows, but I mean the clean, well-dressed, highly-adorned Golden Locks that are met in parks and fashionable places, attended by French nurses and languid mammas. By birth more delicate and sensitive than the children of the gutter, theirs is the harder lot. What they suffer from French maids has often been noted. What they suffer from their mothers can never be told.

The crusade I call for, therefore, is a crusade in behalf of well-born children against their own mothers. The popular theory, that the maternal instinct is possessed by all mothers and is a sure guide to the well-being of her child, is a myth. The maternal instinct belongs to the individual, not to the office. Merely physical maternity is good for little, the maternal heart alone makes the mother, and this often is not found in the bosom that suckles infants. Many an old maid, whose arms are destined, by an undeserved fate, never to embrace her child, has more of true maternal feeling in her withered breast than half the women whose brows wear the golden crown of motherhood. Tell me why other things in this distracted world go so awry and I will tell you why this misfit occurs.

But one doesn't need to see the whys and wherefores of a fact before she can see the fact itself, and one's own circle, however narrow, affords children enough who are ragged, defrauded, browbeaten, and persecuted by their

mothers to justify this complaint. One little fellow of my acquaintance is told so many times a day that he is naughty, that he wakens in the night and plaintively asks: "Is I a naughty boy, mamma?" Yet his mother is oblivious to the pain given his sensitive nature, a pain that is sure to be recalled in after years. In sudden bursts of affection she catches him up, covers him with kisses, calls him by the name of every flower on earth and every star in heaven—and thinks her maternal duty all performed.

Another bright little one becomes as absorbed in his play as an inventor studying his last model. He sits among his toys unconscious of all around him, his brow knit with the beginnings of thought, his awkward little hands patiently following that thought's directions. The time comes for his airing, and mamma, without a word of warning, snatches him up and begins to wrap him for his carriage. His indignant soul protests in the only way it can, by screaming at the top of his lungs, and mamma informs him and all the house that he has the worst temper in the world. He does not recover from the excitement till the airing is half over. The same thing occurs day after day, but the mother never asks herself who is responsible for that developing temper.

When the child is old enough to walk his sufferings increase. Mamma takes him for a promenade, holds his hand, and keeps his arm stretched its full length, and walking her usual pace, compels him to run every step, and even then he lags behind her. At a rough place in the pavement she grasps the hand more tightly and lifts him over, his whole weight depending on the slender arm, and he resumes his jog-trot, bewildered, hot, breathless. He begins to wail and she gives the tortured arm a reproving jerk, or shakes him till his curls fly as in a breeze. Many a time have I longed to mount a pair of stilts,

grabsuch a mother, stretch her arm, and make her run till she cried for mercy.

Another form of cruelty is common. On a cold, raw day last spring, I saw a beautiful little girl on a horse car, dressed in the richest materials, with her legs encased in the execrable half socks that leave several inches of bare flesh. I was none too warm in my winter flannels, and her mother wore furs. Was I demented when I declared to myself that the child belonged to me more than to her? Well, I had to leave the car or do something desperate, for my soul longed to snatch the little creature to my bosom and claim her as its own.

But these are trifles compared to the indifference or ignorance of many mothers to mental processes going on in their little ones, and to their personal rights. Children have no personal rights accorded to them. They are rudely turned away from things that interest them; they are pulled here and pushed there; their innocent little requests go unheeded, they are kissed and fondled when not in the mood, and made to kiss every applicant

irrespective of age, condition, or previous record; their little souls often burn with a sense of injustice that they can not express; their musical prattle and sweet fancies are never listened to as indications that a growing mind is opening like a fragrant flower, and should have the dew and sunshine of a mother's understanding heart to woo and nourish it—in short, they are treated in a way that would cause an American adult, in twenty-four hours, to draw up a declaration of independence more positive than that of our forefathers. Oh, affluent mothers! How can you let the inexpressibly great gifts of a good God go unappreciated!

Let me not die—me, Hetty Deane, spinster—till I have founded a School for the Instruction of Inefficient Mothers, governed by a board of motherly old maids, and have persuaded Congress to pass a law compelling every weak-minded mother to enter it. In such a school alone lies the deliverance of the children.

SARAH E. BURTON.

“NO CHILDREN.”

[These verses were written on hearing one lady say to another, by way of consolation: “You should be glad you have no children.”]

O, BREATHE not such words, they are heartless and cold!

No true woman's heart can such sentiments hold;

How rejoice that in Nature's best gifts we are poor!

The good Lord, himself, does not wish this, I'm sure!

Can wild, barren wastes rejoice in their dearth?

No waters, no shrubs, from the dry, parching earth;

O! the wildest sea-bird knows better than this, Whom Nature has touched with the sweet mother-bliss.

Can trees, which had never their fine fruitage borne,

Rejoice in the fresh summer robings they'd worn?

It can never be so! There is gloom in their glow
The teachings of Nature are truer, we know.

O! who can rejoice that she never has heard
The first childish cry which the mother-love stirred?

How be glad that she never has felt the caress
Of th' immortal babe, as it lay on her breast?

Who would not be circled by dear childish arms,
In love or in frolic, or simple alarms?

At the first sound of “mother,” in infantile tone,

It thrills through the heart of the mother alone.

“O, mother!” “Dear mother!”—words tender and pure,

Which speak of a love that shall ever endure;
Or in sorrow or sickness—if far or if near—
They'll reach to the heart and resound in the ear.

No child as a link on the future to throw,
No life of our life on our race to bestow—
Be content, but not glad, if such fate should inure,

Is all that the good Lord expects, I am sure.

GRACE H. HERR.

EDUCATION ACCORDING TO NATURE.

IT follows from the nature of the human soul, endowed with will, that all education must be essentially *self*-education, and that this development of self will be along the lines of hereditary tendency. This would be true if education were the acquisition of knowledge only. For knowledge is not a matter of memory merely, but of character. We know that which we master and assimilate; and mastery is of the will, and assimilation is of the intellect and desires. We listen to an address or read a book: part we absorb and build into ourselves, and part we unconsciously reject. What we assimilate and what we reject depend on what we are; and thus character determines knowledge. But when we reflect that education is chiefly the development of will, of motives, of mind, we perceive yet more clearly that this development must from its nature be *self*-development, and so along the lines of hereditary tendency. In some cases this tendency is very strong. Edwards, the naturalist, had an irresistible longing to be always among living things. "This," he says, "is the only reason I can give for becoming a lover of nature." This man with this tendency was threatened, was flogged unmercifully, and was expelled from three schools before he was six years of age. How happy for him, how much better for science, if he had found a wise teacher to encourage and direct him; if he, like Faraday, had been discovered by some Humphrey Davy. Sir Humphrey Davy, in enumerating his discoveries, said, "But my greatest discovery was Michael Faraday."

The chief function of the educator is to discover the tendency of each mind, to stimulate it along the line of its strength, to direct it, broaden it, furnish it food, and buttress it with habits of regularity. The world has outgrown and has no use for the philosophers who evolve systems of the universe out of their own consciousness. Men no longer

go to nature with a message of their own, but deferentially they question what she has to say. So Bacon taught: "Man as the minister and interpreter of nature does and understands as much as his observations on the order of nature, either with regard to matter or mind, permit him; and he neither knows nor is capable of more." This sentiment revolutionized scientific methods—has borne fruit beyond the expectation even of its author. We need the application of the same principle to education. The world has no use for—though I cannot say it has entirely outgrown—the educator who believes that the child is placed in his care to be moulded according to some pattern evolved from his own imagination, or received by tradition from the fathers. The real educator is the interpreter and servant of nature, and "nature is to be subdued only by submission."

Reverently, therefore, the true educator stands before the child, who is nature, and a nobler nature than any other found in the earth or in any star in the heavens, and according to the clearest answer vouchsafed to him and his fellow-interpreters, touches, with awed spirit, and influences, according to whatever power is his, this nature, which is the last link in a series of sixty centuries, and the first in a series every individual of which will feel the effect of that touch in all generations to come.

J. H. HARRIS.

ONE-HALF of what we call naughtiness in children is simply weariness, and at least a third is due to indigestion, which leaves but a very small fraction for the theory of total depravity to rest upon. A child who is perfectly well, well nourished, well rested, is almost invariably good tempered and joyous. It is as natural for a child to be happy as it is for a bird to sing.



UNBEARABLE DAYS.

THEY will come. Neither money, nor friends, nor social superiority, nor intellectual power, will keep them away—the days of which we say: “I have no pleasure in them.” They are the days in which the husband seems neglectful, the wife careless, the children undutiful. We suddenly awake to the fact that Mary is getting terribly freckled; that her nose is undeniably a pug. We perceive with clear vision that Tom is coarse, and rude, and crude. The voices of the little ones grate harshly upon our ears. We say in anguish of soul: Is this all? Is this life? Must I go on in this way year after year? The indulgence of this spirit suddenly places the sufferer at odds with all about her—assuming the culprit, or victim, to be a woman, as is very likely. Tom senior resents the coldness of her manner, the criticism in her eyes, the assumption of neglect in her voice. He puts on a mask—nay a whole suit of armor. Ten to one, he is tender-hearted, and is mortally hurt by coldness and criticism. Little Tom gets out of the house as quickly as he can. Mary pouts and looks forward to the time when she shall be old enough to go away from home. There is a deadlock in the machinery of the household. The servant, if there be a servant, is disrespectful; the baby is cross; the youngsters quarrel. By this time, the disease has taken another form. The

sufferer complains to herself that no one loves her. She goes over, mentally, all her sacrifices, all her labors, her trials for these ungrateful ones. What she has done is as naught; nobody remembers, nobody cares. If she were out of the way, her place would soon be filled. This thought is agonizing. It produces the deepest gloom. The “blackness of darkness” pervades the house, morally speaking. The little children are affected by this Icelandic atmosphere. The infant in arms, we may imagine, wonders why winter has so suddenly come—the winter of the Polar regions. How to get out of this condition! Let us rather ask, how not to get into it. Such turning one’s back upon the sun, has ruined many lives, broken the spirits of unnumbered children, alienated loving hearts, darkened homes where were all the elements of blessedness. It is undoubtedly the sensitive spirits that fall into this slough of critical, dissatisfied despond—the spirits that began life with vast enthusiasm, with a radiant outlook. They ask too much of life, and are discouraged at not finding fulfilled the promises they have made to themselves. “Whoever promised you that you should be always happy?” asks one of your sages. We might answer: “Youthful desire.” But this may be compared to a bank without specie. It cannot redeem its

notes. The first step, then, toward bearing the unbearable days is to make up our minds to a certain amount of suffering in life—to a certain number of mornings when we shall rise, feeling that the day has nothing to give; that our dearest friends are full of faults, unlovely, disagreeable. We must next look in the face the fact that these feelings are only feelings. They are like the fog that hides the meadows, the hills, the gardens; they should be treated as lightly. A great help at such times is to open a book—a tried and true one—and appropriate a noble sentiment. If it be the Bible, well and good; if some other deposit of spiritual strength, just as good, maybe better for the case in hand. An earnest, genuine aspiration for spiritual help will surely be answered. The darkness will remain, perhaps all day; perhaps for days. Bear it, but not in the hardest way. If the trouble comes from overwork, as it does nine times out of ten among hard-working people, let yourself be lazy, if possible, tend your flowers; do something congenial, at least, during a small part of the day: set yourself to amuse the children, force yourself to say a kind word—do something, anything rather

than put yourself out of sympathy with those about you. If your darkness comes from over-eating, as is often the case among the “higher classes”—heaven help them—repent and do works meet for repentance. Pie taken upon a full stomach is responsible for much gloom; and gorged livers are often mistaken for broken hearts. But the effect upon one's life is about the same. If ambition is crippled, aspiration fettered, hope discouraged, friends disappointed, children thrust into outer darkness, the cause does not matter, unless by finding it out we can also find a remedy. Whatever be your circumstances, accept the fact that the dark, dull, unbearable days must come. But set yourself to realize that the soul's true landscape lies all bright and fair on the other side of the thin cloud. If the cloud is persistent, live on bravely in the twilight, knowing that you have but one day at a time to bear. Instead of alienating love, which is your lamp in the darkness, keep it bright and glowing.

If, through efforts of the higher nature, the soul should grow in the unbearable days, they may at some future time be looked back upon as the best days.

M. F. B.

THE PREVENTIVE SIDE OF MEDICINE.*

SLOWLY and laboriously have we been arriving at the conclusion that uncleanness, overcrowding, foul, devitalized air, damp, and dust, have been active promoters of disease. Take, for instance, the strange mortality in our army years ago from pulmonary affections; while deaths from consumption of the same age in civil life were 6.3 per 1,000, they amounted in the cavalry to 7.3, in the infantry of the line to 10.2, and in the picked men of the guards to 13.8. Stranger still, it was found that the troops huddled before Sebastopol in 1856 suffered a far lower

mortality than those barracked at home. The pith of these startling figures lies in the fact that after the system was changed, with free ventilation established in the barracks, and sufficient breathing space provided for each individual, the tables were turned, and our soldiers no longer appear to disadvantage, but the reverse, in comparison to civilians. Again, both Dr. Bowditch and Dr. Buchanan showed independently the extreme importance of dampness of the soil as the cause of consumption. The former says: “A residence on or near a damp soil, whether that dampness is inherent in the soil itself, or caused by percolation from adjacent ponds, from

* From a Paper read at the Health Congress, Hastings, England, April, 1889.

marshes, and spongy soils, is one of the primal causes of consumption in Massachusetts, probably in New England, and possibly in other portions of the globe." Again, it was shown that the death-rate from consumption in the city of Salisbury was reduced by nearly one-half, in consequence of its subsoil drainage. Injurious dusts and atmospheres incident but not necessary to certain manufactures can be prevented, and legislation has done something, but should do more, to make such prevention absolute. Past statistics, and even some present ones, tell a terrible tale of shortened lives and ruined health under these conditions. Only recently, in some lectures by Dr. Arledge (reported in the medical journals), the fatal tendency to pulmonary disease is pointed out among workers on our silk, cotton, woolen, flax, and similar manufactures, as well as in other fields of labor, such as wood and ivory-turning, bronze-casting, and so forth. In addition to the injurious effects of the dust of filaments, the air of the work rooms is often kept at a high temperature, and sometimes, notably in the cotton sizing sheds, is damp, also producing languor, loss of appetite, dyspepsia, and anæmia. Out of sixteen hundred and forty-two out-patients treated at Macclesfield Infirmary, of whom nine hundred and twenty-two were engaged in the silk trade, respiratory diseases constituted about one-fourth of the complaints treated. The inferior cotton, Dr. Arledge points out, requires most sizing, and to secure the requisite heat or moisture no external air is admitted, while jets of steam are let into sheds, saturating walls, ceiling, and the clothes of the work people. No wonder, he adds, that the operatives complain of debility, sweating prostration, fainting, and impaired digestion. And may we add that it is no wonder he invites legislative interference to prevent the carelessness of manufacturers, thus sacrificing the artisan. In dressing the linen web a simi-

lar high temperature prevails, and this process is so unhealthful that only a few adult men, free from chest disease are chosen, yet the average duration of employment, even of these, is only sixteen years. What prevention can do is shown in the case of Leek, where the mortality from consumption, as in other silk towns, was notoriously high, but is now happily as strikingly reduced since proper ventilation was established in the mills, unhealthful mills rebuilt, and the artisans provided with improved, well-drained dwellings. During the condition of lowered vitality, from whatever cause, the body becomes specially vulnerable to attack. The soil has lost its richness, and with it the power to grow good seed, but weeds grow apace. The germ of tubercle must be widely spread among us, but for them to fructify they must have an impoverished soil, and be sown with a sufficiently lavish hand, otherwise they will fall harmless and sterile on their bed. In conclusion, he says: "What is to be hoped for, and what can be done, is that with our accumulated knowledge and experience, and with the weapons science has placed in our hands, we may at least keep the enemy, Disease, at a respectful distance, by making our individual lives and homes as healthful as we have now the means of doing, and by such wise legislative provisions for the great sum of life, the good and evil of which must affect the individual units, as shall serve to secure the health, and so the happiness of mankind. F. BAYSHAME, M. D.

WATER FOR DRINKING.—Water from reservoirs, streams, and wells should never be used for drinking purposes without first filtering and then boiling it. Pure water can be kept pure for several days if put in air-tight bottles, and may be kept cool by putting the bottles in the ice-box until required for use. Ice, on account of its impurity, should never be placed in drinking-water.

HYPNOTIC SUGGESTION IN INEBRIETY.

I THINK that I first learned in the PHRENOLOGICAL JOURNAL, as long ago as 1850 or 1851, in a series of articles on mesmeric treatment, that what was then called Mesmerism would form a perfect cure for bad habits, and especially the liquor and tobacco habit. To my youthful mind this seemed a wonderful discovery, and, not having much faith in the heroic medication then more common than now, I believed the idea was a correct one, and would some day be realized. At that time probably no medical journal that had any respect for its reputation would have given countenance to such a thought. So far as I remember, they all voted the whole thing a humbug.

Unfortunately, the early mesmerizers were too much inclined to use the mesmeric power for the production of strange and ridiculous effects rather than beneficial ones. During all these years, however, there has been growing up among the masses some faith and a good deal of use of a modified form of mesmeric treatment, known as magnetic, and while not always scientifically applied, it has in a rude way often proved very beneficial. Men and women with great magnetic power, but with no medical education, have often been able, as by an instinctive guidance, to cure cases that so-called scientific medicine had pronounced hopeless.

At the not very recent International Temperance Congress at Zurich this question of the cure of inebriety by "Hypnotic Suggestion"—but another name for magnetism—came up, and much interesting information was given. Dr. Ladame and Prof. Ford advocated it in a forcible manner. They showed the great uncertainty of permanently curing inebriates in asylums; that total abstinence, which, of course, would be a perfect remedy, could not be realized so long as the insane love for drink continued; others had come to the same

conclusion. A mere determination on the part of the patient to abstain, and signing the pledge, is rarely kept, because of the superior force of desire. The strongest forces prevail here as elsewhere. But if the strongest forces can be made the weakest, and if the weaker ones can be strengthened, a great step in the cure has been taken. And this is what experiment shows has been done and can be done when the physician is able to gain magnetic control of the patient. The physicians above named related to the Temperance Congress some of their own cases. I will quote a few of them from an admirable synopsis given in Mr. Thomas's report.

The first patient was a dipsomaniac, thirty-five years of age, who, after taking and breaking many pledges of total abstinence, and after vain attempts to recover his moral equilibrium through treatment in an asylum, finally placed himself in Dr. Ladame's hands. The following is a record of the experiment:

March 28, 1887.—Patient is hypnotized and remains in a somnolent condition during several minutes. The suggestion is: that he shall no longer feel thirsty.

On the following day he has an altercation with some one, and becomes violently abusive. Under similar circumstances such an eruption of anger would formerly have brought on an attack of drinking. In this instance no such crisis ensued, but the patient experiences all the sensations which usually follow a "spree"—i. e., headache, nervous prostration, and fever; but he feels no thirst, no craving for drink. He feels dreadfully oppressed, and an uncontrollable desire to leave the house seizes him, which desire is coupled with the passing thought, that if any one should detain him he would leap out of the window. Once out of the house, the general depression of spirit gradually passes away.

March 31.—Patient again hypnotized, readily falls asleep—can not open his eyes. The suggestion is : that he will apologize to the person with whom he had the altercation, will not drink, and be in a good humor.

On the following day he writes to the doctor that he even forgot to drink his glass of water at dinner, and continues thus : "I was in excellent humor all the afternoon ; I expressed regret to the person whom I chagrined the day before ; so you see my anger does not last very long."

April 3.—Somnolence a little more pronounced. The suggestion is : that patient will sleep well without dreaming. The patient writes : "I, who all along have slept so much, could not fall asleep. I thought of hypnotic experiments made and to be made, and somehow conceived the idea that hypnotism might be used to remodel the world. Sleep would not come. I tossed about in my bed until one o'clock in the morning."

On the next day the patient is in a bad humor, and has an altercation, which under former conditions would have made him get intoxicated.

April 11.—Drowsiness and sleep come faster, and are more complete.

April 14.—First indication—as yet faintly marked—of suggestive catalepsy during somnolence. Three days later the patient writes to his physician : "Since you have me under your care, I experience a material change for the better in my condition. I am no longer subject to so many fits of ill-humor as I used to be for the most trifling cause. Whether it is the suggestion, to be of good cheer, which caused this change, or whether the thing is fortuitous, I do not know ; but what I do know is, that what you said on the 14th of April—namely, that I would work more and more easily, is true. During the past three days I have cheerfully finished work, which before I could not have summoned energy enough to begin."

April 18.—Sleep more rapid and deeper.

Suggestive catalepsy. Both arms of the patient, once raised above his head, remain extended, and in spite of all his efforts the patient can not lower them.

April 21.—Experiment without result. No sooner do signs of sleepiness appear, than the patient begins to yawn, and in spite of his efforts continues to do so for a while. This did not occur subsequently, but ever afterward the patient felt great anxiety lest it should occur.

April 25.—Occasional fits of sadness and melancholy. For the first time the patient is unconscious of the length of time during which he slept. He slept thirty minutes, but on awaking believed he had slept but five. Feels well after hypnotization, and throughout the next day ; sleeps well and works easily.

April 28.—Sleep is deep ; respiration sonorous ; at times the patient snores. Lethargy becomes more and more complete. Patient feels as if mind and body were rent asunder ; can not move his limbs at will. Less sadness on awaking. Hypnotization is repeated twice in each week, without notable incidents. Patient becomes more susceptible, and falls asleep more and more readily. On the 9th day of May he is attacked by violent stomachic cramps. Passes the succeeding night restlessly. Hypnotic suggestion is : that he will not feel the pain in his stomach. On the morning of the next day he writes : "Have not felt stomach-ache all day ; but what I experienced in this respect is very remarkable, and I cannot explain it. The pain must be very violent, as is usually the case when these crises approach, but I have only a faint sensation of it. I feel it, as one hears the sound of a human voice at a distance. The pain exists ; of that I am sure ; but the mind does not heed it, because it is ordered not to "

One month later (in the middle of June).—The patient is cheerful and finds pleasure in working. The craving for drink has disappeared. He asserts that during the course of the treatment he has had several attacks of that gen-

eral indisposition which formerly impelled him to bacchanal excesses.

Since then nine months have passed, but a relapse has not occurred, and it is reasonable to expect that it will not, unless some unforeseen circumstances of a dangerous character take place.

I can realize the difficulties in the way of success in many inebriates. They will not willingly and earnestly co-operate with the physician, and he can not gain sufficient control of their minds to enable him to alter the mental processes going on their brains. I have no doubt, however, that there are many cases in which control can be obtained, and to such hypnotic suggestion would, if rightly used, be a boon of the greatest worth.

My own experience in this method

may not be of much importance. I have used hypnotic suggestion in several cases of nervous disease with benefit, and in one case of inebriety. The patient was hypnotized daily for one week, and then he passed out of treatment, but he refrained from drink between five and six months, when the suggestion wore off, and I was not situated so as to renew the treatment, and I do not, of course, know what results would have followed, but I have every reason to believe they would have been favorable, as I learn at present the person is in good condition and does not drink. He told me these five months after the treatment were the happiest of his life.

M. L. HOLBROOK, M. D.

HEALTH AND STRENGTH IN WOMEN.

AT a semi-scientific gathering a year or so ago, we heard an eccentric speaker assert that man had been premature in his development. Assuming the truth of evolution, this speaker said that man had taken the upright position before he was fairly ready for it, and the prevalent weaknesses of woman were a demonstration of the correctness of his position; for if man still ran on all fours there would be far less occasion, if any, for such weaknesses. Our reply to this extraordinary announcement would be that it is the unnatural habits that women affect that must be charged with causing most of the trouble they suffer. Out of our boasted civilization and in the walks of semi-barbarism women are as enduring and robust as men.

The aboriginal woman of this continent is far more industrious and energetic, as a rule, than her haughty Indian master, and is expected to do most, if not all, of the hard work of such family life as they have.

In the West Indies the amount of strength and endurance shown by the native women is remarkable, thousands making it a business to carry heavy

burdens on their heads long distances to market. In the fruit season, especially, women perform a very large part of the transportation. The visitor in Jamaica is astonished by the vigor of the negro women in this respect.

There is a market in Kingston, the chief town of Jamaica, every day; but Tuesdays and Saturdays are the busy days. The Gordon Town road, from a very early hour, presents a curious sight, with the native villagers coming into town to sell their produce. They bring large baskets, full of yams, bananas, peppers, beans, and home-made cakes, piled up one on top of the other, each basket on a woman's head. Many come a great distance, twenty or twenty-five miles, and return the same day or night, most of them preferring to do the walk home at night when it is cool.

Some of the younger women affect rather coquettish attire. All, however, are fond of bright colors, or white. Our illustration gives a good idea of the mode in which a country belle fixes herself up. In their working dress, as in most parts of the West Indies, the women tie a string around themselves,

and then, drawing the dress up through it, succeed in arranging the dress short enough, so that they may not be prevented from walking freely.

The banana trade is a most important branch of industry for the Jamaica people, employing as it does a very considera-

ing small boats is begun. This is done again mostly by women ; the men are the overseers and contractors. The boats, when full, are rowed alongside the steamers, and the fruit is carefully packed away in the hold.

Any one who sees these finely de-



GOING TO MARKET IN JAMAICA.

ble part of the population, both in transporting the fruit to the coast and loading vessels bound for various Northern ports.

Immediately on the arrival of a vessel in the Jamaica port the process of load-

veloped West Indian women will be inclined to believe that the delicacy of the civilized woman is due mainly to her want of a comfortable dress and out of-door activity for useful purposes.

H. S. D.

EVOLUTION.

IT would be folly to deny evolution in nature in the sense of development, progress, or growth; but, notwithstanding appearances, it is contrary to all operations in nature for the lesser to produce the greater. Nor is matter cumulative in such a way that from a mere nucleus a world could be evolved without materials from another source. A seed multiplies its kind from substances already at hand; but matter has not in itself the power of creating other matter, much less can it create life which in its essence is immaterial. If, therefore, the Darwinian theory of evolution can only account for developments in or out of matter, and not also for the production of matter itself, as well as of life, it is defective and does not satisfy the inquiring mind.

An evolutionist says: "When I think that Diety could not originate himself, could not always have existed, could not have made this and other families of worlds out of nothing, I am overwhelmed with the magnitude of the consideration." And he adds: "As to matter, the only conclusion I can come to is, that matter always existed and always will exist; and that matter precedes force."

If we follow in mind effect to cause, it soon becomes evident that the chain must somewhere end in a first and independent Cause. And is it indeed easier to believe that matter is eternal and self-produced, which is subject to laws that govern it, and has no power to will or do, than that there is a living, omniscient, and omnipotent Cause of all existence, who "has always existed, and always will exist?"

To ascribe creation to evolution requires such a belief as is above expressed, but upon what can it rest? Evolution can not evolve anything out of nothing, consequently there can be no evolution where there is nothing from which to evolve. Nor can there be evolution without force; and if matter existed before

force, whence did force come? for matter could not then evolve it. Force is not dependent upon matter, for there is no tangible matter in stellar space, and yet gravity, light, and heat extend through it all. After considering all these things, is it not evident that instead of evolution by the tangible, it is the intangible that evolves what is tangible? Soil does not evolve the plant; but the germ in the seed extracts substances for a plant body out of the earth and atmosphere where they already exist; and thus the material plant is evolved. This germ is the first hold that plant-life takes on matter.

Matter is controlled, consequently, also maintained, through chemical and non-vital forces; but life or spirit has such a complete power over all these forces as to take matter from them, as it were, and form vegetable and animal bodies out of it, contrary to the laws of these forces. Matter must be a product of life; for how otherwise could life have such control, not only over matter, but also over the forces that operate in it? And from what else can the chemical and non vital forces exist than from life itself? for from that which is dead no force can come, while it is the very nature of life to produce something.

Evolution in itself is therefore nothing. It is merely a mode of motion or action, while life alone is the cause of motion or action. Evolution begins on the side of life or cause, as in the seed, and not on that of matter or effect, as would have to be the case if matter evolved anything. And all evolution is by strata, planes or degrees, of which one can not be converted or merged into another. A mollusk can not therefore become a vertebrate.

Man being the highest in nature by reason of his superior mental life, he has "dominion over all the earth." It is mind, therefore, that controls matter and nature; but mind is only a higher de-

gree of life than the physical or animal. No part, even in man, can be changed into another; the bones do not become nerves, or the eyes ears; the functions of the head can not be performed by the liver, or those of the lungs by the bowels. The body can do the bidding of the mind, but not its thinking and reasoning. So in the animal kingdom; a horse can not become a cow, or a fish a bird, or a monkey a man. Each of these has its own degree of life; and no part of one life can enter into another, even of the same species. A dog may eat the flesh of a rabbit, but this can not form part of the dog's body while there is any of the rabbit's life in it, or as a rabbit's flesh. It must become dog flesh.

All actions in nature are so precise in every point that the great wonder is how a scientific man could promulgate such an unscientific theory as the evolution of the higher plants and animals from

and by lower things, and finally of man, through a series of all the distinct grades of creatures, from something far less animate than the meanest reptile. That the development of such a theory of evolution was left for this enlightened age is even the greatest wonder. Can it be that this age, when the triumph of mind over matter is seen as it never was before, is the first to recognize the idea as scientific that dead, helpless, unconscious matter is the first cause of all existence, even of life and mind which make it do their bidding in ways innumerable, and altogether contrary to its own proper laws? Only in coming in contact with matter, as in seeds, does life affect it. The laws of matter act upon it everywhere and at all times alike; but life affects matter according to its own degree, developing innumerable kinds of plant and animal bodies out of it.

J. R. HOFFER.

“BREATHIN’ ON THE STAIRS.”

“**B**REATHIN’ on the stairs! That’s what ’twas. You needn’t tell *me*! I never had no higher eddication, as you call it, but I never did no breathin’ on the stairs, neither, nor a host of ridic’lous things that poor, misguided woman ust to do and think it was dretful smart; not that I’ve got a single word to say agin her as is gone over into the kingdom and the power and the glory, for she was one of the saints of the airth if there ever was one, for all she was sich a—fool, I was goin’ to say, and I dunno on the hull why I shouldn’t, seein’ as it’s the blessed truth, and mebbe now she’ll git a better kind of higher eddication than she ever did in this world, and one that’s better wuth the name.”

“I suppose I am stupid, Aunt Melinda,” I managed at last to get a chance to say, “but I’ve no more idea what—”

“You know Mis’ Chittenden died last night, don’t you?”

“Yes.”

“And left a husband and three children?”

“Yes.”

“And the young ones are all a poor lot, not a reel healthy one among ’em; that’s breathin’ on the stairs, I say. You needn’t tell *me*! Annie, that’s the oldest, she’s fourteen, and she’s got weak eyes and weak lungs, and she’s gittin’ all humped over, jest like a reg’lar old woman; and Bess, that’s the next one, and, well, I dunno what to make of Bess, she’s so nervous, her mother used to say. Nervous! Twelve years old—a fine state of things! You needn tell *me*, and a shakin’ and a cryin’ and a havin’ to be kep’ upon quinine and Angelina wine, and what not. And the next one, her name was Mary; she died; never had no strength to live on, anyhow. And Rodman, that’s the baby, of all the puny, pindlin’ babies I ever see, and it’s all breathin’ on the stairs. You needn’t tell *me* ’tain’t.”

“But, Aunt Melinda,” I gasped, get-

ting a second chance to slip a word in edgewise, "what in the world do you mean by 'breathing on the stairs?'"

"Why, I s'posed you knew all about that, seein's how you was sich a visitor to the Chittenden's, but I might a-knowed Mis' Chittenden wouldn't never tell no one about sich a thing as that, nor do it before 'em 'cept they ketched her at it as I've done time and time agin."

"At what?" I ventured, as a dropped stitch in the old lady's knitting compelled another pause.

"Why, breathin' on the stairs, as I was sayin'. Mis' Chittenden allus prided herself on her housekeepin', and she was a master hand at it, that's a fact, things that showed off to the neighbors like the lace curtains t' the front parlor winders, and the plants in 'em, and the big silver door-plate, and all that; not but that she kep' the corners clean, too, furzino, I didn't never have no chance to see, but she was a good woman, and honest in all her dealins', so I guess the corners was all right, but them stairs—she just ust once a week, and oftener if she was a goin' to have company—black walnut, iled—and she'd git down on her knees and scrub them stairs; she had three different kinds of cloth to do 'em with, and rub every livin' one of 'em five minutes, by the clock, and breathe on every one on 'em over and over agin till she'd gone from the top to the bottom, and then she'd allus have to lie down a spell with a dretful pain in her side, and as white as the scourin' cloth, and once she fainted dead away, and I hain't had no sort of patience with her or them stairs; they ust to shine, that's sure, but what made 'em? You needn't tell me. It was just poor Mis' Chittenden's breath of life went into them stairs and put the polish on better'n the hired girl could do—seems hired girls don't have no special pride nor interest; and 'twas jest the same with the door-plate, and the curtains was too fine to be trusted to anybody

else inside or out of the house, and so when they was done up Mis' Chittenden she'd have 'em pinned down on the parlor carpet, and she'd bend over 'em hours and hours on her hands and knees jest a-gaspin' for breath half the time, and used up more'n three papers of pins once before she could get 'em straight to suit her, to my sartain knowledge; and she was jest so partic'lar about every mortal, livin' thing, and had to be dressed jest so allus, tight and trig, and lookin' 'sif she'd come out of a bandbox, and stoopin' over that way was jest the wust thing, if she did write a valedictionary, as they call it, because she was fust in her class at Culminate College; and I've jest told her time and agin; I says to her, says I, 'Mis' Chittenden,' says I, 'you'll jest as sure kill yourself one of these days and leave a lot of helpless babies,' and it's because she never took no care of her poor, perishin' body that they're sich a measley, mise'ble set, without no lungs and constitution, and when it's too late I says to her, you'll think mebbe there's something better'n for a woman that's got a husband and three children to do for 'em than make shiny stairs for 'em to walk over, when they might jest as well be a-walkin' over her flesh and blood, and so I says to her time and time agin. You needn't tell me. And she'd jest smile and press her hand to her side, and says she, 'I must be thorough;' her mother taught her to be thorough, and she felt 'sif her house was a sort of trust, and she said she must be faithful to it for the sake of her family, and the servant couldn't do everything, and I didn't have no patience, for I knew the fam'ly needed something more than them shiny stairs all iled, and you could most see your face in 'em; and now she's gone, and the fam'ly can't live on the stairs, and they won't shine much longer, anyhow, and you needn't tell me. I haint nothing on airth agin a woman gittin' all the idees into her head she possibly can; the more the

better ; but there's something besides the botiny and the algebray and the sci-entifics and painted teacups and shiny housekeepin', and they'd orter have some notion of their poor, perishin' bodies and those they bring inter the world, for they'd orter know how to be wives before they're them, and how to be mothers of healthy children, and how to be housekeepers that don't give up all comfort and length of days to clear-

starched, done-up, pinned-down, parlor back breaking lace winder curtains, and black walnut stairs iled and polished with three rags, and breathed on till they're jest shiny enough to show the faces of them little orphans she's left behind her ; and I know 'twant nothing but what I've said to her time and time agin—breathin' on them stairs. You needn't tell *me* !

C. B. LE ROW.

"PADDLING" ON THE BEACH.

IT may be picturesque to see children at the seaside paddling about in the cool waves, with their pants, skirts, and drawers tucked up to the hips, but we agree with an English writer that it is a really dangerous amusement for most of the children who are permitted by the parents to indulge in it. Down at the beach we have seen delicate looking little ones running and frisking in the water, while a hot sun beat down upon their heads. This sort of play is allowed to go on for hours almost daily by many families who are stopping for the season or weeks by the shore. And what is the effect? Commonly enough a condition resembling sun or heat stroke. Numbers of children are restless at night, languid all day, and complain of headache or general *malaise*. This, however, is often put down to the strong air or to derangement of the stomach, by the parents of the child, and nothing is done to give relief. In severe cases a plan of treatment is advised, called by the author "paddling at the other end;" that is, he applies hot mustard and water to the extremities, while the head is douched with iced water, and gives a brisk purge to relieve the congested internal organs. If "paddling" must be allowed, a degree of safety is insured by making the child leave the water frequently and run about on the shore. The limbs thus become warm again, and the danger to the head is removed at the expense of the skin, which is apt

to become inflamed and blistered by the sun. But this sort of fun should be indulged in but moderately, a few minutes only at a time. D.

LIVING ON ALMOST A PENNY A DAY.—"Dr. T. R. Allinson," says the *London Hospital*, "has been trying the experiment of living on meal and water for a month. His daily allowance is one pound of whole meal, made into a cake with distilled water, and one quart of water. In the first few days he felt hungry, but about the fourth day he had no longer any craving for other food. His brain was clear, his lung capacity had increased five inches, and both his sight and hearing were improved. He had lost seven pounds in weight, but seems to regard this as rather an advantage. Altogether he feels satisfied with his experiment. It is a very economical one, the wheat for seven days having only cost eight-pence. 'This' he says, 'is living on almost a penny a day, and enjoying it.'"

OATMEAL AND COCOANUT CRACKNELS.—Add to half a pint of the finest oatmeal two tablespoonfuls of sugar and three heaping tablespoonfuls of grated cocoanut or two of "desiccated" cocoanut. Stir it into one gill of boiling water, and mix thoroughly together. Turn out on the rolling board, well floured, and roll out a quarter of an inch in thickness. Cut in cakes adding a bit of citron and a few currants to each cake when they are ready to bake. Bake in a slow oven, and watch carefully lest they brown a shade too deep.

NOTES IN SCIENCE AND INDUSTRY.

Printing and Paper in Egypt.

—The manuscripts found at El Fayum, in Egypt, and owned by the Austrian Archduke Rainer, show the most surprising fact that printing with movable types was practiced in Egypt in the ninth century of our era. Two papyri dating from that time are still existing; but from the following century, the tenth, twenty-seven printings on paper have been found among the Fayum collection. As the contents of all of them are of a religious nature, it would appear that printing was practiced only by priests, though the perfection it had acquired would lead one to suppose that it must have been in use for some length of time. During the second crusade, 1147, printed paper money was issued for the north of Syria, which, as it had been issued without control, soon grew worthless. From the papyri it would also appear that the government of the Caliph of Bagdad was, so early as 794 and 795, in possession of a paper factory in the latter town.

New Process for Hardening Plaster of Paris.

—The French Academy of Sciences, says *La Semaine des Constructeurs*, has just received a communication from M. Julte on a new process of hardening plaster so as to adapt it to the construction of flooring in place of wood, and to other purposes for which it can not be used in its ordinary state on account of its want of hardness and resistance to crushing.

M. Julte recommends the intimate mixture of six parts of plaster of good quality with one part of finely sifted, recently slaked white lime. This mixture is employed like ordinary plaster. After it has become thoroughly dry, the object manufactured from it is saturated with a solution of any sulphate whatever whose base is precipitated in an insoluble form by lime. The sulphates best adapted for the purpose, from every point of view, are those of iron and zinc.

With sulphate of zinc, the object, at first greenish, finally assumes through desiccation the characteristic tint of the ses-

quioxide of iron. The hardest surfaces are obtained with iron, and the resistance to breakage is twenty times greater than that of ordinary plaster. In order to obtain a maximum of hardness and tenacity, it is necessary to temper the limed plaster well in as brief a space of time as possible, and with no more water than is strictly necessary.

The plaster cast, or other object to be hardened, should be very dry, so that the solution employed may penetrate it readily. The solution should be near the point of saturation, and the first immersion should not exceed two hours. If immersed too long, the plaster would become friable.

The Mosquito.—To expel mosquitoes, take of gum camphor a piece about one-third the size of a hen's egg, and evaporate it by placing it in a tin vessel and holding it over a lamp, taking care that it does not ignite. The smoke will soon fill the room and expel the mosquitoes, and they will not return, even though the windows should be left open all night.—*The Doctor*.

I learned the secret of successful warfare against these pests when living in the swamps of Louisiana, where, in summer or winter, mosquitoes swarm. For some years life was unendurable, and no meal could be eaten in peace. But all at once there was a change for the better. Bars and screens were often out of place, but there was almost an immunity from insects. I had just changed my colored boy. The newcomer explained how he kept the "critters" away. He burned small pieces of gum camphor on the cook stove, and used a secret preparation he called "sudekillo." When I married and came to Missouri, I imparted the secret to my wife, and as there is no patent on it that I know of, I would advise all fellow-sufferers to go and do likewise. The gum camphor alone is ample for the purpose, and need only be used two or three times a week.—*St Louis Globe-Democrat*.

Pretty Experiment in Chemistry.

—The *Practical Teacher* gives the following simple experiment in chemistry, which any child can try:

Cut three leaves of red cabbage into small pieces, and, after placing them in a basin, pour a pint of boiling water over them, letting them stand an hour; then pour off the liquid into a decanter. It will be of a fine blue color. Then take four wine-glasses—into one put six drops of strong vinegar; into another, six drops of solution of soda; into a third, the same quantity of a strong solution of alum; and let the fourth glass remain empty. Fill up the glasses from the decanter, and the liquid poured into the glass containing the acid will quickly change to a beautiful red; that poured with the soda will be a fine green; that poured in with the alum will turn to a pretty purple; while that poured into the empty glass will remain unchanged.

Vibrations of a Fly's Wings.—In his book, "*On the Senses, Instincts, and Intelligence of Animals*," Sir John Lubbock records some of his later observations, among which are these:

The slow flapping of a butterfly's wing produces no sound, but when the movements are rapid a noise is produced, which increases in shrillness with the number of vibrations. Thus the housefly, which produces the sound F, vibrates its wings 20,100 times a minute, or 335 times a second; and the bee, which makes a sound of A, as many as 26,400 times, or 440 times in a second. On the contrary, a tired bee hums on E, and, therefore, according to theory, vibrates its wings only 330 times in a second. Marcy has succeeded in confirming these numbers graphically. He fixed a fly so that the tip of the wing just touched a cylinder, which was moved by clockwork. Each stroke of the wing caused a mark, of course very slight, but still quite perceptible, and he thus showed that there were actually 330 strokes in a second, agreeing almost exactly with the number inferred from the note produced.

The Care of Matting.—In sweeping the pretty and economical straw matting that is growing to be very popular with housekeepers during warm weather, do not use a broom, for it will tear the strands in a short time. A long-handled bristle brush, such as is used for oilcloth, is the nicest, and will remove the dust best, for the soft

bristles can go into crevices that a broom would miss. Always, when possible, brush the matting the lengthwise way of the grain, and the strands of straw will not tear and break as quickly as though brushed across. Some persons clean matting by sprinkling bran or coarse Indian meal over it, then with a long-handled mop, with cloth wrung out of clean, warm water, rubbing the grain well all over the carpet, then leaving it until dry, when the grain is brushed off. This is claimed to be a thorough way of cleansing matting, but it is usual to simply wipe it off with a damp cloth wrung out of salt and water, not wetting the matting much.

For winter use, if a heavy layer of carpet lining is put under it, matting is a comfortable floor covering. With pretty rugs scattered over it, the room has a pleasant, home-like appearance that is very attractive. It is cheap, and if care is taken when putting it down, that little cleavers, made especially for the purpose, are used instead of the ordinary carpet tacks, it can be taken up at any time when cleaning house, cleaned and put down again, in less time and with less labor than a woolen carpet, and it does not require to be beaten, but may be washed while on the floor the same as usual.

Earthquakes Everywhere.—It may be said, quoting from a reliable authority, that no part of the globe, so far as known to man, and no year, is absolutely free from these convulsions of nature. They are more numerous, however, in the great zones—the border zone around the Pacific ocean on the American continent, and the central zone joining the northern and southern hemispheres. The number of earthquakes recorded up to 1850 have been estimated as 6,795, of which 216 were disastrous.

Connection between volcanoes and earthquakes has been traced with a great degree of accuracy. Thus there are known to be zones of active volcanoes extending through belts of the earth coincident with the earthquake zones, one of which reaches from the Andes, in South America, through Central America, and along the Sierra and Cascade mountains of the Pacific Coast. The only active volcanoes in the United States are in the Sierra Nevada and Cascade mountains.

The most notable earthquake ever occurring in the United States was that which visited New Madrid, Mo., in 1811. The ground undulated repeatedly for several months, a district 300 miles north and south and 100 miles east and west being affected. Lakes were formed in several places in the district named, and drained again by the successive upheavals and subsidences of the earth's surface. The next most memorable earthquake was that of November 18, 1775, in New England. This is supposed to have had the same origin as that which took place at Lisbon eighteen days before. Another series of shocks occurred in New England on October 19, 1870. California was visited in 1852 and 1868. Lone Pine, and other mining settlements in Nevada were partially destroyed by an earthquake in 1871. The disastrous visitation of August, 1886, in Charleston was the most destructive to property, and the only one where lives were lost to any great extent in the United States.

Superstition and Natural Gas.

—Western housekeepers sometimes have domestic service difficulties not found in the category of the East. In a thriving western city natural gas has been introduced lately as one of the best modern conveniences. In one family the cook and second girl immediately gave notice. At the expostulations of the mistress, the cook explained that she "wouldn't cook with hell fire," and the second girl said that she wouldn't stay "in a place where the fire came from the bowels of the earth."

Sensation when Eaten by Wild Beasts.

—Sir Lyon Playfair recently related that he knew three men who escaped with their lives after being partially devoured by wild beasts. The first was Livingstone, the great African traveler, who was knocked on his back by a lion, which began to munch his arm. He asserted that he felt no fear or pain, and that his only feeling was one of intense curiosity as to which part of his body the lion would take next. The next was Rustum Pash, now Turkish Ambassador in London. A bear attacked him and tore off part of his hand and part of his arm and shoulder. He also

said that he had neither a sense of pain nor of fear, but that he felt excessively angry because the bear grunted with so much satisfaction in munching him. The third case is that of Sir Edward Bradford, an Indian officer, now occupying a high position in the Indian Office. He was seized in a solitary place by a tiger, which held him firmly behind his shoulder with one paw, and then deliberately devoured the whole of his arm, beginning at the end and ending at the shoulder. He was very positive that he had no sensation of fear, and thinks that he felt a little pain when the fangs went through his hand, but is certain that he felt none during the munching of his arm.

Autostereotype Printing.

—A new process of so-called autostereotypic printing, especially adapted for the reproduction of books and engravings, has lately been invented in Switzerland, and is already used with advantage in a large printing office at Zurich. The process will cheapen the reprinting of the works of foreign authors, since the typesetting and copying of engravings is saved and an accurate stereotyped plate is obtained directly from the original. It is a transfer process, in which a blank, composed of plaster of paris, silicate of potash or soda, and phosphate of lime, is employed. The print to be copied is moistened in a solution of phosphate of soda in distilled water, alcohol, and acetic ether, and is then transferred in the usual way to the plaster of paris plate previously coated with a film of gelatine containing citrate of iron and ammonia. After the transfer is made (all the processes thus far having been conducted in a dark room) the plate is dried and exposed to direct sunlight for fifteen minutes. When taken out the places where the light has acted will be found to be quite hard, while at the other places the plaster is soft, and will fall off as fine powder as deep as the solution has penetrated, if brushed with a hard brush. The plate is then ready to be stereotyped.—*American Inventor.*

The average weekly production of steel pens at Birmingham, Eng., exceeds 160,000 gross, something that would give an aggregate annual production of 1,198,080,000.



NEW YORK

October, 1889.

CRIMINAL ANTHROPOLOGY.

AT the recent Congress of the Learned Societies held in Paris, the proceedings of the seances for the discussion of criminal anthropology have been very interesting. The attendance appears to have been large, and many eminent observers took part in the discussions. Opinion, of course, varied with regard to the physical evidences of defective or weak moral sense. Prof. Lombroso, of the University of Turin, for instance, believed that in the brain and cranium there exist positive abnormalities of structural development that bear their own witness—of a typical peculiarity possessed by the criminal.

M. Manouvrier, on the other hand, affirmed that crime is a matter of sociology, not physiology, and the commission of acts in violation of law did not intimate a morbid or abnormal constitution in the offender; but the temperament and natural disposition of the person must be taken into account and the nature of his surroundings. M. Manouvrier claimed that among the worst sort of criminals the cranial capacity was not inferior to the average. If a criminal type existed, he said, it would be an artificial scape-goat, a harlequin, and

nothing more; for it seemed to him that there could not be a real criminal type of man any more than there could be a type of man monster or pathological man.

There were not wanting statistical details for the support of the position taken by those who argued on the side of a criminal predisposition, inherited or acquired by association and training, the marks of which were exhibited in the physical organization. Lombroso came to the congress well reinforced with *data* of his own collection as well as derived from sources of excellent repute. He pointed to certain physiological markings that had been distinguished by Mm. Tenchini, Frigerio, Marro, Ottolenghi, etc., as associated with the criminal propensity, and also to the defective sensibility in one or more respects, especially of taste and smell, in offenders, while hearing seems to be exaggerated. A mere outline of the views of recent observers in this new department of study is interesting.

For instance, Severi notes the large proportional capacity of the cerebellar fossa. Ottolenghi notes peculiarities of hairiness and baldness, the slow appearance of wrinkles, especially the nasolabial. Pitre refers to peculiarities in the language and handwriting of criminals, recalls their aptitude in mechanical details, and their want of ideality. He also detects a body temperature that is above the average; a condition we think that may be accounted for by the mental strain or excitement under which the law breaker usually labors. Optical peculiarities noted by Tenchini, Marro, and others are of the following nature: The brown or chestnut iris is

predominant. Color blindness is not remarkable, while sharpness of vision is well developed. The nasal canal shows frequent anomalies, the opening being often irregular, narrowed, and the nasal bones abnormal in relation. The nose itself is usually of medium length, rather broad, prominent, and turned to one side.

In a recent article we have mentioned the investigations of M. Ferraz de Macedo with regard to the absence of the gray commissure in the brains of people of unbalanced mind. M. Macedo, however, according to Manouvrier, has never met a criminal among his subjects. But evidently persons with characteristics such as are described of those lacking that commissure, viz.: "variability of opinion, instability of character, * * * extreme irritability, insolence, impertinence, ingratitude, want of reflection and circumspection, failure of good sense and of mental harmony," are but little removed from the doing of acts positively criminal. They need but the occasion to cross the narrow margin that lies between their ordinary conduct and unlawful things.

It is much after the logic of *post hoc propter hoc*, doubtless, that some of these observers deduce their conclusions, who see in anomalies of physiognomy and physiology evidence of criminal organization, but we are not therefore to designate their conclusions as merely fanciful, for there is a relation between physical abnormality and mental defect.

Nature expresses a vice of character in some material way in the form and fashion of the man, and if observers err in their indications of such vice, it is on the side of finding too many signs, too

many deviations from the normal physiognomy. The very richness of their data defeats the object they have in view, because it makes them appear in a ridiculous light, even so over-zealous in their search for proofs as to be misled by conditions of anatomy and physiology that are not very uncommon among those most respectful toward the established order of society.

M. Tarde, an examining magistrate, asserted that crime is a functional activity innate in the predisposed criminal, and that such organic predispositions are met with in criminals, just as the predispositions of talent are met with in the mathematician, painter, musician, etc. Fortuitous circumstances often reveal these predispositions where they are scarcely suspected, so that the factor of accident was to be taken account of in the analysis of crime as in the consideration of talent. Function reveals the organs, crime discloses the criminal. Organic dispositions exist which are not necessarily indicated by the anatomical characteristics. If, however, we were shown the localizations in criminal anthropology just as we are shown the center of Broca—that presides over articulate language—the base of the edifice would be established. But there is without doubt a bond of union between the order of facts as propounded by the observers. Thus, in brief, M. Tarde.

Other members of the congress spoke of the relations of society to criminal development; the effects of education, occupation, of disease, especially nervous; of hygiene, of disorders, climate, etc., etc. M. Laschi, an advocate of Varonne, said, in the course of an interesting address, that he regarded the in-

fluence of racial peculiarity as an important item in the consideration of the questions involved. The people with broad heads (*les brachycephales*) are conservative; those with long heads (*les dolichocephales*) are more revolutionary. Of 89 revolutionaries that he had examined, only 20 had broad heads.

The growth of interest in this department of anthropology has been marked during the past few years. Its importance is unquestionable, and, in the main, the spirit of the more eminent observers is of that earnest character that promises to lead to results, ere long, that will take form in what is most desirable—advanced state measures for the treatment of criminals.

NOBLE EXAMPLES.

Two illustrious examples of self-sacrifice, or rather, self-forgetfulness, in devotion to benevolent work, have given the world cause of late to reflect upon the higher virtues of human character. Father Damien dying among the Sandwich Island lepers, and Mr. Crossett dying among the Chinese seem to us as nearly perfect types of unselfishness as modern civilization has produced.

Mr. Darwin has been reported as saying that for one example of pure unselfishness in human conduct he would surrender his theory of the descent of man. Would not the careers of such men as these respond to his requisition? Possibly, however, the disciple of the eminent naturalist would plead that these men were moved by a moral or religious motive, high and excellent, to be sure, in its nature, yet related to a potent expectation of a future or heavenly reward; and therefore that they could not be said to be

altogether free from a kind of selfishness. If such conduct must be rated in the category of self-seeking, then let us have more of it for the sake of the ignorant and suffering millions in the world. Surely his must be a soul despicably mean who would disparage the man who gives himself up to philanthropic work, at nobody's cost but his own.

A few years ago a plain man of quiet demeanor conferred with us on the subject of Chinese and Hindu character. He gave the name of Crossett and intimated that he was preparing to go to the East in the character of a missionary. This man impressed us by his spirit of determination and earnestness, yet there was nothing effusive in language or manner. He was the same man whose death has just been reported, and of whose unremitting devotion to the unfortunate and sick of the common Chinese population the press has taken account very properly.

We rejoice in noting such men. Their lives fill us with respect and admiration for the nobility of human nature. We care not whence they or we have come—by whatsoever lines of “descent” or evolution—the glory of a high consecration to deeds of charity amid circumstances that are repellant to the great majority can not be dimmed by any criticism. They illustrate the grand principle of common brotherhood in man, and bring out into vivid light those exalted elements that are the property of human nature only.

HUMOROUS MIXTURES.

ONE of our jocosose contemporaries, as if fearful that his jocosities would be too much of a strain upon the risible

nerve centers of some of his readers, has taken the precaution to interpolate among them certain much advertised pharmaceutical compounds. For instance, following one very facetious venture in which a mischievously bright boy gets the better of his quizzical papa, the editor suggests that pills are very active on a weak stomach. Think of the stroke of humor that is powerful enough to turn a man's stomach or produce a fit of indigestion!

Again, following a very affecting moonlight scene, in which two lovers discourse of poetry the editor comes in with an item advising us to take H—'s Sarsaparilla — "a wonderful blood purifier." As if there were that in the poetic fancies of the erotic swain that introduced pyogenic microbes into the blood, and some anti-septic mixture were necessary to counteract their baleful effect. Further we are advised, if suffering from "humors," to take more of this wonderful compound. Considerate editor!

Speaking of advertised nostrums reminds us of a long-winded description we glanced through recently, which was given a conspicuous place in a well-known weekly. The writer, evidently one of those successful concocters of advertisements, who have come to the business front as forming a new profession, assumed a command of physiological erudition that was most amusingly impertinent. He discussed effects of the "iodides" producing blood and tissue changes in a way to convince the innocent that they were the divinely appointed agents of chemistry to relieve the victims of dyspepsia, skin disease,

glandular congestions, blood degeneration, hypochondria, and anaemia, and went on with a readiness of invention and fluency of detail that were irresistibly refreshing, to describe the manner in which these "iodides" brought about the happy transformation that an invalid so greatly desired. With a thin basis of accepted theory for his start, this advertising specialist had worked up an article that must have greatly tickled his employer's Acquisitiveness. The last paragraph, especially, exhibited a skill in the management of the climax making as it did somebody's "Lightning Express Converter," to be found in every drug store on the earth, the maximum of mortal desire. If the illustrious Brown-Sequard had kept his eyes and ears open to the virtues of the "iodides" he would have been saved the trouble of manipulating certain glandular secretions for the discovery of his elixir, which, in view of the great mixture above noted is rather late in its appearance.

EVE'S "DISOBEDIENCE."—A correspondent whose letter appears a page or two later puts her objection with regard to Eve in a neat and forcible way, but some reader may be likely enough to say that it has more technical significance than argumentative force in a free discussion of the record. For Eve, in her conversation with the serpent, is reported as recognizing the jurisdiction of the command, "Not to eat of the fruit of the tree in the midst of the garden," and recites it in application to herself as well as to Adam. The latter must have had a high respect for Eve's judgment, since he so readily followed her example. Who knows but that like many later Eves she was the real head of the house.

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.

ALWAYS write your full name and address plainly. If you use a pseudonym or initials, write your full name and address also.

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. Personal and private matters addressed to the Editor in the professional capacity of a physician will also receive his early attention.

GALL AND BRAIN FUNCTION.—A STUDENT.
—Dr. Gall did not claim to be the discoverer of the function of the brain, but many distinguished men of his time ascribed to him the credit of its positive demonstration, and not long before he died a medal was awarded him by Parisian admirers on which an inscription extolled him as the great discoverer of the function of the brain. He said that a knowledge of the office of the brain as the instrument was recognized long before his time, and his work as an investigator only determined the anatomical evidences of that belief. Dr. Gall was a modest man, and sought only to know the truth in mental philosophy and psychology. If you would take the time to read the old books, especially Gall's works, Spurzheim's Phrenology, and the early volumes, say from I. to VI., of the *Edinburgh Phrenological Journal*, you will obtain a good idea of Gall's position in the rank of anatomical observers, and learn that some of the more important facts of brain anatomy, considered of recent development by the majority of modern physiologists, were signalized by him.

MARGARET FULLER.—OCCASIONAL.—Your

queries are fairly answered in the article published in the last number on this eminent woman. We infer that you have not read the article. Many of her peculiarities of disposition are described and illustrated by one who knew her, and we think some new light is reflected upon the singular influence that M. F. appeared to wield in the circle of which she was a member.

AN INVALID'S OCCUPATION.—M. C.—If you can use your eyes and hands you can do many things that will be valued by those around you. A prominent minister of New York said, that the most useful woman he knew was a lady who had been bedridden for years. He was indebted to her himself for much advice. We have known a girl who could not walk, yet who contributed much to the happiness and comfort of her home by her knowledge and practice of art: a knowledge obtained in her sick room. A daughter of Neal Dow, the temperance leader, furnishes an illustration of the virtue, so to speak, of a personal affliction. She has been an invalid for years, and unable to move from her chair or bed unaided, but during all this time she has been a close student of languages, and has obtained a very thorough knowledge of several—for instance, Greek, French, Spanish, German, and Russian. There are many things a person situated as you are can learn to do, mechanical, artistic, etc., and you need not brood or repine because of your lot. If you were friendless and destitute there would be a better reason then for complaining.

REFORMER.—QUESTION.—I should like to join a company that believes in temperance and moral reform, and designs to form a settlement of its own. Do you know of anything of the kind?
B. N.

ANSWER.—We know of nothing already established that would be likely to suit you. There are temperance communities, to be sure, in Maine, Massachusetts, New York, New Jersey, and other States. You can easily learn their names. Vineland, N. J., for instance, is well known. Edwards Co.,

Illinois, has a good temperance reputation. There's Pullman, near Chicago, also, that is distinguished for sobriety and order. If you wish something quite new and in a primitive region, how would British Columbia suit? A new colony is in prospect up there for temperance and moral ends, besides industrial independence. The aim, according to the secretary of the movement, is to found a model society, and it has the countenance of the Government.

"HELLO."—ORIGIN.—J. G.—This very common social term, now a technical word in the use of the telephone, has an origin which is not generally known. According to an author who has looked into its history it is very likely a derivative from early English times, when people in the forests would cry out: "A loup! a loup!" on seeing the wild animal of the wolf species. Later, the forest dwellers in Carnwood forest, Leicestershire, in hailing a person at a distance, called out: "Halloup!" The change to "hallo," and "hello" is easy. We think that hallo is the more seemly, now that all classes appear to be inclined to use the terms rather promiscuously.

WHAT PHYSICIAN?—QUESTION.—I am advised by a friend to go to a Homœopathist, but I should like to have your opinion. What are the differences of the schools?

I. H.

ANSWER.—In this matter we should say, use your own judgment. There are good advisers in all the leading schools, and we are inclined to think that the well-trained, experienced, independent physician is a combination of them all.

As regards the differences of the schools, we could not reply to the question satisfactorily in a brief item. The old school—termed "allopathist" by some—but quite erroneously, for that originally was used as a term of reproach in the partisan strifes of fifty years or more ago—is conspicuous for its advancement in pathological research. Having at command the best facilities for anatomical and histological examination in the great hospitals and laboratories of the country this should be expected. The homœopathists are distinguished for their elaborate symptomatology. In their treatment we find very extended lists of "indi-

cations" for the prescribing of different medicaments. The eclectics appear to be notable for their adaptation of treatment to individual cases. They make more of therapeutics, seemingly, than their contemporaries of other schools, and are more pronounced in opinion concerning the value of this or that drug. Their general objection to mineral remedies is a characteristic that is notable, and is probably one reason for the favor with which they are regarded in some parts of the country. In some medical circles it is becoming more and more common to ignore class names, and to claim the right to adopt any form of treatment that the case demands, drug medicine being given or not according to the diagnosis made. This is what is called *rationalism*. We know eminent men who, aside from the occasional use of an antiseptic, trust to skillful nursing and hygienic surroundings in even the severest maladies.



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

Some Remarks on Sex Bias.—

The teaching of Christ gave the first blow to pernicious sex bias, and for many years after Christ women in Christian churches were on an equality with men. Women might preach and perform religious rites equally with men; but when the male preachers gained a little temporal power and prominence the old spirit of dominance sprang up in their breasts and they began to hold church councils and issue canon laws to suppress the woman element in religious ministry. But strong Christian women do not readily submit to impositions. The old story, occasionally told, that Eve's disobedience brought sin into the world; that, but for Eve, the earth would be a paradise, etc., is a noticeable instance of sex bias, and its distortion of men's judgment. The facts in the case, if we take the Bible account, show that Adam, and not Eve, was the guilty party. The command not to eat the apple was given to Adam before Eve's creation. There is no evidence in the Bible

on which any jury in America could convict Eve of the sin of disobedience. Yet, for thousands of years, Eve has been made to bear the stigma of that charge.

MRS. T. C. ALBERTSON.

My Experience in Head Growth.—There seems to be a doubt in the minds of a good many people in regard to the growth of the human brain in the direction of the organs which are supposed to be stimulated and directly concerned in a given occupation in which the individual may be engaged for a number of consecutive years, after he has arrived at maturity, or, say, attained the age of twenty-five years. If the reader will pardon me, I will give some personal experience, which has a direct bearing on this subject, and goes to prove that the organs do develop in that part of the brain in proportion as they are stimulated into action by the pursuit followed by the individual for any length of time.

About nine years ago a noted phrenologist visited the town in which I was living, and I concluded to have my head felt—like a great many others, more for curiosity than anything else—to see what, if anything, he could make out of me, as I had made little or nothing out of myself, so far. He measured my head very carefully, and, after some thought, opened his remarks by saying that the subject before him seemed to have a rather peculiarly-shaped head, as it measured just $\frac{1}{8}$ of an inch more in circumference at the upper part of the forehead than around the part just above the eyes.

He said also that the perceptive organs needed cultivation, especially Size and Individuality, and that Constructiveness also needed attention, all of which he marked 4, or average, in the chart which he gave me.

In answering a question put to him, he said that I *might* make a good mechanic with a great deal of practice, and it would be a good thing for me to work at some trade, as it would have a tendency to develop the perceptive organs as well as constructiveness.

As I had commenced to work in a mechanical line a few weeks before this—not, however, with as great success as I could have wished—I concluded to stick to it,

and have done so the most of the time since.

Just one year ago I had a second examination given the same head, when it proved to be in a somewhat different shape than it was eight years before, for instead of measuring $\frac{1}{8}$ of an inch more around the upper portion, it now measured much less than above the eyes, or, in other words, it measured $\frac{1}{4}$ of an inch less around the upper part, and $\frac{3}{4}$ of an inch more around the perceptive, or just above the eyes, than it did eight years before this.

In the last examination, almost the first thing the phrenologist said was, that the subject before him *ought* to be a good mechanic, as the organs were large which had to do with mechanism, whereas, in the first examination, these were the very organs which needed cultivation. Now, for a man to tell me that there is nothing in Phrenology is equivalent to acknowledging that he has never given the subject much thought, or is one of those fools who never *learn* anything new.

N. B. M.

PERSONAL.

CANON FARRAR's visit to this country a few years ago apparently impressed him pleasantly, since he has sent his son here to complete his education. The young man, who scarcely resembles the typical Englishman in appearance, will take a scientific course at Lehigh University, and will afterward take his degree of civil engineer at the Rensselaer Polytechnic Institute of Troy, New York. From an eminent Englishman's point of view, it appears that American schools are as good as the foreign. We think so, too.

MRS. SARAH VAN NOSTRAND, of Millstone, N. J., celebrated her one-hundred-and-first birthday a few days ago. She is one of the most notable of all our centenarians. There is not a wrinkle upon her face, she goes about the house and superintends her work, knows every man and woman in Millstone and East Millstone, where she lives. Her father was a soldier in the Revolution, and lived to be ninety-four. She was married in 1810, and lived with her husband sixty-three years. She has had eight children, all but one are living, and the New York

Times says: "She has not been called upon to mourn a loss among her children in seventy-five years."

WISDOM.

"Thou must be true thyself,
If thou the truth would teach."

The pure worship of a pure heart is an inspiration and a song.

A SEALSKIN sacque does not always keep the heart warm.

CIVILIZATION depends on morality. Everything good in man leans on what is higher.—*Emerson*.

THOSE who are honest and earnest in their honesty have no need to proclaim the fact.

MIRTH.

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

GREAT wealth in our journey through life is only extra baggage, and wants a heap of watching.

"You wish to marry one of my daughters? The youngest will get 15,000 marks, the second 30,000, and the eldest 45,000." "You don't happen to have one still older?"

"DR. TANNER was not the first man who lived on water for forty days," said Fudge. "No?" queried Smudge. "Of course not." "Who else?" "Well, how about Noah?"



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 the Editor with recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

THE PHYSICIAN HIMSELF AND THINGS THAT CONCERN HIS REPUTATION AND SUCCESS.

By D. W. Cathell, M. D., Baltimore, Md.

Ninth edition, revised and enlarged. 8vo, pp. 300. Philadelphia and London: F. A. Davis.

We do not wonder that this book has had so good a run, for it is filled with plums of excellent advice for the tyro and veteran in medicine. Some things had been better left out, especially those that smack of scholastic rivalry, or ill-will, but, as a rule, the author's spirit is elevated, and he aims to promote the degree of excellence that properly belongs to a noble profession. The fresh youth just out of college and tickled by the dignity of his *Medicinæ Doctor* title should read the book carefully. It will serve as a good introduction to the attempt to practice, because of its influence in directing one to self-study, and to the necessity for self-improvement if he would win true success.

PSYCHOLOGY AS A NATURAL SCIENCE, APPLIED TO THE SOLUTION OF OCCULT PSYCHIC PHENOMENA. By C. G. Raue, M. D. 8vo. Cloth, pp. 541. Published by Parker & Coates, Philadelphia.

The times are ripe for the production of such books as this. So considerable is the interest of thinking people in manifestations that proceed from the higher authorities of nerve function. Psychology has become a science, but its range has not been restricted. It is the method of investigation that partakes of the scientific that has given us results more definite and satisfactory than any known before, and encouraged further and more enlarged study of things once regarded beyond both physical apprehension and human understanding. As we have said elsewhere, through our liberal and improved systems of examining the higher phenomena of life, many things once deemed mysterious, have been resolved into procedures of absolute simplicity, and what was deemed supernatural has become natural.

The author of this new book has chosen a wide range of subject, and endeavors to cover it. He discusses Mind Reading, Thought Transference, Hypnotism, Somnambulism, Staturvolism, Clairvoyance, Second Sight, Retrospection, Psychometry, Telepathy, Telergy, The Double, Apparitions, Phantasms of the Living and Dead,

and Spiritualistic Phenomena, etc. Taking the eminent Beneke as his guide, he employs the principles set forth in that author's "Psychological Sketches," and other works, for the solution of occult psychic phenomena. He shows clearly enough, we think, that the materialistic thinkers of the day are incompetent to explain these occult manifestations, but we are not altogether satisfied with his own theories, although we feel that he should be credited with candor and fairness in their discussion. He accepts occult phenomena as such, and sees in magnetic somnambulism, clairvoyance, second sight, psychometry, etc., positive illustrations of a natural capacity in man to rise above the common material sphere of thinking and being.

Dr. Raue draws liberally from other observers, and sprinkles along the way many interesting incidents to sustain his arguments, but whether or not he demonstrates his position will be determined by the reader, according, we think, to the latter's private convictions.

THE AMERICAN ARMAMENTARIUM CHIRURGICUM is the title of a large volume recently issued by Messrs. George Tiemann & Co., of New York. As the title implies, it is a work devoted to the description of modern surgical instruments as employed in American medicine and surgery. The great development of the mechanical side of the Art Curative during the past thirty or forty years is admirably illustrated by the instruments and appliances that have been devised for the varied operations that have become practicable in the hospital, and in private practice. How much the success of an important procedure may be due, often to the instruments used, it can not be said, but one thing is certain, that many operations could not be performed at all if special instruments were not at hand.

A quarto of nearly 900 pages, the volume is a cyclopedia of information, scarcely less useful to the busy practitioner than his Bryant or Smith, and we cordially commend it as a fitting companion to the latest or best work in practical surgery. The drawings are, as a rule, faithful representations of the instruments and apparatus, and their extensive range may be inferred from their

number, 4,413. The volume is offered by Messrs. Tiemann & Co. at the moderate price, considering what it must have cost to produce it, of \$5, while to physicians special terms are made that are most liberal.

PUBLICATIONS RECEIVED.

HOME RULE AND FEDERATION. By a Doctor of Medicine. Published by E. Truelove, London, is a pamphlet advocating federation as a true advance in national politics, and the solution of "home rule" questions. The author looks forward to a grand system of international federation as the happy consummation of liberal and philanthropic statesmanship, and urges a federal union of France and England as the most important step in that direction.

FREEDOM'S CONQUESTS: The Great Spread of Woman Suffrage Through the World with a Roll of Honor showing over One hundred Regions where it now exists. By Hamilton Wilcox, M. S., LLB. New York.

If any one doubts the progress of modern thought on this much-debated question of woman's right to vote, let him read this pamphlet. Mr. Wilcox has collected with much care *data* from all parts of the world, and given in order an interesting and surprising array of evidence that there are hundreds of millions of people who recognize the right of women to participate wholly or in part in the privileges of the ballot box.

A REVIEW OF REV. EDWARD H. JEWETT'S "COMMUNION WINE." By John Ellis, M. D., author of "The Avoidable Causes of Disease, etc."

This pamphlet is an earnest protest against the position taken by Mr. Jewett that the wine mentioned in the Bible was fermented. He shows, by a liberal reference to authorities, that intoxicating wine could not have been commended by Divine precept for use in the religious and secular life of men.

SELECTIONS FROM THE WRITINGS OF GEORGE MAC DONALD. Compiled by J. Dewey. Paper, 50 cts. Chicago. Purdy Publishing Co.

The particular motive of the compiler appears to have been a collection of a series of quotations from the eminent English clergyman's writings that would serve as "helps for weary souls." There is much consolatory admonition in Mac Donald's fervent sympathy.



NEXT to a century of godliness in the estimation of all mankind should come a century of cleanliness. Just a hundred years ago Pears' Soap began in London its mission of cleanliness. To-day its use is universal, and more people than ever before acknowledge its superiority—a sure evidence that its mission has been successful. For one hundred years it has maintained its supremacy in the face of the whole world's competition. It has had rivals and feeble imitators, but it alone survives—another confirmation of the great law of the survival of the fittest. Such a record could not be achieved without cause. Temporary successes are comparatively easy, but for an article to go on maintaining its popularity through generation after generation, it must appeal to something more than passing fancy. This is the case with Pears' Soap. It is and always has been an honest product. The same care that was exercised a century ago in the selection of materials and in the process of manufacture is used to-day. If our great-great-grandfathers should come to life, one of the few familiar things they would find unchanged would be Pears' Soap. Queen Charlotte would to-day be able, just as she was

one hundred years ago, to go to the Pears' establishment in London and purchase a pure, refreshing, soothing soap, made according to the same formula and of similar materials. She would find it now, as then, the *cleanest* of soaps. In the United States Pears' Soap has found a place in public favor equal to that so long held in England. Men and women alike find it good and reliable. The man who has once tried Pears' Soap in the form of a shaving stick wants no other; he takes it when he travels. That woman who goes to a summer resort and fails to take, as she would her tooth-brush or hair-brush, a supply of Pears' Soap, must put up with cheap substitutes until her burning, smarting skin demands the "matchless for the complexion." Even children know the difference. So long as fair, white hands, a bright, clear complexion, and a soft, healthful skin continue to add to beauty and attractiveness, so long will Pears' Soap continue to hold its place in the good opinion of women who want to be beautiful and attractive. "Beauty is only skin deep," and therefore anything which exerts so beneficial an effect on the skin as does Pears' Soap must be a great aid in the promotion and preservation of beauty. What more could be said for a soap than can be truly said of Pears'—that it is pure, wholesome, refreshing, agreeable in using, and that it never changes in quality!

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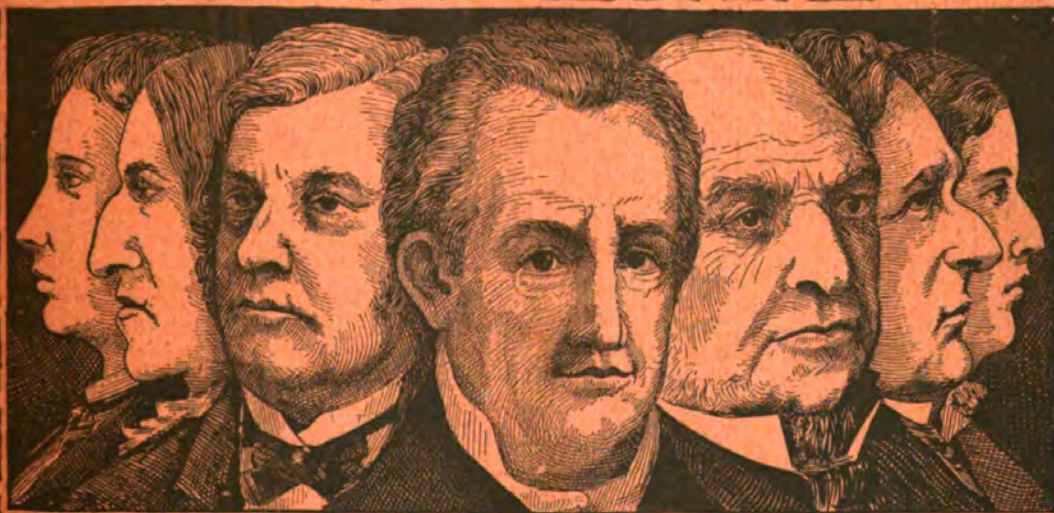
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E. Daeché

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The Phrenological Journal is published monthly at \$1.50 a year, or 15c. a number. To each new yearly subscriber is given either the Plaster Paris Phrenological Bust or New Lithograph Phrenological CHART Premium, a new plate, 19 x 24 in., with ring for hanging. When the Premium is wanted, 15c. extra must be received with the subscription to pay postage on the JOURNAL and the expense of boxing and packing the Bust, which will be sent by express, at expense of the subscriber ; or No. 2, a smaller size, or the Chart Premium, will be sent by mail, postpaid.

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THE
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NUMBER 5.]

NOVEMBER, 1889.

[WHOLE NO. 611.]



PROF. ELIAS LOOMIS.

PROFESSOR ELIAS LOOMIS.

IN the face and head of this distinguished physicist, as presented by the engraving, which taken altogether is a portrait, we note the characteristics of precision, earnestness, industry, ambition, and steadfastness well marked. He was a man of quick impressions, and very solid convictions. A really kind man, but so strict in his views of propriety and duty that the student, as a rule, regarded him as severe. We remember him well as he appeared in the lecture room of the University, always calm, and even toned, strict in his demands upon students who might be reciting, very brief in question, a mere trace of a smile if the student acquitted himself well, and nothing more than "Sit down" when a student showed his ignorance of the lesson by his blundering. He was never sarcastic, never censorious. There might be a coldness of manner, and a slight sharpness in his tone when annoyed, but these were passing cloudlets, so to speak, in the calm blue of his manner. He awed the frisky, mischievous ones into quiet, even well-behaved young men while they were under his penetrating eye, so that we never saw, or knew of a single instance of insubordination in his room during our course. It was really interesting to note how the fellows who were scarcely ever quiet in other departments, and in the hall made the building ring with their pranks, at once, on entering Professor Loomis' domain, settled meekly into their places. Yet, in the councils of the faculty, he was not as influential, apparently, as two or three others, seemingly to prefer a passive relation there. But it was well known that his convictions of a student's incompetency would withhold him from signing the diploma of that student, and it was not the least valuable name among the eight or nine names of national and world-wide distinction that appeared on the diploma of our college days.

The moral tone is shown to be high by the development of the crown. The intellectual faculties are fairly balanced, they indicate a specific range of exercise, and unusual power of attention. He was a man who could concentrate his forces upon a given object, and persist in such concentration. The fiber of his nervous composition was fine and delicate, but so free from excitability that he rarely, if ever, lost his equipoise. His fineness of organization rendered him sensitive, however, and out of the lecture room and the professor's seat he was kindly and sympathetic. Professor Loomis had to be known at home in the circle of his few friends before the inner springs of his disposition were discerned.

Some years ago we had the publication of a sketch of Professor Loomis in view, and some correspondence was had with him in regard to it. He wrote us cordially, and sent a fresh photograph for the engraver's use, but time slipped away ere we had procured sufficient biographical material for such a sketch, and then it was reported that the professor was ill of that malady that has become much too prevalent, Bright's disease, and of which he died on the 15th of August.

Elias Loomis was a native of Connecticut, having been born at Willington, August 7, 1811. He studied under his father's direction as a boy and youth, and entered Yale College for the full course, graduating therefrom in 1830. Soon afterward he was appointed a tutor in his *Alma Mater*, and from 1833 to 1836 remained in that relation. Then he went to France and spent a year in Paris attending lectures given by such distinguished men as Arago, Biot, Poisson, etc. On returning to America he entered upon the duties of the professorship of mathematics and natural philosophy in Western Reserve College, Ohio, where he remained until 1844. Meanwhile he was diligently en-

gaged making various observations with apparatus that he had purchased in Paris for that institution.

The chair of natural philosophy at the University of the City of New York being vacant, he was invited to take it, and did so, holding it until 1860, when he returned to his *Alma Mater* as Munson professor of natural philosophy and astronomy. This last appointment he continued to hold until his death; although for several years past his failing health prevented him from delivering all the lectures of his course.

His scientific work began almost as soon as he left college, he made observations in 1834 for determining the altitude of shooting stars, which, he himself writes, "are believed to have been the first concerted observations of the kind made in America." For fourteen months in 1834 and in 1835, from about 6 o'clock in the morning until 10 at night, he made hourly observations of the declination of the magnetic needle.

According to the writer of an excellent sketch in the *Scientific American*, these observations entitle Professor Loomis to take rank among the American pursuers in the study of meteorology, and to that department of scientific observation he gave not a little of his attention until within a few years of his death.

During his connection with Western Reserve College he observed two hundred and sixty moon culminations for longitude, sixty-nine culminations of Polaris for latitude, sixteen occultations of stars, and he made a series of observations upon five comets, sufficiently extended to determine their orbits. He also observed the dip of the magnetic needle at over seventy stations spread over thirteen States, extending from the Atlantic Ocean to the Mississippi River.

During the years 1846-49 Professor Loomis was for several months employed in telegraphic comparisons for longitude in concert with Sears C. Walker. The difference of longitude

between New York and Cambridge, Mass., in 1848, and that between Philadelphia and the observatory at Hudson, Ohio, was determined in 1849. In the two former comparisons Professor Loomis had charge of the observations at New York, and in the latter comparison he had charge of the observations at Hudson. The first observations by which the velocity of the electric fluid on telegraph wires was determined were made January 23, 1849, between Washington, Philadelphia, New York, and Cambridge, under the direction of Sears C. Walker, a clock in Philadelphia being employed to break the electric circuit. In these comparisons Professor Loomis had charge of the observations at New York.

After settling in New Haven he gave lectures on meteorology, and in July, 1874, published in the *American Journal of Science* the first of a series of papers entitled "Contributions to Meteorology." These he continued to prepare until they were twenty-two in number, when he undertook their revision, and the leisure of his last years was spent in arranging the topics in systematic order and at the same time subjecting each principle to a more rigid investigation by comparison with the numerous observations that have recently been published in the United States and elsewhere.

His scientific papers exceed one hundred in number. These have appeared in the "Transactions" of the American Philosophical Society and of the Connecticut Academy, in the publications of the Smithsonian Institution, the *American Journal of Science*, the "Proceedings of the American Association for the Advancement of Science," in Professor Gould's *Astronomical Journal*, and similar publications. Many of his papers were reprinted in such European periodicals as Sturgeon's "Annals of Electricity," the *Edinburgh*, now *Philosophical Journal*, the *Bibliothèque Universelle de Geneve*, Poggendorff's

Annalen, and others. The first issue of his "Contributions to Meteorology" was translated into French, and also a very full synopsis of these papers were published in the Italian language at Rome.

During the sixteen years that he was connected with the University of the City of New York he was engaged in the preparation of a series of text books, embracing the entire range of mathematical subjects usually taught in high schools and colleges.

Two or three treatises on Astronomy also were prepared by him, and one on Meteorology between 1855 and 1865, which received high commendation in Europe. His "Treatises on Analytical Geometry and the Calculus" was translated into the Chinese language, and his "Treatise on Meteorology" was translated into Arabic. His text books have attained a circulation of more than five hundred thousand copies. Besides these he published "On Certain

Storms in Europe and America" (Washington, 1860), forming part of one of the Smithsonian contributions, and a genealogical work entitled "The Descendants of Joseph Loomis" (New York, 1870).

In 1854 the degree of LL.D. was conferred upon him by the University of the City of New York. He was a member of many scientific societies: the American Association for the Advancement of Science; the American Academy of Arts and Sciences; corresponding member of the British Association; honorary member of the Philosophical Society of Glasgow, Scotland; honorary member of the Royal Meteorological Society of London (1874), and others.

Since the death of his wife, some years ago, Professor Loomis had lived, for the most part, quite secluded; he has two sons, one a resident of California, the other now traveling in Asia. D.

NOTABLE PEOPLE OF THE DAY.—No. 25.

AUSTIN CORBIN.

President of the Long Island Railway.

THIS gentleman is of a decidedly different type from Mr. Roberts, of the Pennsylvania Railroad, whose portrait was presented in the October number. The reader who compares the two faces, and the configuration of the heads, will perhaps quite agree that they are very unlike. Yet both are successful men in their line of railroad management. Mr. Corbin, however, possesses more of the practical elements, is more aggressive, and the man to put into execution new plans. He is of that strong type of organization that constitutes the leader and pioneer in departments of action that require peculiar boldness and force to break through obstacles and conquer difficulties. He is a forcible man in every sense of the word, emphatic and decided, not temporizing, not inclined to concession, not

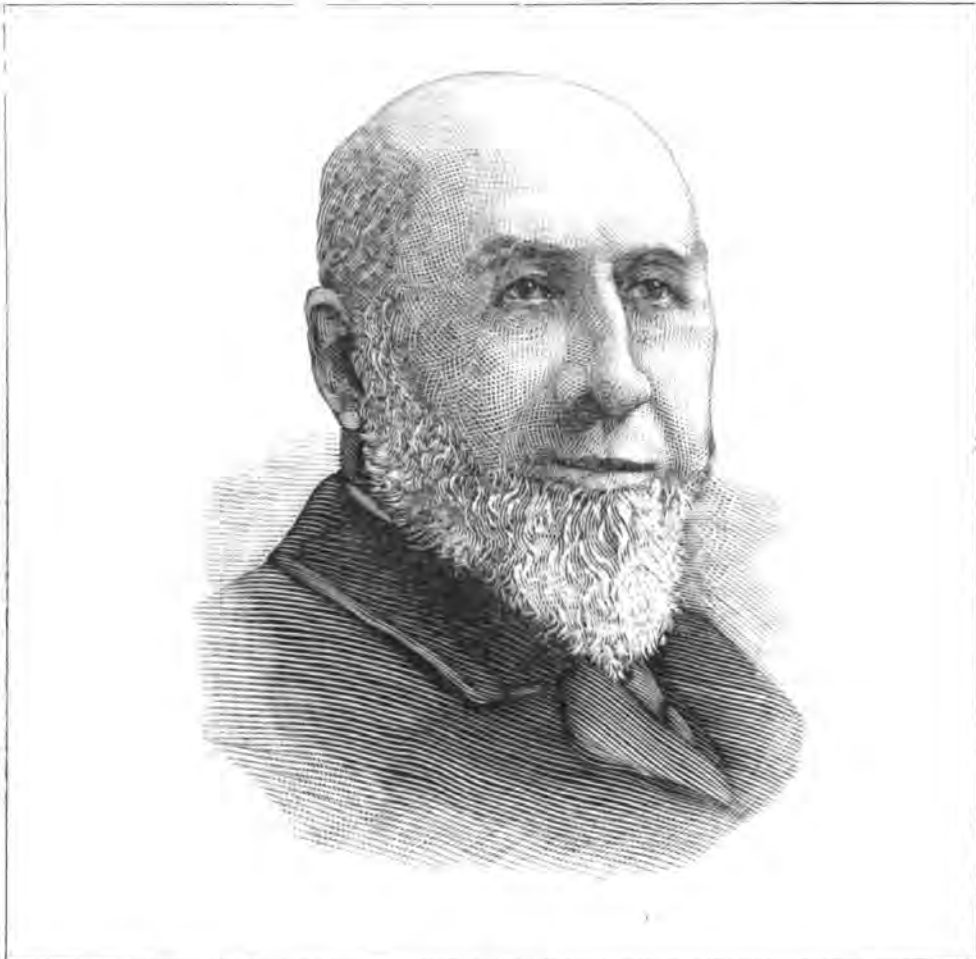
a soft, amiable, plausible person, not slippery tongued or in any way inclined to "oily gammon" to obtain his ends.

Like his large and powerful body, which the type of head suggests, he is nothing if not forcible, out-right, positive, imperious. He is a leader of masses; can control those who admire courage, and open action. As it is said of him, "although he is impetuous and some what brusque in his manner, he has the faculty of winning not only loyalty but esteem from those who come in close contact with him, and he earns respect by the jealous pride with which he regards his commercial honor." Few men have the iron will that this man shows, and have so much of the arbitrary spirit in their transactions with the world, and yet the openness and candor

of his conduct wins respect for itself and success on the practical side.

Mr. Corbin comes of good New England stock ; was born at Newport, R. I., July 11, 1827. Choosing law for his profession, he studied in the office of Chief Justice Cushing, of New Hampshire, and Governor Metcalf, of Rhode

pend in the panic of 1857. Next he organized the first bank to commence business under the National Currency Act of 1863. This proved a quick road to fortune, for a few years later Mr. Corbin came to New York with money enough to commence a similar career in the metropolis. Here he founded the



AUSTIN CORBIN.

Island, and later attended a course of lectures at the Harvard Law School. He practiced for a while at home, and then in Davenport, Iowa, and with fair success, but the pursuit did not accord fully with his energetic business spirit, for in 1854, he went into a banking house, the only one in Davenport that did not sus-

Corbin Banking Company, and with the success of that and his shrewd appreciation of opportunities he acquired gradually such an influence in railway affairs that he is fairly entitled to be called one of the "railroad kings" of the country.

He has been prominent in the develop-

ment of Coney Island as a favorite summer resort for the people of New York and vicinity, purchasing large tracts of land, building hotels, and opening a new railroad system for that purpose. The now celebrated Manhattan Beach is the outcome of his endeavors. Next Mr. Corbin turned his attention to Long Island, and the Long Island railroads. This great territory despite its many local attractions, its proximity to New York, and its natural availability to be the home of a great population, had been, beyond Brooklyn, much overlooked and neglected. Its roads were disgraceful, and its railways a laughing stock to the general public and a burden to its people. Mr. Corbin secured control of the railroads, and organized a plan whereby the island was to be developed into a territory of homes, hotels, and clubs. As an early consequence the feeble railways were amalgamated into one system, and became remunerative. In fact so rapid has been the development of Long Island under the Corbin regime that it has been found necessary to establish new ferries and other lines of communication between it and its neighbors. Beyond this, it is now proposed to connect it at the Brooklyn end with tunnels and bridges between that city on the one side and New York and Jersey City on the other.

He has more recently become interested in the Reading Railroad of Pennsylvania, a bankrupt yet important concern. Made president, he has already introduced a new aspect in its affairs, and it is probable that the road will ere long be on the way toward regaining that prosperity which it boasted years ago.

Over sixty years old, Mr. Corbin is a well preserved and vigorous man, seemingly as young and active in body and mind as most men half his age.

ELLA DIETZ CLYMER.

President of "Sorosia."

THIS portrait gives one an idea of

the appearance of the face that Mrs. Clymer wears in a state of complete passivity. It suggests a calm, even-toned order of mind, with the habit of reflection. It has an air of earnestness that intimates the disposition to consider matters of real weight and importance, and not the trifling and ephemeral. There is a vein of the sad in the expression as if she had learned to know from experience what shadows lie along the path of life, and humanity in all its phases drew upon her sympathy.

The organization is evidently of the finer type, physically and mentally, symmetrically molded, admirably balanced. At once highly sensitive, and responsive, and also self-poised and self-controlling. She is the product of a good heredity and fine culture.

It requires no great physiognomical skill to perceive the strong impression of the ideal in her nature. *Poeta nascitur* "the poet is born," applies to her fitly; whether or not she was ever "guilty of a rhyme" she has shown in her manner, her feeling, her social tastes, her domestic life, the æsthetic spirit. With favoring circumstances such a mental organization would lean toward literature, as the stream flows toward the sea; and, if one who knows little, very little at this moment of her career, were permitted to surmise, he would say she would naturally write and rhyme of the inner depths of human feeling, of those aspirations that concern the heart, and of those things which contribute to solace and contentment. She would aim to meet the want of affectionate, sympathetic natures and would shun the exciting and disturbing methods of commoner class of writers, who cater to the capricious sentiment of the time.

According to a writer in the *Business Woman's Journal*, Ella Dietz was born in New York. While very young her father died, and being full of aspiration to make her life useful in directions that would tend to elevate and refine the moral status of society, she believed that

the drama would be the field in which she could do good work. It would appear too that she regarded marriage as an aid to her purpose, and she was scarcely a woman when she became the wife of the late Mr. E. M. Clymer, of Pennsylvania. Not long after this marriage she went to England, and there she studied

draw from it. Of poetry she has written not a little; the first of her poems that were published appeared in 1873. Since which time she has been a constant contributor to the press.

In 1877 appeared "The Triumph of Love," seven years later "The Triumph of Time," soon followed by "The



ELLA DIETZ CLYMER.

and wrote in dramatic lines. For a few years she "trod the buskin," exhibiting talent of a special order in the personation of such characters as Pauline, Juliet, Rosalind, Ophelia, Desdemona, etc. Stage life, however, did not prove compatible with her delicate organization, and she was compelled to with-

draw from it. These books were issued in England, and the London press and public were unanimous in praise of them. They are composed of songs, lyrics, and sonnets on the varying phases of religious feeling and human love.

While in London Mrs. Clymer was an

enthusiastic member of the Church and Stage Guild, a society of actors and clergymen whose purpose was the reconciliation of church and stage on the lines of Mrs. Clymer's early theories. She also belonged to the religious guild of St. Matthew, which aims "to promote the study of social and political questions in the light of the Incarnation." She lectured before the Cobden and other workingmen's clubs; recited at entertainments for working people and interested herself in other philanthropies. Mrs. Clymer's connection with Sorosis began with its inception. In March, 1868, she received a call to the Blue Stocking Club, an association that had been formed by several prominent literary ladies of New York. At that meeting the name "Blue Stocking Club" was dropped and *Sorosis* adopted. The first executive committee was formed with Miss Phebe Cary as chairman, and Mrs. Clymer as one of the members. For two years she worked on the executive, and as a member of the executive became one of the incorporators of the club. Since that time she has been one of the active spirits of that well-known organization, and it was but fitting that on the retirement of Mrs. Croly from the position of President that Mrs. Clymer should be the cordial choice of the Society as her successor.

In personal appearance Mrs. Clymer is a striking woman, tall and well-formed, with light hair and dark-brown

eyes—large, luminous, and full of expression. Her mother was Mrs. Dietz-Hallock, a woman of much character, a pioneer teacher of the "kindergarten" system in New York.

At the annual banquet of the Sorosis, in 1888, she read a poem on "Woman" from which these verses are taken.

Woman—the wife, the glad help-meet,

The giver of life's bread;

She stands with lilies at her feet

And roses crown her head;

By serpent's voice no more beguiled,

Her heart to God is reconciled.

Mild is her beauty and serene

Her smile; her word is peace;

Man bows before her as a queen;

She maketh wars to cease,

True lady, she who giveth bread,

The multitudes by her are fed.

Yea, peace and plenty dwell with her,

Wisdom and length of days,

The cherubim do minister

To her, and guard her ways;

The seraphim do sing her name

Above the altar's holy flame.

The child of wisdom, she is wise;

She gathereth her store;

She sees with love's far-seeing eyes

How nations shall implore

Her bounty; patiently she waits

While outcasts gather at her gates.

O woman, crowned with righteousness!

The scepter of this land

Is thine to wield! Rise, save and bless!

The struggle is at hand;

Let wisdom heal man's Babel-strife,

And bring to earth celestial life.

EDITOR.

"THE OLD AND THE NEW PHRENOLOGY."

I VENTURE to offer some criticisms on the article with this title, by Prof. M. Allen Starr, M. D., Ph. D., that appears in the October number of the *Popular Science Monthly*, in the belief that an article of such a nature from an instructor connected with a leading scientific institution may have a prejudicial effect upon the uninformed and delay the general acceptance of the true physiology of the brain and philos-

ophy of mind. I had occasion to review in the *PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH* an article on the same subject that was copied from an English periodical by the *Popular Science Monthly* about ten years ago, hence it is but natural that I should be inclined to take up the pen again on a similar line.

Had Dr. Starr been content with the effort to show the connecting link be-

tween the mental faculties and the external senses, his article would prove of some real value to the reader. To show in what way the truth, so far as what he has presented in this regard is true, opposes the claims of the "Old Phrenology" requires the effort of one who, it might be supposed, had been told by a peripatetic "bumpologist" that his head was too small to set the world afire or too smooth to manifest any striking characteristics.

In so far as the author has attempted to refute the "Old Phrenology" his labors have proved about as fruitful as those of another noted neurologist who, exerted himself to prove that the seat of instinct is in the medulla and cord, and further along asserted that plants as well as animals are endowed with instinct. He wisely, however, left the reader to learn for himself the seat of the medulla and cord in plants. To show what stunning blows have been dealt the "Old Phrenology" in this latest attack upon its fortifications, let us consider *seriatim* some of the points made by the author.

He says: "Almost every one has at some time wondered whether there is any truth in Phrenology. The figures of heads, on which various mental faculties are marked, are to be seen everywhere." From this we may infer that, after all, Phrenology is by no means yet dead, notwithstanding the author's further assertion that "it is pretty well agreed among scientists, at present, that the old system of Phrenology has no actual basis of fact, and that elevations upon the skull do not indicate masses of brain beneath them."

We can assure Dr. Starr that there are many scientists, doctors and others, who openly express their belief in the truth of the "Old Phrenology;" and many others who, in spite of a contemptuous sneer when it is mentioned in public, yet instinctively heed its dictates in their relations with their fellow men. But in the sentence quoted the author

shows his own ignorance of Phrenology, for we think that he is candid enough not purposely to mislead those who are not informed with regard to it that its claims rest on the assertion that "the elevations upon"—not of—"the skull indicate masses of brain beneath." If that were its only claim for acceptance then the preceding statement that it has no actual basis of fact might be true. Gall himself, and all his intelligent followers, ever sought to disabuse the uninitiated of the notion that Phrenology means "bumpology": that the slight irregularities or elevations on the surface of the skull, due to differences in the thickness of the bones in different parts or to exostoses, do not constitute "brain bumps," and consequently are not the indications of the size of organs of the mind. But if Dr. Starr means that the elevations of the skull due to the greater area of a given bone of the skull—for instance, the parietal in the parietal region, the frontal in the frontal region, or the temporal in the temporal region—or to a greater area of a given portion of that bone as compared with the same part in another skull, do not cover corresponding masses of brain as a rule, he makes a great and a grave mistake. If it were not so, how, we may ask, could the bones of the skull taken collectively inclose a larger brain in one case than in another; how could given diameters in one be greater than the same diameters in another? The only reasonable excuse for mistaking anything in the teachings of Gall for "bumpology," or the reading of character by the nodosities on the skull, is the fact which he recognized that a convolution or convolutions in a thin skull sometimes leave a perceptible impression the shape of the external plate, marking an active organ or group of organs beneath. Of course it is not meant that in such cases the surface of the skull shows in like degree the infractuositities of the brain beneath. That a perceptible deviation of outline between a part of the

skull covering one organ or group of organs and that covering another organ or group of organs exists in many cases, is certainly found true in practical Phrenology, and must strike every thinking person as reasonable when it is remembered that the several radii of the skull cavity are found in no two cases to be precisely equal.

Even if the claims of Phrenology rested on the idea of "bumpology," the term being used in its somewhat better sense, they would seem to have some foundation according to Dr. Starr, who says: "And a so-called bump or elevation on the apparent surface of the organ, even if it produces a corresponding elevation on the head, which it frequently fails to do,"—that is, it does so sometimes, at least. The remainder of the sentence reads, "will indicate nothing regarding the number of the folds or the depth of the creases which lie about it, so that it may be stated without hesitation that from the size or shape of the head no conclusion whatever can be made as to the extent of surface of the brain, and consequently no conclusion can be reached regarding the mental capacity." According to this *dictum* physiologists may abandon all hope of ever learning anything about the mental capacity of an individual except by actually opening his skull and studying the brain by sight and touch, or must wait for some cerebral lesion to take place and manifest itself by destruction of some function, or, possibly by long personal acquaintance with the individual under all phases of life, learn something, probably but a mere trifle, about his character.

Our author does not inform us here what else a skull of given capacity contains besides brain and nerves. If it contain only brain and nerves, besides the membranes and vessels, what can be its function unless nervous and mental, and this in proportion to its size and activity? A given skull may, as he says, contain more brain *surface* than

another even somewhat larger, but it can not contain more *brain* unless there is something in the other which is *not* brain; it can only have more brain matter in one locality than the other, and less in another locality. What difference in function that signifies the "Old Phrenology demonstrates; the "New Phrenology," according to Dr. Starr, ignores it, asserting that absolute or relative size and shape have nothing to do with function. It may be added that two brains of the same size may vary in the number, because varying in the size, of their nerve cells and fibres. But that is a matter falling under the head of activity and quality.

If size has nothing to do with function, why would Dr. Starr infer that an animal or human being without any brain, or with very little, must have very little, if any, mentality? Why would he expect when a given portion of the brain was destroyed by the knife or disease, that a particular function would cease? This phase of the discussion narrows itself down to the long disputed, though axiomatic, one of whether size has anything to do with function (not whether it has *all* to do with it). Experience has shown that one might as well reason with a jumping-jack on the existence of the Trinity as to reason on the function of the brain with one who denies the self-evident fact that Size, other things being equal, is the measure of power. The opponents of phrenology are ready enough to admit its truth when it goes to support their own hypotheses. Witness Dr. Starr's statement that "in the middle lies the motor area, and it is interesting to know that on the left half of the brain, which guides the right hand, it is larger in extent than on the other side which controls the left hand; because the majority of fine movements are performed by the right hand, and have to be learned by the left brain. The reverse is true of left-handed people."

It is refreshing to note with what cer-

tainty, according to Dr. Starr, given lesions of the brain of the dog and other animals are followed by certain symptoms, and, presumably, by those symptoms only; or with what certainty the investigator is able to judge from such lesions of the function of the organ or part of the brain which has been destroyed. One might also infer from the article that there is no difficulty in judging of the location of a tumor or other lesion of the human brain, provided it implicates the fields marked in their diagrams. In practice, however, the simplicity of the case largely disappears, and often the diagnosis of the disease and its location becomes extremely difficult, if not impossible. The reasons for such difficulties could not be more clearly stated than was done by Gall himself much more than sixty years ago. That a lesion in a given portion of the brain may cause paralysis of motion or sensation in some part of the body is little more surprising than that a lesion, in some portion of the cord or of a nerve passing from the brain, should do the same thing. In the former case, it is simply approaching nearer headquarters, nearer the central station from which and to which the wires of the telegraphic system proceed. But the convolutions of the brain are not the only source of motion and sensation, or of the senses taken collectively, as witness facts observed in lower animal life, in monsters, and in decapitated animals. But since in man the organs of the mind, of thought, of emotion, of construction and destruction, so dominate motion and sensation, and all other functions of the body, an injury of the convolutions or of their externally and internally radiating or intercommunicating fibers is very apt to manifest itself by some derangement of bodily function. If the lesion occur in the course of a definite band of the internally or externally radiating fibers before reaching or after leaving the central organ, though interior to the skull, the resulting symp-

tom or manifestation in the external member will be comparable in definiteness to that following a lesion of the same bands after having passed out of the cranial cavity or spinal canal. But when the cerebral convolutions or mental organs themselves, whose behests the external members have been accustomed to obey, are injured or diseased, there is a greater change or destruction of function than can be measured by the terms loss of vision, of hearing, of sensation, of motion, or of touch; a change, in other words, which the methods of those who know of no other than the so-called new phrenology can recognize. Who can measure the "love and goodness, purity and truth, benevolence and devotion, firmness and justice, authority and command"—mental qualities which may be combined in one human life—by such experiments as have enabled Dr. Starr and others to map out the areas or organs of the "New Phrenology;" or by a knowledge of the existence of such areas themselves—of motion, sight, hearing, smell, and taste, and touch? Has it not ever been known that such areas must exist, whatever might be their location? What, then, has this boasted "New Phrenology" done to aid us in the analysis of human thought and emotion?

The opponents of phrenology are not always in harmony with one another in their objections to it. For instance, speaking of areas of motion, sight, etc., Dr. Starr says, "These are the areas which are thus far discovered, but our knowledge of the brain is by no means complete, for there are large regions, on this African map, of undiscovered country. Fortunately several Stanleys are on the way." In the article published in the *Popular Science Monthly* about ten years ago, already referred to, the author thought he had made a strong objection to phrenology when he pointed out that to some portions of the brain no organ had yet been assigned, or was accessible to external measurement. It

is a satisfaction to learn, on the authority of one of the incredulous, that it is possible to know something about something before you know all about that something; and that the something which you do know may be of assistance in learning something more.

Dr. Starr shows very clearly that, although every sound person has areas of motion, of sight, of hearing, of smell, and taste, and of touch, which place him in relation with the external world, and enable him to form, for instance, a concept of a rose, of a picture, of music, yet that concept will differ in different persons. Why? The author explains when he says, "and, after all, we must admit that we do not really see with our eyes, or hear with our ears. Why does your friend want to hurry through an art gallery, while you wish to look carefully at the paintings? You both see them with your eyes alike. Is it not because behind the eye there is something mental which enhances your enjoyment, and the lack of which prevents him from appreciating the beauties of art? Yes, that is it exactly, Dr. Starr. Now tell us what that mental something depends upon. Is it not a mental organ which you have and your friend has not, or, at least, has not developed in the same degree? And what constitutes a mental organ? Why, brain tissue, of course. But your friend has brain tissue as well as yourself; he may have more of it, and if you still think size has nothing to do with the case we may add that his cerebral convolutions may even be deeper and more numerous than your own. Then what does cause this difference of sensation of viewing things of art? Can you give a better explanation than do phrenologists, who admit, as you do, that it is through vision that we perceive pictures, that the impression is conveyed from the eye along the optic nerve to the brain; but who go farther, and say that there is a portion of brain in communication with that nerve or its brain area, which

takes cognizance of things artistic, of the beautiful, of the ideal, of the perfect? They also say that there is another organ in the brain which takes cognizance of colors, a deficiency of which, no matter how good one's vision in other respects, will cause his appreciation and judgment of colors to be poor. The same is true of the musical power, of mechanical skill, of power of analysis, etc. You admit these differences in the mental qualities of yourself and others; physicians have observed the more or less complete annihilation of certain mental faculties following upon lesions of particular parts of the brain; how, then, can you deny that such mental faculties have organs in particular parts of that brain? In your defense of the so-called "new phrenology" you admit a difference in the function of different areas of the brain, especially those relating to the senses and go on to say that the impression upon the senses constitutes only the foundation for knowledge which must come from the appropriation of the food thus derived, its conversion into thought, into mentality, into emotion, and feeling; and this thought, mentality, emotion, or feeling will vary in different individuals. Why vary? The "old phrenology" will enlighten him who is open to conviction.

The author illustrates his views regarding the physical basis of memory with a quotation comparing the brain to a block of wax "which is of different sizes in different men; harder, moister, and having more or less purity in one than in another." Elsewhere he says, "we have seen that on our brain-map there are some empty spaces. There is every reason to believe that these grow smaller as our information widens." Presumably, then, the infant begins life with a skull full of brain as devoid of life and activity as so much wax, with only a few small spaces devoted to the reception of impressions derived from the external organs, that each impression upon these areas, made through the external

senses, stamps itself upon neighboring unused parts of the wax-like brain, and a concept is thus stored away which serves as a basis for future memories ; only, it may be feared, that at the close of his three score years and ten the moderately industrious man will have consumed all his block of wax. And, should he be spared a few more years, find himself compelled to ruminate over old concepts. Or, should more unused wax be necessary for this purpose, be under the necessity of crawling into his den and hibernating the remainder of his days. The reader may be wondering by this time how many empty spaces yet remain on our authors's brain-map. Also whether, by the exercise of occupied spaces, one is capable of increasing their area and power without drawing upon the blank unused portions. Whether in that event it was not superfluous on nature's part to provide blank spaces at all. He may wonder whether Dr. Starr entertains the same views of the composition of other organs of the body, as of the heart, stomach, liver, feet and hands. If the supposition, applied to these organs, is absurd on the face of it, why not by analogy is it equally absurd when applied to the brain ?

It may be said that in so far as the line of investigation pursued by the "New Phrenology" is based on facts, it coincides with the line pursued by the Old Phrenology, and goes to establish the truthfulness of its deductions. That in so far as the course of reasoning of the new phrenologists follows in the footsteps of the old phrenologists it leads to truth, but whenever it departs therefrom they, as a rule, fall into inconsistencies and contradictions. It is true that phrenologists attach far more importance to another mode of studying the functions of the brain and character than by mutilations of animals ; it is that of closely observing the character and habits of animals and man, and their relation to the development, size and form of the brain and regions of the

brain. If this habit of the phrenologists is a bad one, I fear it will require more cogent arguments than those advanced by Dr. Starr to eradicate it.

He concludes : "The old phrenology, as we have seen, was wrong in its theory, wrong in its facts, wrong in its interpretation of mental processes, and never led to the slightest practical result."

Wrong in what theory ? That the brain is the organ of the mind ? That it is composed of various faculties ? But Dr. Starr considers these wrong in what facts ? The two just mentioned ? Or that men differ in character ? But he admits the latter also. Or that those differences correspond with differences in the shape and size of the brain ? But he gives no proof of this. And how wrong in its interpretation of mental processes ? Did not Gall show, before the birth of this "New Phrenology," the connection of the senses with the internal or mental faculties, the plurality of these, their interdependence and relation to one another, and analyze the mental processes somewhat similarly and far more intelligently than most modern psychologists have done ? And it "never led to the slightest practical result !" Does he not admit that it first prompted investigation regarding the function of different portions of the brain ? Did it not lead to the true method of studying the anatomy of the brain, that is by the unfolding instead of by the slicing process ? Did it not show the crossing of fibres, going to and from the brain ? Did not phrenologists first show the relation between lesions of a certain part of the brain and the loss of speech, and thus lay the foundation for the study of brain function on the line pursued by Dr. Starr in the case of man ? To enumerate all the practical results of the "old phrenology," even though one left out of consideration that of reading of character by the size and shape of the head, would take up far more space than has been allotted me.

It is a fact worthy of passing notice

that as far as the nature of the mental faculties can be judged of by motor and sensory disturbance, the location assigned them by the phrenologists has been confirmed rather than nullified by the observations of the clinician and experimentalist. For instance, the so-called motor area includes the organ of constructiveness or mechanical sense. If this were injured or diseased one would be prepared for some motor disturbance or interference. Disease of that portion of the brain assigned by phrenologists to speech causes disturbance of speech, yet it is also true that an injury somewhat distant from this point will likewise interfere with some phase of language, as the utterance or writing of words; just as an injury to the spinal cord would cause disturbance of motion,

as surely as would an injury to the so-called motor area in the brain. Deductions as to the function of parts of the brain based on disease or mutilation of those parts must, for reasons which Gall has clearly stated, be accepted with a great deal of reserve.

In conclusion I would assure Dr. Starr that fear of one's "little foibles and more serious deficiencies" being discovered by others is greatly diminished when one knows that those others obtain their information through reading nature's open book, and temper their judgment with the philosophic spirit of the phrenologist, instead of through listening with gaping wonder and curiosity to the tell tale prattle of Mrs. Partingtons.

R.

BRAUNFELS CASTLE.

ONE of the most interesting of the old homes in Germany is Schloss Braunfels, or the Castle on the Brown-rock. This has often been celebrated in the legendary song and story of the German folk, and it is not at all remarkable considering the ancient history of the castle and of the family in whose possession it has been for generations. As described usually Braunfels overlooks one of the most picturesque regions of all Germany.

The authentic history of this castle goes back nearly a thousand years, and we find that the family of Solms in whose possession it still remains, had important relation with the royalty of England in the thirteenth century, through marriage and other connections. Count Henry Solms fought with William of Orange. At the head of his regiment of Blues, he served at the siege of Derry and at the battle of Boyne water, and later, was killed in battle while helping the Dutch at the battle of Necrwinden, in 1693.

In 1679 the old castle was almost destroyed by fire. The rebuilding was

soon afterward begun, and continued at intervals, as these troublous times permitted, but it was not until recently, viz. 1885, that the castle was completed, and its old grandeur restored, though the earnest effort of the present head of the Solms' family, Prince George.

The view of the castle as seen from the road that leads through the deerpark from the railway station is most effective, as at a distance its outlines stand out in marked contrast with the sky background and lower down the gabled roofs of a part of the old town, with the beech and oak forest surrounding them like a frame work. At the old castle and standing on the old ramparts the visitor sees beneath and near him woods of gnarled oak, beech and waving pines; in the distance to the north the Westerwold, to the south the Tannus mountains with their peaks ranging one above another. Within the building there is much to interest. The rooms and halls are tastefully arranged, showing the styles of different periods with old carved oak, china, tapestries, antique silver, laces, etc. The Baronial Hall,

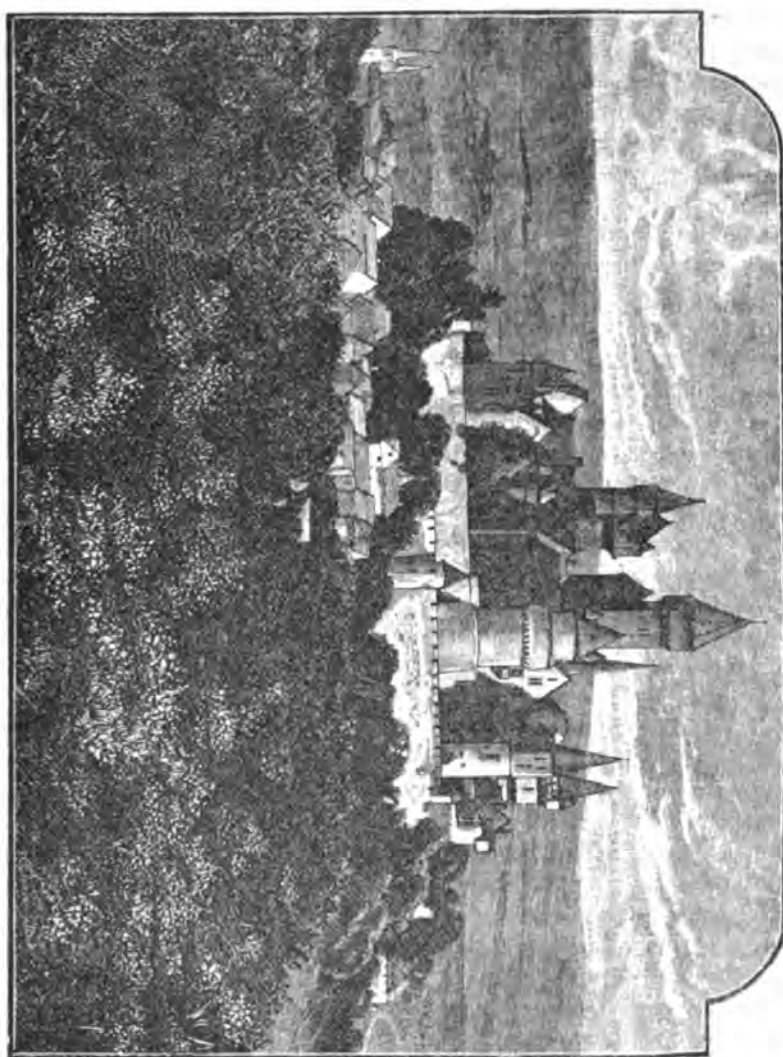
with its weirdly arched roof and the collection of old armor at the walls attracts a close examination. There are picture galleries, with family portraits, old and modern works of art, etc., etc.

Until recently Braunfels was little visited by travelers, although but two

ing country, but is suggestive of its peculiarly interesting character.

SELF-POSSESSION.—It is said that Miss Dix, the earnest philanthropic woman, whose death was recorded a year or so ago, was remarkable for her mental bal-

THE CASTLE OF BRAUNFELS.



hours journey by rail from Coblenz, or Frankfort, but now its beauty, and the healthful character of the atmosphere will probably draw many tourists as they become more and better known. Our view of the castle necessarily includes but a small part of the surround-

ance in trying circumstances. At one time while visiting an insane asylum, there suddenly appeared a raging maniac brandishing a knife and his chains clanging about him, rushing down a narrow passage toward her. The man had eluded the keepers and she was

sitting alone for a little rest. Taking in a moment the situation, she rose, and in a steady low voice repeated a child's hymn or prayer. Her quiet manner calmed the man's fury and his attention

was caught by the familiar words that she uttered. He slackened his pace, and when the alarmed keepers came to the rescue they found the man in tears with his head on her shoulder.

DOINGS OF WOMEN FOLKS.

THE Feminine World was never more thoroughly awake and active than now. In the line of progress woman is never found far in the rear. The last decade has developed and systematized her power as no previous period in the world's history has ever done. Especially has she learned to think closely, to plan carefully, and to work methodically. An easy money market, rising prices, and great prosperity in business beget recklessness of expenditure, carelessness in the management of details, and a spirit of adventure without carefully considering the cost. But a period of decline in prices, and curtailing of enterprise engender the opposite qualities and cause her to become exceedingly thoughtful, diligent, and practical.

The nicety of detail with which the woman, who was only the butterfly of fashion ten year ago, to-day follows out the details of an extensive and complicated business is wonderful. Great occasions develop great characters. The necessities which have existed everywhere for business thrift and activity, have caused women to study out many new methods for themselves.

Among the most ingenious of these inventions is the Woman's Exchange. This affords a grand opportunity for the rich and those who are benevolently inclined, to do good to their less fortunate sisters, and at the same time affords a wonderful field for the struggling ones to find scope for their capacities, and sympathy for their misfortunes. The women who conduct these enterprises can not be actuated by other than benevolent motives, while those who profit by the facilities of business thus af-

forded, are brought in contact with the best classes of society, instead of the associations of the workshop, which are often not only exceedingly repulsive but actually debasing.

The amount of good which the various exchanges have done for elevating the condition of indigent women can hardly be overestimated. There are three Exchanges now established and doing large business in the city of New York. The first and parent Exchange is located at 329 Fifth avenue, near 33d street.

This large concern had its inception in the heart and brain of Mrs. Wm. D. Choate, wife of one of New York's most popular lawyers. Its board of managers consist of forty wealthy ladies, who devote a great deal of their time and money to the business of the Exchange. Its beneficiaries are exclusively gentle women. Those who have seen better days, but who through the caprices of fortune find themselves in destitute circumstances.

The volume of business transacted the last year exceeds fifty thousand dollars, all of which goes to the women for whose benefit the Exchange was organized, less ten per cent. which is retained for meeting the legitimate expenses of the business. This sum would not near cover expenses were it not for the frequent donations received from its friends and patrons. It can hardly be said of this institution that it runs any costly or extravagant machinery, or supports rings, which is more than can be said of some or many of the institutions presided over by men, and supported by general taxation. Woman's skill in managing her own private enterprises

proves her fully worthy of recognition in the management of the of affairs State and Nation.

The second of these Exchanges is established at the corner of Madison avenue and Fifty-ninth street. The third and most recently organized is situated at 134 West 23d street, between 6th and 7th avenues.

This institution owes its existence to the energy and business activity of two enterprising women, Mrs. Hester Wilson Dart and Miss Sarah Louise Howell.

This enterprise was endowed at the beginning with a donation of \$5,000, by a lady who prefers that her name should not be mentioned. It differs from the other exchanges in the fact that it has no Board of Managers, but is in the business sense, simply the personal enterprise of the two ladies who originated it. They allow all self supporting women to enter articles they would like to offer for sale free of cost, and leave them until sold, when the Exchange forwards them the money, less the usual commission. The other exchanges charge all consignors a fee of \$5 before goods can be entered.

Besides the exchanges, nearly every church in the city conducts a charitable enterprise of some kind. The Helping Hand, the Dorcas Society, the Mite, the Aid, the Sewing Circle. Every device that woman's ingenuity can invent or generous, sympathetic human nature execute, has been undertaken in behalf of the poor, the helpless, the homeless, and the suffering of this great city.

But when one considers that 30,000 women walk the streets of the city of New York at night because they are poor and homeless, besides the tens of thousands who work all day for less than will keep them in bread and shelter, one may form some faint idea of the magnitude of the benevolent work that must be done if thousands of women are to be saved from absolute starvation. At the very best, the most than can be done by all these agencies is to help a few women

to eke out an existence, and does not even look to the possibility of ever raising them above the necessity of earning each day's bread by the sweat of the brow, and when the willing hands can no longer toil, and the weary feet refuse to run on further errands, the poor, unfortunate victim must lie down and die a pauper at last.

What is wanted is a new school of thought. We never build better than we plan. It is a mistake ever to plan to keep so large a portion of womankind in a state of dependency. If one-half the time and labor and money that is devoted to helping women to barely earn a scanty living for a few years were devoted to an intelligent solution of the great problems of everyday life, a new era would soon dawn upon woman-kind.

Let the women of America not forget that they constitute one-half of the human race; that they are endowed by nature with every gift of intellect, every power of mind, every capacity of thought or action, every right before the law, and every conceivable possibility of doing and daring in the world's great enterprises that belong to her compeer man and that it is not only her duty, but privilege to take her rightful share of the world's wealth, and her part in its great activities; then, and not till then, will different conditions follow.

But woman's heart is willing. Her hands are ready, and her tired, hungry nature cries out for the new light—the new paths—who will show her the way? The whole world echoes, who will show her the way? None but a woman knows just what a woman needs. Isabella, of Spain sacrificed her jewels to give America to the world, and yet, after the lapse of four centuries, woman is still shut out of her kingdom.

Is it not largely due to her own inertness? and is it not time now for her to assert herself—assert her claims to an equal share of the world's great privileges, by her activities, her intelligence,

her practical thought? There is just as much room for a new discovery as there was in the days of Columbus. He discovered a continent. The great need now is for some one to discover a plan whereby a large population may live on so great a continent, without so large a portion needing assistance from charity of any kind.

Who will be the Pioneer of Thought?

Who will be the Coming Woman?

CAROLINE A. BLODGETT.

"THE PROGRESS OF SCANDAL."

THE following, from English sources, is an amusing illustration of the rise and growth of frivolous and yet injurious gossip: "My friend advised me, if ever I took a house in a terrace a little way out of town, to be very careful that it was the center one—at least, if I had any regard for my reputation. For I must be well aware that a story never loses by telling; and, consequently, if I lived in the middle of a row of houses, it was very clear the tales which might be circulated to my prejudice would only have half the distance to travel on either side of me, and therefore could only be half as bad by the time they got down to the bottom of the terrace, as the tales that might be circulated of the wretched individuals who had the misfortune to live at either end of it; so that I should be certain to have twice as good a character in the neighborhood as they had.

For instance, I was informed of a lamentable case that actually occurred a short time since.

The servant at No. 1, told the servant at No. 2, that her master expected his old friends, the Bayleys, to pay him a visit shortly; and No. 2 told No. 3 that No. 1 expected to have the Bayleys in the house every day; and that No. 3 told No. 4 that it was

all up with No. 1, for they could not keep the bailiffs out. Whereupon No. 4 told No. 5 that the officers were after No. 1, and that it was as much as he could do to prevent himself being taken into execution and that it was nearly killing his poor dear wife. And so it went on increasing and increasing, until it got to No. 32, who confidently assured the last house, No. 33, that the Bow St. officers had taken up the gentleman who lived at No. 1, for killing his poor dear wife with arsenic, and that it was confidently hoped and expected that he would be executed."

"AND THE TRUTH SHALL SET US FREE."

Ask not that all the earth's teachers
Should tread the self same road,
For countless as his creatures
Are the avenues of God.

Not one shall fail of reaching,
A haven of rest at last,
Though some, through Error's teaching
May feel his furnace blast.

God's truths are all eternal,
But human errors die;
And souls in realms supernal
Will see with clearer eye.

When right of none infringes
On what another claims,
Then love that now but fringes
Our hearts, will leap to flames.

But oh! not yet for ages,
Will the world be justified,
For love makes here slow stages,
And must oft be crucified.

But let us strain and labor,
To the end that it may come;
And, blessing each our neighbor,
We'll light love's lamp at home.

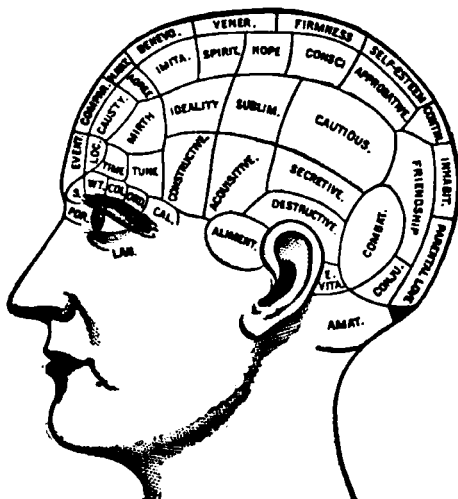
Whence shining through the window,
With clear and steady ray,
It may chase the deepening shadows
From some worn traveler's way.

Belvidere Seminary. [BELLE BUSH.

PRACTICAL PHRENOLOGY.

[CONDUCTED BY PROF. NELSON SIZER.]

PHRENOLOGICAL HEAD.



MENTAL CULTIVATION.—NO. 1.

EVERY mental faculty, whether it be intellectual, moral, executive, or social, is susceptible of improvement or cultivation. Every body knows that the bodily functions which pertain to motion and power may be cultivated. The mind and the body are naturally trained and cultivated together. The intellect, master of motion, trains and controls locomotion and force. Emotion, desire, and feeling, also influence physical action. The interplay and co-operation of the different mental faculties is a wonderful complication of activity and influence. The emotion of hunger inspires force and fierceness in the lower animals and in man. Fear excites the intellect. Desire for liberty inspires hope, skill, and talent, just as music excites the muscles to keep time. The babe in arms watching a procession led by a band of music will beat time with its head or with its hands, and it is

too young to have performed any intelligent physical effort. Consider how ambition inspires every element of skill and every factor of force in the race and strife and struggle, how artistic taste is aroused by praise, how every thing that is refining and enobling co-operates to call into exercise the earnest activity of the faculties which sympathize with refinement and elegant culture. If we watch a babe as his infantine faculties begin to act, he sees a bright object presented, and simply makes his hands and arms go as if he were swimming. He is interested in the bright colors and in the attractiveness of the object and wants to enjoy it, and be near it and possess it. A week or two later, he stretches forth his hand toward the object. After awhile if the object be placed near enough to him, he awkwardly grasps it. He takes both of his hands to do it and then crams it in his mouth. Awkwardness and earnest interest have in such cases their most perfect manifestation. We visit the child a week or two later and we notice that he can stretch forth his hand and grasp the object. A week later he will begin to use his other hand. A month later he will show intelligence in the management of objects by passing them from one hand to the other, and taking hold of things in a more intelligent way. In a little while he wields the whip, and so mind and muscle co-ordinately working, we find the child of a year old able to turn the leaves of the book delicately, one at a time, and after awhile it begins to feed itself, but requires both hands to get the spoon to the mouth. A few months afterward he watches the object

of his desire and loads his spoon. The arm has learned to bring the spoon to the mouth, no matter where his face is turned, the spoon will find the mouth. This illustrates physical and mental education in the early stages of mental and physical development.

For the past year my first great-grand-child has taught me the best lesson on gradual development. Seeing him but once a week, I know the grades of development. It is so interesting to watch the development of the child and how he learns language and adapts it to his knowledge and his wants. The child uses nouns and verbs. He says, "man come," "mamma gone;" and later he uses adverbs and adjectives and pronouns. The child hears these words, but he does not comprehend their meaning and relations to the subject until later on.

In the development of human character, we find faculties varying in their degrees of strength, and thus we find the necessity for training and developing the faculties that are not strong enough, and also for restraining and regulating those that are too strong.

One man is endowed with excessive energy and may lack prudence. Another has excessive prudence and may lack energy. It is desirable that each of these be modified, trained, and cultured so as to promote harmony of development. A gentleman had two daughters who married men of very different type of character and disposition. The sons-in-law were ministers. One had a worldly mind. He preached, to be sure, but it was an intellectual operation apparently. He did his work perfunctorily, but he was a great business man. As soon as Monday showed its smiling face, he was ready to adapt himself to the physical and financial phases of life. He wanted to be in business and desired to trade and traffic and prosecute affairs and make money. The other son-in-law clergyman had no secular wisdom. He was about as

amenable to the selfish tact and greed of the business world as sweet apples in August are to the invasion of boys, chickens, and grasshoppers. Every one takes a bite and the result is defeat to the apple. But the man was a good preacher. He seemed born of a higher life, and lived in the atmosphere of purity and joy and hope. The father-in-law said of his sons-in-law, that when one of them was in the pulpit he never should get out, and when the other was out of the pulpit he never should go in. If we could take these two men and mold them into one common mass, as sugar and lemon juice can be mixed and mingled, and then divide it into two equal parts, both would be improved. There was enough in both men to make two good common men, but one had all the force and business capacity, all the selfish, driving earnestness in the way of secular prosperity; the other lacked these, and was like lemonade that was pretty much all sugar, and was too good for this world.

Most persons are aware that almost anybody can be cultivated in different directions according to the needs of their mental and physical constitution. If we would increase muscle, we use it. A man seventy five years of age begins to climb the steps of the elevated railroad station. There are forty-two steps, and that is a pretty severe task for the muscles. But if persisted in every day, so that the man goes up and down eighty-four steps, the limbs suffer and feel sore and the muscles are disturbed; but he keeps at it as necessity compels him. He walks slower, perhaps, when the muscles are painful. In the course of three months, he does not mind it. The muscles have ceased to be troublesome and he does not get out of breath as he did when he began, and that improves his ability to walk anywhere and be on his feet without weariness. Such a person may have had early culture in muscular effort and could stand his ground with muscular men anywhere, but later in

years, taking life a little more easily in regard to muscular effort, riding instead of walking, and letting others run up and down stairs for him, he had fallen off from his early development ; but he goes to work and cultivates himself back again to energetic efficiency.

A farmer boy commences the winter school and comes home after a day or two of work and complains to his mother that his head aches at the temples where the organ of Calculation is located. She bathes his temples with vinegar and Cayenne pepper, and in a few days he ceases to complain of it. He works all winter in solving problems, his brain being cultured to the work, so that it does not pain him. In the spring when the term closes and he goes back to his farm work, his hands blister in twenty places, where the tools of the husbandry produce friction. Then he brings his sore hands to his mother, and she oils them with lard and beeswax and puts leather mittens on him to sleep in. He keeps at work but wears the mittens. In a few days the blisters have healed, and by autumn he has a thick piece of skin where the blisters were made by the work, as he had the fall before. He goes to school and the thick skin begins to peel off. It takes about six weeks to get the thick, callous places peeled off to the common thickness of the skin. His head goes through the same process of aching in the forehead and temples, especially at the faculty of Calculation, and thus he alternates.

The brain by being little used during the summer becomes unfitted to grapple with study. Time and effort cure that, and so the blistered hands become tough by usage, as the used brain becomes enduring by its exercise. Probably he overworked in study, and when he went to his muscular labor he overworked at that. A uniform amount of muscular and mental effort would have kept both the brain and muscles in proper working order.

The sum total of character is made up

of individual faculties and functions which belong to it, as a cable rope manifests strength according to its several strands. When they are co-ordinated and twisted together the strength of each is combined with the strength of all. Character by its individual factors makes up the sum total ; as it is evident that the rope will be strong and effective in proportion to the equality and harmony of its several strands, not the extra strong or extra weak ones. So in the making up of character, the faculties that co-operate harmoniously, each being equally strong and the combined action of the harmonious parts giving the highest and best results. It is said that no chain is stronger than its weakest link. That is true where individual links have to bear the whole strain, but in a rope the weak strand is of course weakness, but that does not measure the strength of the whole as in the case of the chain. As we have said human character is made up of many faculties or factors. Sometimes we find genius in some of the faculties and weakness or idiocy in others. In such cases men are one sided. When the strong side comes into service, effective work can be done, When the weak side comes into use failure is the result. The best men and women are those whose faculties are in harmonious relation to each other, and who have harmonious unity of strong parts, each strong enough to command respect and do its work. There are two ways of culture, one in the form of restraint, the other in the form of assistance and development. Where the faculties are in harmonious development active restraint is not likely to be required ; but where the faculties are strong we do not so much incline to weaken them as to guide them. We are proud of a man's strength, if he will use it rightly. The locomotive is the embodiment of physical power—and perhaps it is the best—is all right as long as it has a track and is used according to the law of its construction. The harmonious activity

of all the forms and forces which go to make up the first-class ocean steamer represents the ideal of that form of service. The hull is able to stand the strain. Its form is such as to divide the water and ride upon it. The propelling power is such as to push the vessel ahead and the load which the machinery and its fuel carries is in harmony with the structure of the ship. If the power could be generated by a better method of producing it and do it without the bulk and weight of coal, it would be an improvement; but we are all the time improving our steamships by a modification of their building and by perfecting their machinery and by adapting science to meet the resistance, and at the same time insure safety.

Apply this thought of the steamship to the human constitution. Let there be vital power and muscular power and nerve force in such harmonious development and activity as to produce the highest order of physical health and force, and at the same time let the mind be developed in such a way that every faculty shall be of full power and the whole harmonious so as to secure the best efficiency. We have human beings that are models as we have steamships that are to-day models for our time, whatever may happen in respect to their improvement hereafter. It is certain that human nature is developing. It has more physical power, more alertness, more power of mental effort. It has invoked science, and now almost every result is reached by less friction and more speed. As muscle can be developed by physical exercise and appropriate effort, so every mental faculty can be improved in its nature and vigor and facility of effort by right training and exercise. How this can best be done should be the interest of all and must constitute the drift and scope and object of present effort.

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† Examinations may be made from photographs. Send for "Mirror of the Mind" for particulars.

THE AMERICAN INSTITUTE OF PHRENOLOGY.

ON the 11th of October, the twenty-sixth session of the American Institute of Phrenology was closed. Since the incorporation of the Institute we have had one session annually, and in two instances, we had two sessions in the year. The last class was a very interesting one, consisting of forty-six members, including several ladies, four ministers of the gospel, two lawyers, two physicians, three medical students, eleven teachers, one being president of a college; the others were artists, merchants, mechanics, and farmers. One student came from England, two from Canada, and the others represent Arkansas, Oregon, Louisiana, the Carolinas, the states of Maine, and Kansas, Missouri, Minnesota, Michigan, and Kentucky. Pennsylvania and Ohio were as usual largely represented in this phrenological interest. In the class there were also two lecturers on Phrenology, who have been successful in the field for the last ten years.

It is now established that the sessions shall open on the first Tuesday in September of each year; this will serve to give students an opportunity to go into the lecturing field for the winter after graduation, a later session of the Institute would nearly spoil the first winter's work for graduates.

We notice in each year, a larger number of students, who have become well-informed on the subjects which we teach and this promises a higher grade of work in the future; and every year there seems to be more intense inquiry in regard to the details of mental science. It is not enough that the subject be taught on general principles, there is an inquisitiveness to know as much as possible about the minute and practical working of mental science. We have great hope that the class just graduated will take and hold an influential rank wherever its members shall be engaged in the good work.

CHILD CULTURE.

VIEWS ON A SCIENTIFIC EDUCATION.

THE first essential in a scientific education is, that the child should learn to read, write, and perform the simplest arithmetical calculations. This knowledge is equally necessary for all, and it is eminently proper that the first years of school life should be, as is usually the case, almost entirely devoted to those branches. But once they are attained, the unfortunate pupil is crammed with an intellectual hash of dead and living languages, grammar, geography, mathematics, literature, physiology and hygiene, mental philosophy, ancient and modern history, book-keeping, evidences of Christianity, natural and physical science, and a hundred other studies, of which no one mind could digest the hundredth part, until graduation day or brain fever brings the long desired relief. Such a pupil, if he survives, after being graded "perfect" in physics, will, very likely, take stock in the Keeley motor, or some similar scheme; or, after completing his course in mental philosophy and physiology with honors, become an ardent believer in the mind-cure.

Such an education will, undoubtedly, give a thin veneering of culture to those possessing it, but, to our mind, what is much more to be desired is an education which will best develop the intellectual faculties to the full extent of their varying powers in different individuals, and fit them to be of the best use to their possessors in the infinitely differing conditions of their after life. The conditions of adult life are different in almost every individual, and it is the height of absurdity to hold that any one, or even a dozen fixed courses of study, will be of direct practical benefit to the pupils who take

them. The object of preliminary education—that is, up to the time when the college course is usually commenced—should be to give a good, solid foundation, upon which the individual himself must erect the superstructure as the circumstances of his after life may determine.

A scientific education, then, should be one in which the *observing* faculties are trained to the utmost accuracy, so that a true and accurate comprehension of facts may be obtained, and next the *reasoning* faculties so developed that the logical value of the observed facts may be properly estimated. Very few persons are able to properly observe and comprehend any unusual occurrence. Let a teacher question the members of his class separately in regard to any circumstance which may have happened out of the common course, and the chances are that he will have as many different accounts as there are scholars who saw it. Let him ask their opinion upon any political or social question of the day, and, in nine cases out of ten, the answer will simply be the opinion of some older person, or of their favorite newspaper—somewhat changed in language, it is true, but without the slightest trace of any independent thought.

Now it is just these deficiencies, which are common to every untrained mind, that it should be the object of education to remove, and the question arises as to what course or system of study is best for this purpose. It is impossible to lay down any rigid course, or certain definite studies suitable for every one; the individual tendencies of each student must be taken into consideration, and it is as much the manner in which the in-

struction is given as in the subject itself which determines success or failure. One pupil may excel in mathematics—an excellent discipline for the reasoning faculties alone—while another may be unable to comprehend a simple algebraic formula, and yet have a very full knowledge of the habits of animals and birds, or spend all his spare time experimenting with chemical substances and such cheap apparatus as he may be able to procure. To another the dead languages may be very attractive. * * *

It is clear, then, that the individual peculiarities of a child's mind must be

considered first of all ; we would recommend the study of the laws, phenomena, and forces of nature as of the very highest value as a means of mental discipline, to say nothing of their eminently practical value. They all rest on a basis of absolute fact, and when once they are properly comprehended and their logical value estimated, the student has acquired something definite, and not—as in the purely literary studies—something that rests merely upon the opinion of some one else, and liable to be changed at any time.—*Popular Science News.*

A THOUGHT FOR MOTHERS.

IN reading lately an extract from M. Percy's translation of "The Three First Years of Childhood," I came to the following words which seemed worthy of the attention of mothers for the purpose of memorizing to put into practice. "We should always endeavor to surround our children with an atmosphere of serenity, and help them to maintain tranquility of spirit."

Perhaps we do not realize as we ought what a power for good in our children's lives such a spirit of tranquility might be if they were to receive it with their birth and carry it with them to their graves. Perhaps in our short sightedness we fail to see how many snares lie in wait for our darlings' feet because of the want of this virtue. How much real suffering both physical and mental must come to them in future years because they were not born and trained in this "atmosphere of serenity." Every fretful thought and unreconciled feeling leaves its unenviable impression upon the mind, and impairs the healthfulness of the body. How necessary then that children should possess this requisite for happiness and future usefulness.

But how may they obtain it? Are not children born with this and that disposition which must in a great measure influence their whole lives? Indeed

they are, and it is just this to which I wish to call attention. How often do we hear the thought reiterated in one or the other of its many forms, that as the mother is so shall the child be. Is not that fact then easily comprehended that if we wish our children to possess this spirit we must constantly maintain such an one ourselves?

To the weary hard pressed mother this may seem an utter impossibility, but "is the arm of the Lord shortened that it can not save?" Did any ever ask for help and be refused? There may be other ways of maintaining tranquility of spirit amid the cares and labors of a mother's daily life, but I have never found it.

Perhaps we were not ourselves born with the kind of disposition which naturally looks upon the bright side of difficulties. If not, let us by the help of God, and for the sake of our children, acquire such a one.

Were you never very, very ill, so weak that you willingly allowed the nurse to do everything for you, even to the turning of your head upon its pillow? Well this is the state of mind in which we need to come to God with our perplexities. Oftentimes our duties seem so much greater than our strength that the spirit of tranquility seems as far

from us as one pole from the other, but I tell you tired, overworked mothers there is a strength which you may have for the asking, which shall tide you over these hard places, and enable you to

maintain that spirit of tranquility which shall surround your home with that atmosphere of serenity, without which it is unworthy of the name.

MRS. S. E. KENNEDY.

DEVELOPMENT OF THE CHILD MIND.

NOT a little attention is given in Europe and America by some observers to the psychological development of the infant and child. One of the most trustworthy of these is Prof. Preyer whose book on the subject has a high value, as he has labored with great care to show the gradual development of the senses, intellect, and personality of the growing child, and presents his results in a condensed form. It is recorded that sensibility to light, touch, temperature, smell, and taste are present on the first day of infant life. Hearing, therefore, is the only special sense which is not active at this time. The child hears by the third or fourth day. Taste and smell are the senses at first most active, but they are not differentiated. General organic sensations of well-being or discomfort are felt from the first; but pain and pleasure, as mental states, are not noted till at or near the second month.

These deductions have a general application, although there are exceptions not so much as regards the order of development, as concerns the chronology. For instance, we know of a

child that indicated its ability to hear in a most striking manner within an hour after birth.

The first sign of speech is in the shape of utterance of consonant sounds is heard in the latter part of the second month, these consonants being generally "m," "r," "g," or "t." All the movements of the eyes become coordinate by the fourth month, and by this time the child begins to have the "feeling of self," that is, he looks at his own hands, and looks at himself in the mirror. The study of the child's mind during the first year shows conclusively that ideas develop and that reasoning processes occur before there is any knowledge of words or of language; though it may be assumed that the child thinks by symbols, visual or auditory, which are clumsy equivalents for words. By the end of the year the child begins to express itself by sounds—that is, speech begins. The development of this speech capacity is according to Preyer, in accordance with the development of the intellectual powers. By the end of the second year, the child's speech is practically complete.

HOLDING UP THE MIRROR.

WE allow the desire for the perfect—that is, our own estimate of the perfect, which is too often, alas! a long remove from the real perfection—to dwarf our better natures, to sour our tempers and cause us to shrink within ourselves so that we exhibit, and often feel, no love for mankind in general, and for those who should be nearest and dearest to us in particular.

Instead of waiting God's own time,

we grow skeptical, cynical, fault finding, looking for and seeing only the evil, when if some good genie should suddenly convert our friends and surroundings into the perfect things we so fondly imagine ourselves fitted to enjoy, feeling that we are not granted our birth-right because we are denied it—we should find ourselves so out of harmony with it all that life would be even more miserable than before.

The truth is, we all of us to a certain extent create our world around us and carry about with us a subtle influence which burnishes or blackens all that comes within its radius. "To the pure all things are pure," and our influence is the same. If we are happy we inspire others; if we are sad we awaken sorrowful sentiments in those around us, and for the time being they predominate, so that we see them only, and conclude that all the world is sad. Who can see a happy, laughing child without smiling too, or a pale faced woman clad in the habilaments of woe and not be touched by her sorrow? Could you show *her* the glad, joyous side of your nature?

How quickly an angry word stirs up all the indignation within us, while an expression of kindness or friendship will call forth the most generous and noble impulses of our nature. So if we would inspire certain moods and dispositions in others we must first possess them ourselves. When a person is in a blinding passion how can you hope to restore him to a normal calm by flying into a passion yourself? Yet in this conflict for supremacy the temper is usually the winning power; for the moment we lose self-control, we not only lose control of another, but they are controlling us. It is just as reasonable to expect those around you to be joyous and happy when you manifest the deepest grief or to make children sad by telling them funny stories and exercising you mirthful propensities, as to expect to cure temper and other disagreeable traits of character by indulging in one of your own.

After all, our opinions of other people count for but little except to indicate our own particular standing; it all depends on the kind of eyes we look through. When John L. Sullivan was asked his opinion of the Prince of Wales, he replied, "He's a fine fellow, but I could knock him out in half a round," the muscular development only being his measure of manhood. What we see in

the world depends altogether on what we are looking for; and it is only when we realize that we ourselves are a center from which emanates those influences which inspire others with the same thoughts, feelings and actions and reflect back to us our own states of mind that we keep the best in us uppermost, and we not only strengthen others, but, by the reflex action, help ourselves and gain the maximum of happiness and the minimum of sorrow. That is, if we maintain a firm mastery over ourselves, be just what we would like those around us to be (regardless of what they *are*) they will approximate much nearer our standard than if we allow every little, adverse wind that blows to drift us among the rocks of discord, which is as surely fatal to the social, business, or domestic bark as is the invigorating breeze to the stately ship without anchor or helmsman.

M. C. FREDERICK.

! THAT BOY.

THROUGH the house with laugh and shout,
Knees threadbare and elbows out,
Mamma hears with anxious doubt,

That boy.

Vainly all the lessons taught,
In one short hour they are forgot,
Gentle manners learneth not

That boy.

Thus she muses while she tries
To sooth the wakened baby's cries,
While to other mischief hies

That boy.

Patient mother, wait awhile;
Summon back thy loving smile,
Soon will graver cares beguile

That boy.

Soon the boy with "cheek of tan"
Will be the brawny, bearded man.
If thou would trust and honor then

That boy,

Trust him now and let thy care
Shield his soul from every snare
That waits to capture, unaware,

That boy.

And when, though worn and oft distressed,
Thou knowest that God thy work hath blessed,
Then trust with him for all the rest

That boy.



ABDOMEN, REX.

DO we seek power in principalities and kingdoms? Do we seek it in impressive appearance of temporal things? Do we know where to look for real power? Where do we say that real power exists? In the mind of man. It resides in the brain, and the brain is capable of wonderful things, and the destinies of nations are decided by the intense action of a powerful brain. But power is of growth and growth is of material, and material must be such as will be conducive to growth. What is the material? What is growth? What is the power obtained by this growth? To answer these questions we come to another kind of power, the vital power. We come to the human stomach, the grand generator of strength. Given the material, the proper material, the human stomach will develop all the strength it is capable of producing. That is power. There is no power without strength. Just as the blood will furnish material for bone, hair, skin, and all the various parts of the body, so will the stomach furnish power for digestion, nerve, muscle and brain. But there are one or more great *ifs* about the matter. For instance, *If* the material furnished to the stomach is of the right kind. *If* there is no vital disease which prevents the accumulation of power, and, *If* there is no hereditary weakness which prevents the develop-

ment of power. Setting these exceptions aside let us take the human stomach as God intended it to be, healthy, and free from bad inheritance, and consider of what it is capable. If a man starts out in life to fulfil a career of any value, the first thing he wants is strength, physical strength. He might as well give up all hopes of accomplishing very much without it. Think of the mother with her infant son on her knees. What visions does she foresee of that boy's future life! What schemes does she weave in her ambitious mind of his career! Is any position too high for her to claim for that little morsel of humanity whose only language at present is those sweet cooing utterances that are nearer to angels' songs than any other earthly sounds, and who finds heaven and earth and the Alpha and Omega of existence in his mother's smile! Statesman, orator, poet, novelist, minister, hero, the maternal pride would consider that he might easily distinguish himself in any of those lines, and as the clear baby eyes are lifted to her own she can readily realize him a leader among men in any department he may choose.

If we notice the physique of an infant we find that the abdominal section is far larger in proportion than any other part. Small limbs, small head, a large head in an infant is a sign of deformity, and what do we learn from this admira-

ble provision of the Creator? We learn that that little abdomen is the foundation and reservoir of strength for the future career of that small human being. That is the reason it is the largest part of the body, in order that strength in large quantities may be generated there. No need to use the head, not much need to use the limbs, but the stomach! that is the grand factory and every function therein is busily at work building up the whole structure of the organization on principles, or develop the greatest amount of power. Oh, how that little stomach is preparing to work for its owner if it is allowed to do so without interference from artificial foods or drugs. Given natural food and healthy conditions, it will build up a fund of strength from day to day, which will stand the little fellow who owns it in good stead all his life and that a long one. Just let him grow. Don't use his brain very much during childhood. Let nature be his nurse, almost his mother. Let him run in the free, fresh air with the dogs and squirrels and the butterflies, and if he has a mind to use, it will develop ten times the vigor and originality which it would if he were brought up under artificial conditions. How seldom do we see the physical and mental conditions of a man or woman well balanced! Americans particularly exhibit greater mental development than physical, the brain largely carrying off the strength of the body. Hollow chest, small abdominal development and as a consequence poor physical strength. And what becomes of the man? He has started in life with the feeling, that given the chance, he can accomplish something worth while, but after a short career he brings up suddenly against broken health, strength all gone, brain relaxed, and refusing to work. Result, disappointment, often death, or next to that, years, all the best years of his life spent in trying slowly to regain a small modicum of health and partial strength.

One year spent in any one of our sanitariums is sufficient to acquire the sad knowledge of how many fine men and fine minds are simply lost to the world because life or health are lost at an early age. Why is it so? Because they have never had the power to do the work which God intended they should do. Ah, there we have it! Stomach is King! If these unfortunate people had been given the proper conditions in infancy and childhood for generating and developing power in the stomach and vital organs, there would not be the long line of unwilling martyrs filling early graves or the walls of sanitariums and hospitals instead of joyfully fulfilling the ends of their creation and attaining the full measure of a happy and useful life. Power is a grand word; grand for men, grand for women, and almost all may have it. The human system has a wonderful power throwing off hereditary taints of disease if applied with the proper conditions for doing so, but if by poor habits of living a catarrhal condition of the system is encouraged and a chronically engorged state of the liver established, then farewell to a career of credit and usefulness or a wholesome and happy life. "She who rocks the cradle rules the world." If a mother would fain see her son fill positions of usefulness and honor, let her with reverential care begin by laying the corner stone of future power in that little stomach which no other human hand but her own has the right to guide through the successive stages of infancy and childhood. The human stomach is the throne of the world; the brain is the scepter. If the stomach becomes unnerved then everything in the physical economy is unnerved, and orderly, harmonious action become impossible, and how quickly does the scepter of brain tremble and fall. Give the boys and girls strong stomachs and brain and body will work vigorously during a long and useful life.

M. A. JACOT.

PHYSICAL RECUPERATION.*

AND Joab said to Amasa, "Art thou in health, my brother?" This is the first question men ask each other everywhere. This fact indicates the importance of the question. If life is worth living, health is worth keeping. The glory of an old man as well as of a young man is his strength. There is a distinction to be made between health and strength. A man may have good health *i. e.*, every organ may be perfect, and yet not be strong. On the other hand, a man may be a Hercules but on account of some organic lesion he is not in good health. So that health is preferable to strength, though strength should be a resultant of health.

Health, in this country is fast becoming one of the lost arts. We find men and women seeking for it as they sought in the olden time after the philosopher's stone, or in the early history of our country they sought for the spring whose fabled waters imparted eternal youth. True, the average of human life has been slightly raised—thanks to advanced medical science—but not on account of a better physical condition of the people. Such is our physical status that he is a shrewd man who keeps out of the private or public hospital. The physical condition of the American people has entirely changed within the last seventy-five years, and in most respects changed for the worse. This is especially true of the nervous system. Our dry electric climate, our stimulating diet, and fast living generally have developed the nervous system to such an extent that we have become as the late Dr. Beard said: "the most nervous people under the sun." It is important to bear this in mind as it will account for a great many things happening now which did not happen seventy-five years ago. The necessity of "physical recuperation" early and often is patent to all.

* A paper read before the Minister's Meeting of New York City.

In order to recuperate, a large and growing number resort to stimulants. This is a sad mistake, a fatal delusion. Stimulants, while they may elicit strength do not create it—nutrition does that. All that stimulants can do is to call out latent power. The physical interest having been spent stimulants draw on the principal and spend that; so that stimulants, if depended upon, naturally lead to physical bankruptcy. For physical recuperation another large class resort to tonics. This is a slower and more natural process of restoration. A tonic is supposed to have the "power of exciting slowly and by insensible degrees the organic actions of the different systems of the animal economy and of augmenting their strength in a durable manner." Their name is legion and they answer a purpose, but at best they are artificial and unreliable. In order to recuperate another class resort to rest and change. This is a wiser method, when practicable, as a means to an end. Even if the change is to a worse locality the nervous impressions will be new and consequently restful. It was considerate in the Master toward his disciples to withdraw with them into the mountain to rest awhile. But it seems that the change only brought partial rest. That is the trouble with many of his disciples now, they do not rest when the rest comes. The best remedies for physical recuperation are *proper* food and sleep, especially sleep. These are God's restoratives and no system of *Materia Medica* can improve upon them. This is the natural method.

"Tired nature's sweet restorer, balmy sleep."

All that any medicine can do is to imitate or assist nature. When a man is run down it is called "physical" or "nervous prostration." What is meant by this? Simply that the nerve centers of the man are empty. Along the spinal

cord are an number of ganglia, or nerve centers. They constitute, the batteries, the little reservoirs of the body; they furnish the strength, the physical power of the man. When these are empty he needs a vacation. Now the surest and quickest way to fill these reservoirs is for the man to lie flat on his back eighteen hours out of the twenty-four, sleeping all that he possibly can. This also is the philosophy of healing. When these reservoirs are filled they will carry the healing power to the afflicted parts and restore them.

The moral aspect of this general subject calls for special attention. It was a part of the Jew's religion to keep himself in repair; with him health was a recognized necessity, aye more, it meant obedience to God's law. God made provision for his people health-wise. All those commands as to diet, ablutions, periods of rest and general habits stood as sentinels on guard at the door of health. These were God's laws. They recognized them as such. If broken the penalty was sure to follow. So, to the Jew, sickness meant sin. The same is true to-day. God's laws have not been repealed. Humanity is slowly waking up to this fact, that these laws which govern the body are God's laws, and that they are just as sacred as the laws of Sinai. These laws which regulate the human system we can not escape, to obey them is to be well, to disobey them is to be sick. Sickness means now just what it meant at the beginning—broken laws, so that no one should be sick, that is, in the Divine order. Sickness is God's goodness in a retributive form. We have all been great sinners right on this line, breaking God's laws.

This why Jesus was never sick, because He never sinned; because He kept God's laws and they kept Him—"who did no sin, neither was guile" (nor drugs) "found in His mouth."

The idea of *healing* as entertained by God's ancient people should not escape our attention. Their Divine system of

Materia Medica was a system of negatives. Their medicine was prevention, which they took in allopathic doses. They looked to the cause rather than to the cure of disease and they prospered accordingly. This is the lesson we have yet to learn. Through all these centuries what vast efforts have been expended to *cure* disease, but scarcely anything has been done to prevent it. Intelligent people are seeing this. The inquiry has gone forth in many directions: "Is there not a better way to live?" And if I can discern aught in the signs of the times the business of the coming physician will be to keep men well, rather than make men well; instead of eternally doctoring systems, he will, like Moses, doctor the cause; he will place his patient in right relations to natural laws and the symptoms will take care of themselves. With all our advanced and boasted civilization we are now looking backward five thousand years and learning how to live and the most advanced authorities on sanitary regulations are quoting Moses as their authority.

The relation of the pulpit to this general subject is one of practical interest. The average minister is not at the "top of his condition." He has special temptations to waste vital force. This occurs for instance, in the matter of *diet*. Many strong ones have fallen right here. Dean Swift, in his old age, use to imagine he could see the sheep and oxen galloping around him which he had unnecessarily eaten during his life. This is in keeping with the statement of the great surgeon Abernethy, that "One-fourth of what we eat keeps us; the other three-fourths we keep at the peril of our lives."

The interest about the menagerie reaches its climax when the animals are fed, so the pleasure of the pastoral visit culminates when the time comes to test the pastor's capacity, and the greater his capacity the greater the pleasure, as illustrated by the kindly old lady who

remarked : "What a nice Dutch dominee he is, how he can eat !" Here the waste appears in that it requires as much vital force to take care of the heavy meal as would be expended in five hours of ordinary manual labor.

Most of us waste power along the line of sympathy. This is true especially of those who have no power to spare. We should be sympathetic, we should give our sympathy, but ordinary sympathy is a terribly expensive gift. There is an art of being sympathetic without spending strength. A man may lock the door of his heart and leave the key at home and still be a sympathetic man. The minister should cultivate this art, "For in doing this he shall (physically) both save himself and those who hear him."

We waste power in cultivating the nervous at the expense of the muscular system. We unconsciously fall into this temptation because the major part of our work relates to the nervous system. But these two systems act and react upon each other. Each must have an opportunity if the equilibrium is preserved.

The minister, if he can not saw wood, must saw the air, he must engage in some active exercise lest his muscular is distanced by his nervous system.

By way of application, the minister should keep God's laws ; if possible, he should be a well man. Says one of the foremost physicians in the country : "It is bad enough for a worldlying to be sick ; it is worse for a Christian ; it is worst of all for a Christian minister." Next, he should preach the gospel of good health. He should summon the people to a better physical life. He should, at least, emphasize the moral aspect of this subject.

Jesus, probably, spent two-thirds of his precious time improving men physically. Does not this fact furnish a hint for us ? Were he preaching to men now—ninety per cent. of whom are suffering from nervous debility—He certainly would not leave this matter entirely to the physicians. He would probably co-operate with them, as I think, we, as ministers, should do to arrest this awful waste of health and life.

J. A. TRIMMER.

TREATMENT OF CATARRH.

THE victim of chronic catarrh is usually low in flesh ; his face is thin, cheek bones sharply prominent, jaws angular, and the whole figure suggests a poorly nourished organization. There is that color of the skin, of the eye membrane, of the gums that intimates defective assimilation and circulation, and associated with these physical appearances may be the manner and attitude that proclaims weakness of body and mind. "I don't know how I feel," "I'm not fit for anything," are phrases often on the tongue of such a patient. There is frequently a morbid appetite that leads the man to excessive indulgence at the table, but he derives little nourishment from the food and suffers the agonies of a worried, overworked dyspeptical stomach in consequence of

his excesses. In the majority of cases the appetite is poor and capricious, and unless much care is taken in the selection of food, eating brings heaviness and oppression with headache and increased congestion of the nasal and pharyngeal membrane.

While it is the duty of the physician to give such local treatment in the beginning as will afford relief to the head of his patient, he should also insist upon the patient's co-operation in the plan of treatment for the restoration of the digestive function. Nothing beyond mere temporary relief can be expected from medicaments whatever their nature, and however applied, if a rational, hygienic system is not instituted and kept up. The stomach, the liver, the spleen, the kidneys, the intestines, are more or less in-

volved in the disease and their recovery is essential to that constitutional soundness that is fundamental to the suspension of catarrhal trouble. If we can bring about a healthful tone as regards appetite and digestion, the case, however discouraging at first, will assume a very different character and we can hope for great improvement if not a complete cure.

The morbid appetite must be controlled; the enfeebled, protesting stomach must be treated kindly, given a chance to rest, and only bland, soothing, nutritious articles introduced within it a proper intervals, and in such quantity as can be managed comfortably. Is there sluggishness of the bowels due probably both to an unreasonable diet and a habit of using cathartic drugs? Then simple enemas may be employed to assist the effects of diet, and fomentations or compresses in accordance with improved hydropathy come in to reduce painful inflammations. The majority of catarrhal cases are associated with constipation, for the same reason that dyspepsia is a common feature in their history, and the use of cathartics has but aggravated the bowel condition. They never remedy it, because repeated irritation of the intestinal membrane by such unnatural and poisonous substances as aloes, myrrh, colchicum, podophyllum, jalap, and the various salts, etc., exhaust its muscular vitality. To be sure it must be acknowledged that the retention of excrementary matters in the intestines becomes dangerous in a short time because of absorption of poisonous substances into the circulation. Consequent to such absorption we have functional derangement of liver, kidneys, skin, and heart, and that "nervous debility" the catarrhal subject proclaims as one of his chief troubles.

Fighting poison in the system is a procedure that draws most disastrously upon the vital resources, and the attenuated frame and sallow skin of a hawking, sniffing man proclaims its severity.

This brief statement will be sufficient, I think, to show that constipation is no trifling matter, and that when it is inveterate there may be some excuse for the administration of a purge, but until other physiological and hygienic means are found ineffectual, a purge should not be given. The hygienic physician has a considerable *armamentarium* at his command for breaking up and removing impacted fecal matter, in the enema, the sitz bath, copious water drinking, abdominal compresses massage, electricity, etc. When it comes to local applications he has also within reach simple yet powerful means for the relief of the soreness, congestion, and irritability of the nasal passages, in the inhalation of dry or warm vapor, fomentations to the nose, the cold compress the douche for the removal of incrustations, etc. In a later article I shall consider the local treatment of catarrh in the light of recent experience.

H. S. D.

THE MELANCHOLY YOUTH.

TO-DAY, along the noonday street,
In vain pursuit of truth,
I chanced, while sauntering on, to meet,
A melancholy youth;

Who wandered viewless and forlorn.
Mouth-pursed, cheek out of tune;
I passed but still, unbred of scorn,
I conned this quiet rune:

Why lovely youth, why art thou so
By dismal thoughts beset?
Canst thou some awful sorrow know,
Thou wouldst betimes forget?

Have wretched cares, has hopeless grief,
Thy tender heart dismayed?
From sorrow vainly sought relief?
Or hast thou been betrayed?

Cease, cease, I mused, as forth I stept:
These are but vain conceits,
From dinner, doubtless, he is kept,
While his, another eats.

Some ruthless errand called him out,
Unfed, against his will;
His moody looks declare (no doubt)
That he is hungry still.

HENRY CLARK.

CONSUMPTION IN THE SLEEPING CAR.

THAT luxury of the traveling public the sleeping car, to which the finger is sometimes pointed as to an evidence of the triumphal march of modern civilization, is, like many other productions of modern ingenuity, a nurse of disease, a disseminator of contagion. Dr. Whittaker speaks of its influence in this respect in strong but reasonable terms, and it is our duty and the duty of every educational publication to instruct the people with regard to what is a very serious matter to the general community, as well (as to those who travel. Dr. W. says :

"It would be difficult to conceive a conjunction of circumstances more directly contributive to disseminate this disease than is offered in the palace car. It is always badly ventilated ; the vestibule car especially, is close and hot, sixteen to thirty people being crowded into a space that might make a small hall in a house, but never a bedroom for a pair of human beings. Somebody is always hurt by a draft, so that windows are kept closed to prevent free ventilation, as well as the ejection of sputum, which is mostly deposited on the floors. Cuspidors never contain water, and are mostly used as waste baskets or slop-jars, and the temperature is raised to a degree sufficient to rapidly disseminate infectious matter.

"With the gathering shades of evening, the compartments containing the bedding are opened into the car to diffuse through it a disagreeable, musty odor. The traveler is treated to the luxury visibly of clean sheets and pillow-cases, but the blankets, mattresses, carpets, and worst of all, the curtains, remain the same until worn out.

"Consider now that every car contains, or has recently been occupied by a consumptive traveler, if only *en route* for a change of climate, and that through ignorance, carelessness, or weakness there comes to be deposited upon bedding, curtains, etc., tuberculous matter.

What becomes of it, if it be not dried and disseminated throughout the car, or gradually incorporated into the lungs of the traveler ?

"It is a curious fact that the first note of alarm of this kind should have been sounded by a layman, viz., a barrister in Australia, who published in the *Australian Medical Gazette*, last November, a protest against the admitting of consumptive travelers into the same cabins with healthy people. The danger is, in one sense, far greater on a ship, in that the people are so closely confined in the cabins, and, as the author states, considerations of humanity prompt the well man to close the port in protection of the sick. Then, also, the trip is much longer.

"These advantages are compensated on the car by the fact that there is from it no escape to the outer air, not even on express trains, for meals or other necessities of life. A man may mount for a breath of fresh air to the deck of a ship, where, indeed, he passes most of the day; a prisoner is allowed some part of the day a walk in the 'free,' as the German says ; but a traveler on an express train is for all the world in the condition of the dogs made to breathe, inclosed in boxes of atomized tuberculous matter, until even these animals, naturally immune, become infected with the disease.

"But it is one thing to find fault, and another to suggest the remedy. The plush velvet and silk hangings must go. Seats should be covered with smooth leather that may be washed off, carpets substituted for rugs, to be shaken in the open air at the end of every trip, or better still, abolished for hard-wood floors. The curtain 'abomination' must give place to screens of wood or leather ; blankets of invalid's beds subjected to steam at a high temperature ; mattresses covered with oiled silk or rubber cloth, that may be washed off ; and above all things, invalids provided with separate compartments, shut off from the rest of

the car, with the same care taken to shut out the smoke of tobacco.

"The cuspidors, half filled with water, should abound in every car, and consumptive travelers be provided with sputum cups, which may be emptied from the car. For it is necessary to say here that the sole and only danger lies

in the sputum. The destruction of the sputum abolishes the disease. When the patient himself learns that he protects himself in this way as much as others—protects himself from auto-infection, from the infection of sound parts of his own lungs—he will not protest against such measures."

HOUSE LIFE IN JAPAN.

MR. WORES writes of this in the *Century*: In Japan women have always held a higher position than in other Asiatic countries. They go about freely wherever they please, and the seclusion of the Chinese is wholly unknown to them. The schools receive as many girls as boys; and as a result of my observations I can safely say, without idle compliment, that the former are brighter than the latter. By degrees, and under these favorable conditions for general observation, some of the causes of the people's happy spirit of independence began to be revealed to me. The simplicity of their lives, in which enters no selfish rivalry to outdo one another, accounts in a large measure for this enviable result. Regarding one another very much as belonging to one family, their mode of life is more or less on the same plane, and consequently a spirit of great harmony prevails. A very small income is sufficient to supply the ordinary necessities of life, and everything else is secured with but little effort. Household effects are few and inexpensive; and should everything be destroyed by fire or lost in any way, it is not an irreparable calamity. All can be replaced at a small outlay and life go on as before.

The tenant upon renting a house is put to little expense to furnish it; indeed, he requires absolutely no furniture at all. The clean, finely woven mats which cover the floor serve as table, chair, and bed; and as it is the universal custom to remove the shoes before entering a house, there is no danger of

one's bringing with him the dirt from the streets.

His bedding consists of cotton quilts, which are spread out on the floor at night, rolled together in the morning, and stored away in a closet during the day. A few pictures (*kakemono*) and specimens of beautiful script decorate the walls, a few vases contain sprays of flowers, and a number of cushions on the floor complete the furnishing of a room. Yet it does not seem empty or cheerless; for the general arrangement of harmonious colors, the different woods employed in its visible construction, and the beauty of the finished workmanship, make a most harmonious and pleasing combination. Paint is never used to cover the wood, much less to substitute a false grain.

LIME AS A DISINFECTANT. — In the search after disinfectants, the efficacy of which if not always directly in proportion to the complexity of their chemical constitution, one seems to have lost sight of the valuable properties of substances at once cheaper and more accessible. Lime, for instance, has been shown to possess remarkable power in controlling the further development of the typhoid or cholera bacilli, and even two per cent. of lime in water is stated to be an effectual germicidal agent. Bacteriological experiments, conducted by different observers, have shown that a four-per-cent. solution of lime completely disinfects typhoid stools within half an hour, a result which was not obtained with either chloride of lime or corrosive

sublimate. The best form to employ is the "milk of lime" prepared by slaking a kilogramme of freshly burned lime and then adding sufficient water to make up twenty per cent. This ought preferably to be recently made, its activity diminishing after the lapse of a day or

two. Only liquid stools admit of disinfection by this method, which has the advantage of being almost costless and devoid of an odor of its own. It has been proposed to use lime on a large scale for the disinfection of cesspools and sewers.—*Medical Press.*

NOTES IN SCIENCE AND INDUSTRY.

From the Congress on Criminal Anthropology.—In the section for Criminal Anthropology at the recent Congress held at Paris, M. Garofalo read a communication on the determination by Criminal Anthropology of the class of delinquents to which an accused might belong. He said that the anatomical characteristics of the criminal should be completed by the picture of crime which his psychic anomaly unveils to us. The criminal is endowed with a peculiar nature, monstrous in fact.

That nature once recognized, we are compelled to distinguish the born assassin or the moral imbecile from the insane or the epileptic. In extreme cases the circumstances of the crime are sufficient to reveal the nature of the criminal, but in ordinary cases it is necessary to make a careful examination of his anthropological relations to determine his class. Anthropological data are of special importance for the diagnosis of children and young people that indicate criminal propensities. One finds in such cases the typical physiognomy of the assassin, the cold look and fixed eye, and certain cranial deviations sufficiently marked. Very often there is an excessive lengthening of the lower part of the face, prognathism, a narrow and retreating forehead, in itself a sign of contraction or defect in the mental economy; furthermore, certain anomalies such as that of *plagiocephalic* or *scaphocephalic* type. In those who are given to crimes of indecency, or brutal outrage, there is usually a heaviness and thickening of the lips. Insensibility to pain is not rare. In the moral nature there is apathy and stolid selfishness. Not uncommonly some form of psychopathy is associated, which if not shown by true insanity, indicates that we

have to do with a born criminal, an epileptic or moral imbecile. A physical examination helps us to recognize in the delinquent the impulsive nature that points to an alcoholic origin, to the heritage of drunken parents, and suggests those afflicted with fits or convulsions, imbeciles and epileptics. This class of delinquents in fact forms a ring, so to speak, between the wrong doers by instinct and the accidental or professional class. In the impulsive type there is very often an absence of marked cranial abnormality. We find anomalies, however, as, for example, facial hemiatrophy, or one-sided emaciation. Nervous anomalies, or morbid states of the system, are most frequent. The impulsive criminal, half invalid, is more dangerous than the criminal by accident or circumstances, and should be the subject of special treatment. Often in cases of calumny or cruelty, the offender is affected by a hysterical neurosis. In the case of injuries to the person, of immoral attempts, and of violence, he is frequently an epileptic or a victim of alcoholic drink.

Outside of vice that belongs to the morbid type, for instance kleptomania, we find persons with an instinctive hereditary tendency to robbery. This is manifested by external anthropological signs. M. Lombroso finds in such persons a remarkable mobility of the face and hands, a small, lively eye, eyebrows that are thick and approach each other, a nose flat or snub, and a forehead small and retreating. Tramps, vagabonds, and thieves and other enemies of property are characterized frequently by a physical neurosthenia, a physical and moral apathy, exhibited by a strong aversion for work and a strong taste for pleasure; thus to the

congenital factor a social is added. Penal law, through enlightened legislation, should take a very accurate account of the classification of criminals, and not busy itself with *a priori* theories or conceptions, or mere sentiment. The great variety of facts supplied by nature should compel consideration of this subject.

D.

Exhibition of the American Institute.—The 58th annual industrial exhibition of the American Institute, opened at Institute Hall, 3d avenue between 63d and 64th streets, on the 2d of October, and will remain open until November 30. The admission this year is fixed at 25 cents, the same as last season, which proved to be a wise move, as the increase in attendance was over 122 per cent, and the results of the exhibition of 1838 to the exhibitors was so satisfactory, that all the space in the building has been taken for the present year. The variety of exhibits covers a wide area in invention and art. There are very many important improvements shown in the machinery department and in the other departments especially, there are fewer exhibits of that sort which are of no particular general interest than have been seen for several years.

Mirrors for Nervous Diseases.

—Dr. Allen McLane Hamilton has brought from Paris a new device for the treatment of nervous diseases, which is used there for hypnotic purposes. It is a little cherry box, about five inches square, above which projects two shafts, one within the other, sleeve and arm fashion. On each shaft is balanced a black bar nine inches long, an inch wide, and a quarter of an inch thick, edge up. By clock work on the box these ebony arms or bars are made to revolve in opposite directions. Six little round mirrors are placed on each side of each bar. The patient is placed in a chair in a dark room, facing the machine. An electric light or any bright light is concentrated on the back arms of the machine by a convex mirror placed behind the patient, and then the arms are set awirling. The patient watches them whirl. The motion and the flashing light operate on the nerves through the eyes. Dr. Hamilton said he had patients put to sleep by this means and some extraordinary cures

were accomplished. The suggested explanation of the effect of the whirling arms and flashing lights is that they change the habit of the brain.

Insect Repellers.—From the French *Horticultural Review* we have the following:

The roots of black hen-bane, placed in granaries, will drive away rats.

The ox-eye daisy, mixed with the litter of stables, will drive away fleas from horses.

The fresh leaves of the black elder will rid cabbages of caterpillars.

The castor-oil plant has been used successfully to protect grape vines from moles.

The buckwheat protects cabbages and radishes from the flea beetle.

The leaves of the camomile rubbed upon the skin of horses protects them from annoyance by flies. A decoction of the leaves of the walnut answers the same purpose.

A decoction of the leaves of the common burdock appears to have considerable value for protecting the roots of cabbages and onions from injury by maggots.

An Electric Plant.—According to *Nature* a curious growth, a strange plant has recently been discovered in India, which possesses to a very high degree astonishing magnetic power. The hand which breaks a leaf from it receives immediately a shock equal to that which is produced by the conductor of an induction coil. At a distance of six meters a magnetic needle is affected by it, and it will be quite deranged if brought near. The energy of this singular influence varies with the hour of the day. All powerful about 2 o'clock in the afternoon, it is absolutely annulled during the night. At the times of storms its intensity augments to striking proportions. During rain the plant seems to succumb, and bends its head during a thunder shower; it remains then without force or virtue even if one should shelter it with an umbrella. No shock is felt at that time in breaking the leaves, and the needle is unaffected beside it. One never by chance sees a bird or an insect alight on the electric plant; an instinct seems to warn them that they would find there sudden death. It is also important to remark that where it grows none of the magnetic metals are found; neither iron, nor cobalt, nor nickel: an undeniable

proof that the electric force belongs exclusively to the plant. Light and heat, phosphorescence, magnetism, electricity, how many mysteries and botanical problems does this wonderful Indian plant conceal within its leaf and flower!

Belvidere Seminary, N. J.—One of the schools that are commanding attention to-day because of their advanced method of instruction is Belvidere Seminary. The intelligent and liberal management that the heads of this New Jersey institution

age to its pupils. Modern languages and music are also taught.

The scheme of the industrial department includes the provision of practical exercises in housekeeping for the girls, and out-of-door work, or some mechanical pursuit, for the boys, one hour each day. Those entering the "Wendell Phillips" department specially are employed in some branch of industry three hours a day besides being given branches of study in the usual lines of school education.

It should be said that the conduct of this



BELVIDERE SEMINARY, N. J.

have shown has properly drawn attention to it. Established over twenty years ago, the chief aim has been to give a practical education to the youth in attendance, to accentuate the useful rather than the ornamental, while the latter is not lost sight of. There are three departments—a literary, commercial, and industrial; the last, called "The Wendell Phillips Memorial Industrial School," has been in operation almost four years, and has proved of very great advantage

to a large extent based upon the principles of mental science, and text books are used with the advanced classes for the purpose of affording older pupils the advantage of systematic mind studies. The results, as reported by Dr. Clark and Miss Bush, are gratifying, and show the wisdom of their course.

The location of the seminary is attractive, on the Delaware River, about twelve miles from the famous Water Gap. A view of

the buildings is given herewith, and their situation on an eminence overlooks a considerable extent of country.

It ought to be said here that this is not the only school of importance where the training of the youthful mind is formulated in accordance with phrenological principles; in the West and South there are several institutions that recognize the psychology of Spurzheim and Combe, and whose great success is believed to have a relation to that wise policy.

Barren Iceland.—Iceland is said to be growing yearly less and less habitable, owing to the increase of volcanic matter scattered over the valleys and plains. The people have for some time been thinking of emigration, and Senator Platt, chairman of the committee on Territories, has in view a plan for moving the whole population to the fertile and heavily wooded region of the Yukon River in Alaska. The Icelanders would form an excellent nucleus for the population of that extensive territory, which is well adapted to their wants.

Bogus Cloves.—The latest fraud in the line of wooden nutmegs and shoe-peg oats is in artificial cloves moulded from paste. The *Apotheker Zeitung* says that the resemblance of the spurious article to the real one is sufficiently close to allow of their being overlooked in the mass; their color approaches closely to that of the genuine, but when examined carefully ridges from the mould are perceptible, and there is an adherent dust that is yellow, consequently much lighter than the clove. In the mouth the spurious "cloves" soften to a gritty paste, coloring the salvia brown, and tasting slightly of clove with a remarkable "bark" flavor.

Two Remarkable Watches.—John Huntington and his son, W. T. R. Huntington, of Cleveland, own two of the best watches in the world. They are duplicates and were ordered by the senior Huntington in 1881, in Geneva, Switzerland. He agreed to pay \$5,000 in gold for two watches that should combine every movement then known to the art of watch-making. A description of one answers for both. The case is of pure gold; the works number

400 pieces. On the large dial, appears four smaller dials. The one at the top shows by a diagram of the sky the changes of the moon, the firmament being of lapis lazuli, studded with golden stars. The next dial to the right shows the leap years, the tiny hand moving around the circle once in four years, and an auxiliary hand shows each month. On the dial at the bottom is a hand marking the quarter seconds, and one showing the day of the month. At the left, on the fourth miniature dial, is a hand pointing out the day of the week, another the tide as it ebbs and flows. Around the large dial, besides the "usual minute" hands, moves a second hand and an extra horse timer, so arranged that the distance between the two horses at the finish is accurately noted in quarter seconds. By pressing a button the past hour is struck on a deep-toned bell, one of a chime; the quarters of a more silvery note, and a rapidly-tinkling companion gives the minutes. The watch is a stem winder, and one spring furnishes the motive power.

Slate an Unsafe Roofing for Mills.—A writer in the *Milling World* says: "Slate is not a safe material for mill roofs. Not long ago I saw a slate-roofed mill fired from heat from an adjoining burning building. The heat cracked the slates and they ran off the roof in a shower, leaving dry wood exposed to the flames. Another building covered with shingles was equally exposed, and singularly enough the roof of the slate-covered mill took fire before the roof of the shingle-covered building.

The streams of water turned on the slates after they became hot caused their rapid destruction, while the wetted shingles were kept from burning. The slate roof allowed streams of water to drip downward through the entire building, while the shingle roof protected the building which it covered. Slate roofs may prevent fires from floating sparks, and shingle roofs when they are dry may invite fires from such sparks, but when buildings are crowded closely together, almost any one of the roofing materials is better and safer than slate, because in the case of crowded buildings the roof is exposed to heat sufficient to break it and uncover the wood."



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THE NEW DEBTOR TO THE OLD.

"THERE are many interesting facts which make one believe that the greater extent of brain surface in a man, or, to put it a little differently, the more the folds and the deeper the creases between them, the greater are the man's mental powers; and just here it becomes apparent that to judge of the extent of the entire brain surface by the size of the head, or by the extent of the superficial irregular surface which is covered by the skull without any regard to the number of folds or their depth, is to fall into an absurd error, and here we begin to see how baseless the old phrenology really is.

"For a little brain with many deep folds may really when spread out have a larger surface than a large brain with few shallow folds and so-called bump or elevation on the apparent surface of the organ, even if it produces a corresponding elevation on the head, which it frequently fails to do, will indicate nothing regarding the number of folds or the depth of the creases which lie about it; so that it may be stated without hesitation, that from the size and shape of the head no conclusion whatever can be made as to the extent of the surface of

the brain, and consequently, no conclusion can be reached regarding the mental capacity."

This quotation is from an interesting article recently published in the *Popular Science Monthly* by Dr. M. Allen Starr on the structure and functions of the brain. With all due deference for the writer's ability as a neurologist we must point him to the fact that the early teachers of what he terms the "old phrenology," recognized the relation of the convoluted surface of the brain to mental capacity. It was Spurzheim, indeed, who demonstrated by his peculiar method of unfolding the brain that the folds or convolutions were nature's way of packing a large extent of gray substance organized as it is cerebrally in the skull. That an apparently small brain of fine quality and maturity might have a larger cerebral surface than another measuring more in circumference, but of lower quality, was therefore well known to the disciples of Gall and Spurzheim.

Mr. George Combe in his "System of Phrenology," in editions that appeared quite sixty years ago, wrote: "The convolutions appear intended for the purpose of increasing the superficial extent of the brain without enlarging its absolute size, an arrangement analogous to that employed with the eye of the eagle or falcon, in which the retina does not form a simple concave surface, as in man and quadrupeds, but is presented in folds to the rays of light, whereby the intensity of vision is increased in proportion to the extent of nervous surface exposed to their influence. The rolling up of the substance of the brain in folds in a similar manner, strongly indicates

that extent of surface is highly important in reference to its functions."

It is then made evident enough that the statement attributing ignorance or want of attention on the part of phrenologists to the structure of the brain cortex is unwarranted.

Further, the statement in the second paragraph is certainly not founded on a knowledge of "old" phrenological literature, because the point of objection made is very fully discussed by writers of the first quarter of our century. In one of Dr. Spurzheim's early treatises and in his celebrated answer to the attack of Dr. John Gorden, of Edinburgh, he goes over this very ground.

In the American edition of this reply, published in 1833, by Marsh, Capen & Lyon, of Boston, the text runs: "It may be questioned whether all organs reach the surface so as to enable us to determine the organs of all faculties of the mind by the size and shape of the head? There are indeed many convolutions in the middle line of the brain between the two hemispheres; and there are also some others at the basis of the brain, and between the anterior and middle lobes, which, therefore, do not reach the surface of the skull; but it seems to me that a great part at least of every organ lies at the surface, and that if one part of any organ be well developed the whole participates of this development. The whole cerebellum does not touch the skull yet it is possible to determine the size of the cerebellum, according to that part of it which reaches the surface. Accordingly the cerebral parts, which are, as above noticed, situated on the middle line between the two hemispheres, seem to be proportion-

ate to the superincumbent organs; at least, I have always observed a proportion in the vertical direction between these cerebral parts. In this way it appears to be possible to determine all the organs though the whole of their fabrics do not terminate at the surface."

The doctrine of memory centers that Prof. Starr considers at some length, has its counter-part in the "old" literature, and if he will consult the works of Gall he will find that the modern cerebralist "owes a great deal," indeed, in that line of mental inquiry to the eminent Swabian. Professors Baine and Calderwood appear to have a better comprehension of the phrenological doctrine of mental action than our distinguished neurologist.

The accepted theory of motor centers is in most respects confirmatory of the "old" phrenological centers of ideation. Witness the papers read before the British Anthropological Society, and the Science Association, recently, by Mr. Bernard Hollander. The discussion at the Congress for Criminal Anthropology held in Paris last August, wherein Lombroso, Benedikt, Bertillon, Lacasagne, Ottolenghi, and other distinguished observers participated, have a similar confirmatory tread. It seems to us that every certain step that is made by the "new" phrenologists, with the important aids of modern pathology and surgery at their command, but brings them nearer to the "old" phrenologists. They certainly have adopted the fundamental principles of localization as formulated by the early phrenologists, although seemingly there is an attempt to appropriate these principles as a part of later demonstrations. If to the sys-

tem of mental action as taught by Gall, "modern science really owes a great deal," let the credit be awarded without envy or prejudice.

Palman qui meruit ferat.

—♦♦♦—
A NEW PROFESSORSHIP.—It is suggested by a writer in the *Atlantic Monthly* that a professorship of children's reading be founded, whose duty would be to prescribe reading for our young folks at home, according to their habitual or temporary mental state. For instance, "Tom is sulky, or Betty is getting too sentimental to be endured, or Harry is apparently dead to all sense of honor; Kate's whole small soul is given over to slothfulness, Dick will prevaricate, or Nancy's temper is the terror of the household. The professor of reading will be called in: he will give a prescription just as the physician does, only that his will go to the book-seller instead of the apothecary."

This is not a bad idea on the whole, although to the reflective it seems too easy a method to be permanently successful. Children of the day are overfed with literature. The libraries of the day school and the Sabbath school furnish their supply of entertaining books, the circulating libraries, and the thousand weeklies, story papers, paper serials, etc. pour out an exhaustless stream of stuff, good and bad. To select from all this an amount of healthful reading suitable to boys or girls would be a most useful service, but we doubt that such a censorship would be accepted by most publishers or relished by the average sample of Young America.

A professor of reading would need one accomplishment, especially good

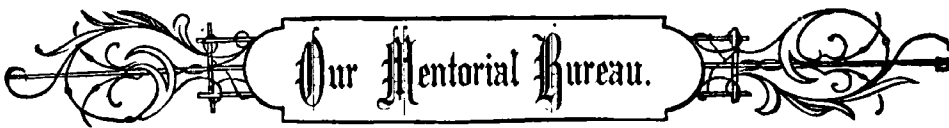
judgment of child character. If this were wanting he would lack an important element of success in his vocation, because of his inability to adapt his selection of books to particular cases. He might know a great deal about books, have the whole range of juvenile "classics" well ordered in his mind, yet from ignorance of the causes of character differentiation he would be more likely to prescribe the wrong book than the right one. We should, however, like to see this idea carried into effect.

—♦♦♦—
MANUAL TRAINING.—Yes, reader, give your children opportunity for the study and practice of the elements of the domestic and mechanical arts. There are schools in many of our cities and larger towns now, and they are multiplying, where young people may receive manual training; and this we consider a most valuable part of education. The boys and girls of a hundred years ago were as a rule related to homes where they were expected or compelled to take part in practical work out of school hours. The duties of the shop, the store, the mill, the farm, were performed by members of the family, old and young, for the most part, if not altogether. People lived more on an equality than now, and were so related to their callings that this could be done. The growth of population, the great increase of a laboring, serving class, and the separation, in cities, of the business place from the home, have immensely reduced the *advantages* of our girls and boys in the way of practical training at home; hence the institution of schools for manual training have become necessary, if we would have our young folks become

well grown, mentally balanced, and useful men and women.

The principle involved in this new feature of school work is one of fundamental importance, and lies back of the idea that it is a recent outgrowth of labor agitations and the systematic restriction placed upon the instruction of apprentices or raw assistants by skilled or journeymen workers. The student who is provided with facilities for the exercise of hand and arm in some useful way, who gives every day an hour or two to mechanical work, will prove more efficient and be better developed physically than the student who merely delves at his books. The dull scholar is quickened and brightened by the association of brain and muscle. Let him,

as one says, when speaking of this subject, go to the work room for an hour, and there drive the saw and plane in the effort to convert a rough piece of board into smooth, fit material for a box or an article of furniture; he will feel more buoyant and elastic, and if he finds that he can do with tools as well or better than a bright, glib classmate, he receives an impression of self-respect and confidence that will be of priceless value to him when back in the class room. Brain and muscle should be trained, as it were, side by side, because the centers of thought and the centers of muscle impulse lie side by side in the brain, and their mutual exercise is productive of the best results for the man himself and for society.



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.

ALWAYS write your full name and address plainly. If you use a pseudonym or initials, write your full name and address also.

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. Personal and private matters addressed to the Editor in the professional capacity of a physician will also receive his early attention.

AN ORGANIZATION BY NUMBER.—M. B. N.—Assuming the marking that you give to be accurate, the disposition should be rather

strong in its expression. There should be no want of dignity, decision, truthfulness, and self-assertion, and a good degree of the inclination to look out for snags, and embarrassments. There may be a want of severity in the temper, but there should be courage, boldness and spirit. Interest in a cause would lead to its defense, and aspiration would stimulate to persistent opposition. Having once taken responsibility such a person would not be likely to lay it off before he had accomplished the object in view, for defeat or failure would be very unwelcome, and perhaps humiliating. He should believe in maintaining his reputation for honor and honesty, and any loss of credit would be mortifying. What the temperament, the character of the organization we are not told, but assuming that the physical constitution is up to the full average, and the intellectual organs are also average above opinion would hold good.

CONSCIENCE INNATE.—B. O.—The psychologists generally accept the theory that

conscience or conscientiousness is a faculty of original, innate endowment. Our opinion is in harmony with them. Considered on the rational side, and apart from organization, it seems to us that if any faculty or power of the human mind can be shown to be original, the conscience can. We know that many writers on this subject maintain that this faculty and all others are a product of experience, association, education, or an evolution, but we think that their argument fails especially in the attempt to cross the chasm that separates mere intellectual perception from moral or affectional perception. We are distinctly conscious of different kinds of emotion, relative to different objects accordingly as our attention is directed to them, and education, and experience do for these emotions or feelings just as they do for the intellect, rendering them more active and discriminating. Their actions are so often entirely disconnected with intellectual judgment that one can not say that the reason itself is the controlling or guiding element. Dr. E. G. Robinson in an analysis of the moral sense, clearly shows the distinction between the effects of training and the instinctive action of conscience itself, "Misled by defective or false standards, that is, judging by mistaken laws of right, its judgments may be wholly false; but the faculty itself, no amount of training and no deficiency or false standard can ever give or utterly take away."

DISAGREEABLE ITCHING.—G. W.—In some organizations oatmeal porridge appears to cause an unpleasant irritation of the skin. In your case there is a relation between the intestinal mucus membrane and the irritability that is marked. We do not think that it is due to hemorrhoids, but rather to the peculiar excitability of the membrane. Sugar if used freely may have such an effect. It may be that you use a coarse grade of oatmeal, in which the outer or woody coat of the grain has been broken up and not removed, and consequently the sharp spurs or edges of this broken or crushed woody, silicious coat would be likely to excite a delicate intestine. Use a better quality of oatmeal or stop eating it, and take wheat meal instead.

QUALITY—GROWTH OF ORGANISM.—McL. S.—Quality is shown by the form, appear-

ance, complexion, hair, manner, language, culture, etc. In the treatises on Phrenology you will find the matter discussed. To understand and practically apply the principles governing quality, much experience is required.

The activity of an organ will appear in the character and expression of a person, of course. The larger organs are naturally more active than the smaller. Some observers claim that differences of temperature are appreciable on the surface of the head and from these differences the degree of organic activity may be inferred. The late Dr. Seguin, of New York, made a special form of thermometer to measure the head temperatures. Of course that part of a brain which is most exercised has the more active circulation of the blood, and the physiological effect is an elevation of the temperature in the part. Delicacy of touch and instrumental appliances may determine a limited area of heightened temperature and so indicate that organic activity, that special culture would be produced.



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

Sincerity.—How little sincerity we find in this world. This Greek word which refers to porcelain means that if the vase be held up between the eye and the sun, it is *sincere*, without flaw, or breach. Insincerity is closely allied to cleverness. I always try to avoid merely clever persons. Cleverness is double edged, it draws largely from insincerity. It is only fit for small occasions and for small persons. You will often find one of these the sharpest man in his neighborhood; he can take in any number of unwary people, with his glib, oily tongue; he will tell people that what they are about to buy is of the very best quality, when he knows that nothing worse was ever put into human hands. This may be clever, but it is not right. A business man has a right to make all the money he possibly can—but he should get it legitimately, let every shilling be honestly won. Some one has said, that.

there are moments when a man is almost a God—this is when he is sincere. But there are so many men in the world, keen as a hawk in seeing little points, and availing themselves of them, but blind as a mole in beholding the measure of the circumference.

A mind that sees every aspect of a question may seem to be weak when it is only judicial.

The narrow man always appears to be the strongest; with his one idea he often becomes the emphatic teacher and leader of the nation or church; whereas the man with larger views has to collect and focalise so many considerations that he is often thought to be weak and vacillating when he is truly a great judge, and a patient critic. To the man who has but one thought his work is easy. He rolls out that thought, and keeps repeating it, until he gains credit by his tenacious attachment to a single idea; while a more comprehensive intellect meets ghosts in the snare of questions, these he has to choke down and strive to meet the demand of the average mind. This is a character that can be called sincere. It is worthy of imitation. Sincerity is a beautiful thing, from the king to the peasant, if one only cared to cultivate it. Home, with all its attractions is enhanced in its beauty where this precious flower blooms. Youthful soil is most favorable to its growth. It possesses a native simplicity that the sunlight of young hearts can best nourish, and yet the old man or woman is pervaded by an atmosphere of safety when what they say, and do, and think, is inspired by sincere motives.

MRS. A. E. THOMAS.

Good Work and Temperance.

—One of our correspondents urges it upon those who take up mental science as a vocation to take also into consideration the importance of a temperate life, even to a degree of *total abstinence* from all intoxicating drinks. "No man," he says, "can teach, practice medicine, preach the gospel of Christ, or practice Phrenology properly, who is under the influence of strong drink. It is impossible that one can serve himself rightly, deal justly with his fellows, and worship his Creator truly, while in bonds to that great curse of to-day, intemperance! The slaves of strong drink, how do they end their days? The children of

drunkards, how many of them ever become great in that which is pure and good? The wealth of this or any other nation, consists in the willing hands, the strong and healthy bodies, the clear minds, the pure morals, and righteousness of its individual members. May the day soon come when all that can intoxicate will be a thing of the past. The honest phrenologists are doing and have done grand work, and may they keep right on in their endeavors.

DAVID.

PERSONAL.

THE interest of the French public in General Boulanger seems to be running low. His life in London does not savor of the heroic, and it is said that he is soon to take up his residence in the Isle of Jersey, for the purpose of reducing his expenses, as the persons who have been furnishing him with financial support refuse to continue to supply him with money.

MR. GEORGE BANCROFT celebrated at his summer residence, Newport, R. I., on October 3d, his eighty-ninth birthday. "The Life of Martin Van Buren," soon to be published by Harper & Bro., attests the mental vigor of the venerable historian. The manuscript of this book has been thoroughly revised by Mr. Bancroft. It is not long ago that we were told that Mr. Bancroft had retired from the sphere of activity altogether.

COUNT TOLSTOI, the Russian novelist, of whom so much is said to-day, married the daughter of a Moscow physician about thirty years ago. If all accounts of this wife be true she is certainly entitled to more respect than Tolstoi himself. For instance, we are told that she has the entire responsibility of the household management and care of the family, which numbers thirteen children, superintends their education, and teaches them English and music. She has also sole charge of the sale, circulation, and distribution of her husband's books. She is both amanuensis, reviser, and translator. Tolstoi's writing is illegible to most readers, and his wife rewrites his manuscripts again and again until they suit his fastidious taste. In this way she copied "War and Peace," from end to end, six times, and his last work, "Life," she re-

wrote sixteen times, besides translating it into French.

THE Woman's Suffrage Association of the City of New York, held its regular meeting on the 1st Thursday of the month, at the parlors of Mr. and Mrs. Lovell, 4 Lexington avenue. The attendance was large, and the enthusiasm knew no limit; especially when it was announced that the Territory of Wyoming had adopted an out and out Woman Suffrage plank in its new Constitution.

It is probable that Wyoming will be admitted as a state the coming winter, Woman Suffrage and all. Then woman will become a real factor in the affairs of civil government, even if she has to shun highly civilized and christianized New England and the Eastern States, and enter by the gateway of the new and the true and the beautiful West.

"Westward the star of Empire takes its way."

It will be gratifying to the friends of suffrage to learn that the two factions of the Suffrage movement, have made terms of conciliation and will unite at the next annual meeting. This division occurred more than twenty years ago, when Lucy Stone and Mary Livermore took the Boston section under their maternal wing, and Susan B. Anthony, Elizabeth Cady Stanton, and Lillie Devereux Blake hovered over the Western Division.

WISDOM.

"Thou must be true thyself,
If thou the truth would teach."

WE can never conquer any person or people that we hate.—W.

If you have conquered your inclination, rather than your inclination you, there is something to rejoice at.—*Plautus*.

THEY who are most weary of life, and yet are most unwilling to die, are such who have lived to no purpose; who have rather breathed than lived.—*Clarendon*.

It is not good to cover up our eyes from our mistakes and losses; the best way is to look at them at their worst, and then, determine to avoid them in the future.

Most of the evil wrought in the world is the result of thoughtlessness, not premeditation,

but it is none the less an evil, and therefore, seeing it could have been prevented, a wrong.

THE truly innocent are those who are not only themselves innocent, but think that others are so.—*W. Shaw*.

I WOULD rather dwell in the dim fog of superstition than in air rarified to nothing by the air-pump of unbelief.—*Richter*.

It is better to fall among crows than among flatterers; for they only devour the dead, but the others devour the living.—*Antisthenes*, 426, B. C.

ALL men who have sense and feeling are being continually helped; they are taught by every person they meet, and enriched by everything that falls in their way. The greatest is he who has been oftenest aided. Originality is the observing eye.—*Ruskin*.

MIRTH.

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

"WHY, Mattie, you have put your shoes on the wrong feet." "What'll I do, mamma? They're all the feet I've got."

HE—Do you believe in marrying for money, Miss Antique?

SHE—I don't know. How much have you got?

HUSBAND to young wife—What were you saying about the barometer, dear?

SHE—Only that I found that it wouldn't tick, so I changed it away at the door for a butter dish.

"It's odd and sometimes melancholy," remarks an exchange, "to see a man try to make up his mind when he has no material on hand to work with."

JOHNNY—Say, ma, there goes pa off fishin' again stead of going to work.

MA—Tell your grandfather to go after him.

JOHNNY—Grandpa's playin' ball down on the flats.

MA—Well, this is a pretty state of things. If I catch any more of that 'lixir of youth in this house I'll put it in the stove.

"WHAT's the matter driver?" said a passenger, "why doesn't the car go?" "Cause you ain't put a nickel in the slot, that why." And all the other passengers tittered.

MR. BULLITUDE "Young Mr. Dawdle wants me to give him a position in the office, Flora. You're acquainted with him. Is he a man of brains?"

Flora "Really, papa, I don't know. I've never met him except in society."

Florence (six years old)—Mamma, do dogs get married?

Mother—No, my dear.

Florence—Then what right has Hark to growl at Jennie when they are eating their breakfast?

"Is there anything I can do for you?" asked Mrs. Cumso, tenderly, when her husband was suffering from sea sickness. "What do you want?"—"I want the earth," gasped Cumso, as he leaned over the rail.

WHERE did you get that cake, Annie?" "Mother gave it to me." "She's always a giving you more'n she does me." "Never mind, Harry; she's going to put mustard plasters on us to-night and I will ask her to let you have the biggest."



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 the Editor with recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

"READY FOR BUSINESS," or Choosing an Occupation. A series of Practical Papers for young men and boys, and their parents, by George J. Mason, 12mo, extra cloth, price 75 cents.

The aim of this new and clearly written book is to impart such information as a youth, who has finished his school education, wants in regard to the pursuit he may incline to adopt. Should he wish to become an architect, say, he will find in this book, advice as concerns the duty and work of such a profession. So, of many other lines, as banking, building, navigation, journalism, chemistry, electrical engineering, mer-

chandise, etc. A young man goes to some friend engaged in the vocation he thinks he would like, and asks him for "points," but he does not often get more than the merest outline of what is required in character and talent for success in such a pursuit, although he may be told something of the method of its management. Mr. Manson treats of the practical side of business affairs, describes with a great deal of minuteness the nature of each pursuit on the list of his book, and thus performs a valuable service for young men who are "looking around" for something to do. While it is most important that a young man and a young woman too, should know the quality and order of their mind and adaptation, it is also important that they should obtain a good knowledge of what will be demanded of them in the prosecution of the calling to which they feel drawn. Thousands would avoid serious mistakes if they insisted upon these two particulars of information, before entering upon a profession or business.

PRACTICAL TYPEWRITING BY THE ALL-FINGER METHOD. By Bates Tory; Author of a "Plan of Instruction" in Shorthand. Small quarto. Fowler & Wells Co., New York.

The purpose of this well arranged and natty printed manual is two-fold, first to instruct one in the general use of that now indispensable adjunct of the desk, the typewriter, and also to advocate the operation of the instrument with both hands, or, as the author styles it, "the all-finger method."

It is plain enough that facility in the use of the keys depends upon the way in which the fingers strike them. The skilful pianist shows grace and ease in the exercise of all his fingers, and contrasts with all the awkward player in this respect. The typewriter boards are not unlike the key-board of a piano and obviously the manipulation for rapidly of effect should be analogous. As Mr. Torrey says, "the all-finger action looks better than the practice of using the index and second fingers of each hand," this in itself is an argument in its favor. As a manual for self-instruction the book is serviceable while to teachers of the art it can be highly commended.

PRACTICAL BLACKSMITHING. Compiled and edited by M. T. Richardson. Volume I, pp. 224. New York.

As publisher and editor of *The Blacksmith and Wheelwright* a trade periodical that has earned a wide circulation, Mr. Richardson can be said to know the wants of the blacksmith. His book is a collection of articles by skilled workmen, and covers a wide range of the uses and applications of blacksmithing, from the simplest work at the anvil to the most complex. The hand of mechanics the matter is practical. The style of description is clear, the pen of the editor being used not to garnish but to make every detail intelligible to the class for whom the volume is designed. Furthermore the book is a novelty; while other trades and arts have their representative treatises or manuals until now the blacksmith has lacked a special work for himself, Mr. Richardson, therefore, is entitled to the thanks of a large class of men for supplying the lack. Numerous illustrations of tools and procedures are distributed through the text and the parts of the printer and binder are exceedingly well done.

PUBLICATIONS RECEIVED.

SHOPPELL'S MODERN HOUSES. No. 14 of the Illustrated Architectural Quarterly, published by R. W. Shoppell, New York. Contains several very attractive designs for country or suburban homes, with estimated costs running from \$1,500 to \$7,500.

TRANSACTIONS OF THE KANSAS ACADEMY OF SCIENCE. Vol. X, 1885-6. Acknowledging our receipt of this volume from the Librarian of this society, Mr. B. B. Smyth, of Topeka, we express our gratification with the continued existence of the academy and the evidence given of original work.

DAS BURGFRÄULEIN VON PRESSBURG, ein Guslarenleid der Bosnischen Katholiken, Von Dr. Frederick S. Krauss.

LA FIN DU ROI BONAPARTE. Chanson des Guslars orthodoxes de la Bosnie et Herzegovine, by the same author.

The editor takes pleasure in acknowledging the receipt of the above results of oriental reward which have been lately sent him by the distinguished scholar and traveler Dr. Krauss, of Vienna.

A PROPOSED SOLUTION OF THE ASPIRATE PROBLEM. A paper read in the Ohio Stenographer's Association. By James E. Howard.

He suggests the *tick* that can usually be joined to the consonant and vowel sounds conveniently and furnishes a series of illustrations to show the facility of the application. To the shorthand writer the paper will be interesting.

THE DISPOSAL OF THE DEAD. By John M. Peacock, M. D., of Brooklyn, N. Y.

In this paper the writer discusses this problem of our day with force, and makes a good argument in behalf of the "desiccation" method. For all the purposes of memorial, this method would answer, we think, and relieve society of the common practice of burial, which is altogether out of keeping with modern hygiene and modern progress.

A BASIS FOR SANITY AND INSANITY, and the Classification of the Insane. By A. H. Buttolt, M. D., LL. D., of New Jersey.

This interesting paper by one of our most eminent alienists was read at the late meeting of medical Superintendents of American Institution for Insane. It is a strong argument for a classification founded upon the organic constitution of the brain, a classification, therefore that shall be physiological, definite, and comparatively simple.

PSYCHOLOGY AND MESMERISM EXPLAINED.

By Prof. William Seymour. Author of "Key of Character," etc. 12mo, pp., 118. The editor of this book is a professional magnetizer, and appears to give in his book a candid exposition of the phenomena of magnetism, in accordance with his observation. His explanation of mesmerism is in brief that it is "the phenomena of impression produced upon our consciousness through the use of one or another of our external senses." From that once well-known writer, Dr. Dodd, he derives much of his philosophy.

TEMPERANCE ARITHMETIC is a pamphlet of 32 pages, for children in our homes and schools, prepared by Mrs. J. McNair Wright. Price 5 cents. J. N. Stearns, agent, New York.

From two to three hundred questions and examples are given in addition, subtraction, multiplication, division, fractions, United States Money, land measure, liquid measure, etc., etc. Appendix with the answers is also given.

It gives an insight into the liquor traffic, its power and proportion, and contrasts money spent for its support with that put to good use.

A GOOD FIT.

CROWDING one's feet into shoes that are one or two sizes smaller than the normal size of the feet is certainly unwise, but this is what many people do, and in consequence a crop of corns, bunions or other pedal ills is the harvest they reap sooner or later.

A properly fitting shoe, one that sets snugly to the foot, is more comfortable than one that is loose and ill proportioned, and will not prove injurious to the healthy foot. One of the worst corns I ever had (and I will own to having had several), was caused by a few days' wear of a pair of shoes that were much too large, and slipped about as I walked.

Later when I was enjoying the company of one of those pleasant inter-toe nodules that are so hard to expel, the most comfortable foot wear I owned was a pair of patent leather boots that were made to order for use on a society occasion and which fitted closely to every bend and angle of the feet. The secret of their comfort was the even distribution of pressure, and this explains why a shoe or boot that is positively loose, yet ill-fitting, may cause one pain after walking a little in it.

An old uncle of mine, living in Brooklyn, has very small feet for a "six footer" and has always been proud of them to the extent of wearing the smallest shoe that his shoemaker can fit to them.

He is a physician and ought to know what is proper in the matter. I said to him one day:

"Don't you wear pretty tight shoes?"

"I wear shoes that fit well," he replied.

"They don't hurt you then?"

"No, I should not wear anything that was uncomfortable; I'm too fond of walking for that."

"Aren't troubled with corns then, I suppose?"

"No, haven't had a corn since I was a boy. I am of opinion that a shoe that fits snugly all over is less likely to give trouble than one that is comparatively loose and out of proportion to the foot."

An ill-fitting pair of shoes usually gives the wearer trouble because of the uncompensated pressure at two opposite points, the first joint of the little toe and the articulation of the great toe with the metatarsal bone. Between these the foot is widest, and here the shoe may pinch, although large and loose everywhere else. Then, too, in walking the alternations of pressure and friction experienced in wearing such shoes finally produce a corn on the outer aspect of the little toe, or on both that and the great toe joint.

High heels must take the responsibility of producing many a corn crop. They make an inclined plane of the soles, down which the feet tend to slide and thus crowd the toes forward into the narrowing part of the shoes. I hail as philanthropical the late improvements made by some of our shoe manufacturers in the way of "common sense" heels and "natural" lasts that put the sole and heel on nearly the same level. They may not promote the interests of the pedicure, but they certainly save their sensible wearer many pains and help to establish his reputation for good nature and the use of refined language.

This article is not published for the purpose of advertising anybody's wares, but to stimulate attention to what is neat and comfortable in foot gear. We advise the reader to buy of the dealer who has such shoes, and let them advertise him as they must.

AYTON.



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NICHOLAS NICKLEBY,
REPRINTED PIECES,
BLEAK HOUSE,
LITTLE DORRIT,
PICKWICK PAPERS,
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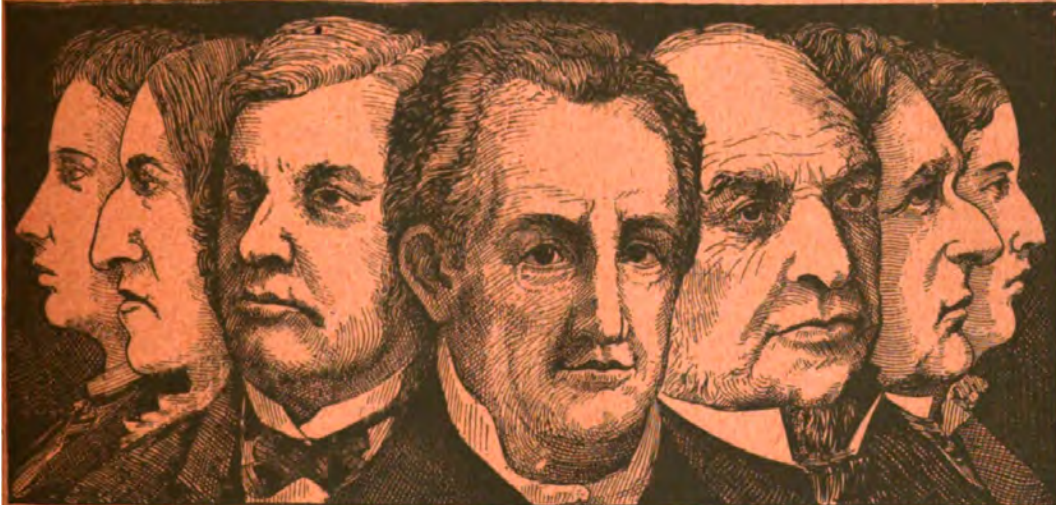
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THE

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E. Daech

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THE
PHRENOLOGICAL JOURNAL
AND
SCIENCE OF HEALTH.

NUMBER 6.]

DECEMBER, 1889.

[WHOLE NO. 612



THOMAS C. MENDENHALL,
President of the American Association of Science.

THOMAS C. MENDENHALL.

PRESIDENT OF THE ASSOCIATION OF SCIENCE.

A CLEAR, well-cut expression this portrait of Mendenhall furnishes us, of a clear and well-balanced mental constitution. The development is that of a close and earnest observer, one who is specific in his attention to the subject of his inquiry, and thus endeavors to make thorough work of his examination. The breadth of the head is marked; it points to his family derivation, and signalizes the characteristic of industry and physical energy that belongs naturally to the true Teutonic stock. However that stock may be deflected this peculiarity of cranial and cerebral organization is usually to be seen, and its impress upon the intellectual and moral qualities is expressed in the action of the man. He is a worker more than a talker. He speaks from the fulness of his information but is always terse, definite, to the point. He has the power to systemize his gatherings from the field of nature, and to give them due effect in the formulation of a theory or system; he has unusual ability in the comparison of data; hence should evince power of criticism, readiness in detecting fallacies of argument and errors of deduction, and that keenness of analysis that is practicable in excluding things that embarrass one by their apparent connection in the effort to determine the bearing of facts. That is a curious, scrutinizing nose. It intimates nicety of judgment, and good culture. It also indicates a vein of severity in the judgment of moral things. He is naturally inclined to be sharp in his demands upon others who have obligations to perform. We should be disposed to credit him therefore with a sensitive regard to personal responsibility and reputation. The fulness and height of the crown show strength of character, firmness, and independence. He is not likely to attempt what he can not carry out; and once in the harness of endeavor, he is no half way, easy going, indolent worker, but

spirited, rapid, and on the lookout. He exacts much from himself, and may do the same as regards others.

Thomas Corwin Mendenhall, who was elected President of the American Association for the Advancement of Science at its last meeting, is a native of Ohio. He was born in Columbia County, Oct. 4, 1841, of Quaker stock on his father's side that dates from the settlement of the Penn Company.

A country village school was the place where young Mendenhall received his boyhood's education. Later he studied books on his own account, and being drawn toward mathematics and natural science, he pursued them as opportunity and leisure afforded. Becoming somewhat known for his proficiency in these branches, he was appointed instructor in physics and mechanics in the Ohio State University when that institution was organized in 1873, and held the position until 1878, when he resigned to take the professorship of physics in the Imperial University of Japan at Tokio. While in Japan he organized a meteorological observatory, in which observations were made during his stay and afterward until it was merged into a general meteorological system established by the Japanese government. He also carried out a series of investigations on the force of gravity at the sea level, and on the famous Japanese extinct volcano Fujiyama. He made measurements of the figure of the mountain and of its density, from which data he deduced a value for the mass of the earth that agrees very closely with the result that Francis Baily obtained by the Cavendish method. About this time he also made a series of elaborate measurements of the wave-lengths of the principal Fraunhofer lines of the solar spectrum. Professor Mendenhall became interested in earthquake phenomena while in Japan, and was one of the founders of the Seismological Society of Tokio. With

Professor E. S. Morse and others he gave public lectures on scientific subjects to general audiences in the temples and theaters of the city of Tokio, out of which grew the establishment of the first public lecture hall in the Japanese empire.

In 1881 he returned to the United States and resumed his chair at the Ohio State University. In the following year he organized the Ohio State Weather Service, of which he was director until 1884. He was the first to devise and put into operation a system of weather signals for display upon railway trains, which became general throughout the United States and Canada, and continued in service until the introduction of a new code by the chief signal officer in 1887.

In 1884 Professor Mendenhall was appointed professor in the United States Signal Service at Washington, where he organized and equipped a physical laboratory in connection with the office of the chief signal officer, and inaugurated systematic observations of atmospheric electricity. In connection with this work he investigated the methods for determining ground temperatures, for which purpose he has invented several forms of apparatus, and he was the

first to establish stations in the United States for the regular collection of earthquake phenomena.

In 1886 he resigned from the service of the government to accept the presidency of the Rose Polytechnic Institute, in Terre Haute, Ind., where he has shown not a little executive ability in developing the efficiency and usefulness of a young institution. In July of this year he was nominated by President Harrison to the place of superintendent of the United States Coast and Geodetic Survey, an appointment that has been held by men of considerable scientific eminence, and for which Professor Mendenhall is well fitted for by experience and culture.

Among his many scientific articles are included original papers published in the *Proceedings of the American Association for the Advancement of Science*; the *American Journal of Science, Nature, Popular Science Monthly*, etc., and monographs that were issued by the University of Tokio and several special reports on seismology issued by the United States government. In addition to the foregoing he has published a popular treatise entitled "A Century of Electricity."

PHRENOLOGY IN THE BRITISH ASSOCIATION.

OBSERVATIONS ON THE RELATIONS BETWEEN BRAIN-FUNCTIONS AND HUMAN CHARACTER.*

THE failure of a scientific basis to human character and a correct analysis of the fundamental human dispositions must be attributed to the want of knowledge of the brain and nervous system, and to the preference with which men hitherto followed metaphysical speculations on the human mind in comparison to physical research. The study of comparative anatomy, of craniology, of the evolution of the intellect, of heredity, of mind in animals, of the

growth of intelligence in children, and the perversion of the faculties in the insane, and other studies which help us to understand Human Nature are of comparatively recent origin, while the most important of all, that is, brain physiology, is still most obscure. It is only recently that the plurality of functions of the brain has been demonstrated scientifically, and though a number of English and foreign investigators have succeeded in localizing centers for motion and sensation, we are still in need of a method: how to demonstrate centers of ideation or thought. A

* Abstract of a paper read before the Anthropological Section of the British Association at the late Newcastle meeting.

number of experiments have been made on the cortex of animals with the result of defining the distinct regions for motion and sensation, either by exciting definite portions of brain, and watching the movements that occur, or by destructive lesions and observation of the loss of movements; and though the results in themselves were not hitherto considered to be of direct value to the student of mental science, they demonstrate—as will be shown—the physical parallel of certain emotions, and confirm actual localizations made empirically by earlier investigators.

This communication is intended to be a collection of facts relating to the subject of brain functions, in the subjective and objective aspects, with the view of showing the possibility of a "scientific" Phrenology and the necessity of re-examining the observations made by Gall, bearing in mind the defects of the system and overstrained pretensions of some of his followers.

(a) Experimental physiologists are agreed (see Prof. Dr. Sigmund Exner, *Localization der Functionen der Grosshirnrinde des Menschen*, Vienna, 1881), that the most intense centers for movements of the "facial" muscles are in a portion of brain extending from the gyrus centralis anterior to the latter end of the middle frontal convolution. This localization is confirmed by pathologists and all observers are struck by the frequency with which disease of the "facial" nerve occurs together with loss of articulation of speech. This brain area corresponds with that in which Gall located his "organ of mimicry," which he supposed to be the physical condition for a talent for the imitation of gestures of other people, and which he noted to be often accompanied by a talent for imitating the voice of others, thus constituting the necessary fundamental dispositions to the art of "acting."

(b) Prof. Ferrier's localization of the "gustatory center," at the tip of the

lower temporal convolution, the center which sometimes give rise to ravenous appetite or sitophobia, exemplified in certain forms of insanity, is exactly the same as that of "gustativeness" or "alimentiveness" as made by the early phrenologists, and which they supposed to incite us to the sensual enjoyment of the palate, and the activity of which is independent of hunger and thirst.

(c) Prof. Ferrier (*Functions of the Brain* p. 463 etc.,) considers intellectual attention to be essentially ideal vision, and says that when we are concentrating our attention the ideal object is held in the field of clear vision by appropriate ocular movements, which react back on the centers of vision and keep the ideal object in the field of clear consciousness, and through this recall its various sensory and motor associations. He comes to the conclusion that the center of vision is the center for concentration of attention. Prof. Ferrier supposed the angular gyrus to be the center of vision, but it is now shown by Prof. Schafer (*Royal Society Proceedings* Dec. 22d, 1887) and by foreign observers to be in the "first occipital convolution," the same area in which George Combe located the same power, naming it "concentrativeness," which he supposed to enable one to arrest one's attention for a long time on one object.

(d) The area, a portion of the ascending frontal convolution, in which Prof. Ferrier located the centers for movements of the elevator muscles, the same which are called into action in joyful emotions and enable us to elevate the cheeks and angles of the mouth as expressed in smiling, is the same in which George Combe located the organ of cheerfulness, badly termed "hope," on account of grandiose delusions which are created when the organ is in an excited state. Sir James Critchton-Browne and others have noted that in the disease known as general paralysis of the insane there is almost invariably optimism, insane joyousness, delusions

as to wealth and grandeur, while the earliest physical symptom is trembling at the corners of the mouth and at the outer corners of the eyes, and Dr. Voisin explains the condition (*Traite de la Paralyse Generale des Alienes*, 1879,) by supposing the existence of a center of exhalation.

(e) Mr. Herbert Spencer, the eminent philosopher, who wrote in his younger days some clever articles on Phrenology (see *Zoist* Vol. 1 and 2) in which he demonstrated his belief in Gall's system and showed himself an acute observer, localizes in the latter halves of the lower frontal convolutions, in the area which was thought by Gall to be connected with "visions," the faculty of "Reviviscence." His theory is that the proposed faculty is "the chief agent of imagination and that it affords a tangible explanation of mental illusions." He quotes many examples of men of powerful imagination like Dante, Tasso, Swedenborg, and others who have been subject to mental illusions and asks his critics to examine the likenesses of poets to see the predominance of the corresponding skull-area. Modern pathologists thought at one time that spectral appearances were caused by disturbed brain centers of vision, but an examination of the cortex of the insane has shown that the supposed visual brain area is hardly ever affected, while the posterior zone of the frontal convolutions always shows adhesion, decortication and wasting. Further evidence is deducible from the fact that the facial expression of visionaries can be produced by physical excitation of the area in question, but the attempt to analyse the supposed faculty meets with difficulties. All we are entitled to assume is that this area is concerned with the powers of imagination, and that when it is in a state of disease, or over-excitement, it may give rise to hallucinations and visions.

(f) Lesion of the angular gyrus is shown by Munk, *Ueber die Functionen der Grosshirnrinde*, Berlin, 1881, and

others to cause so-called "Psychical blindness." *Seelenblindheit*, and numerous experiments demonstrate the "non-perception of danger" in those animals in which this gyrus had been destroyed. Adjoining it, i. e. at the extremity of the ascending parietal convolution, Prof. Ferrier locates the center for movements of the "platysma myoides muscle," on the importance of which in the expression of fear both Darwin and Sir Chas. Bell dwell, while Duchenne calls it the muscle of fright. The whole area corresponds with the area in which Gall located his organ of "apprehension" afterward called "cautiousness," which he supposed to be excited when we are in a state of anxiety or fear and which region he found enormously developed in persons known to take alarm easily and who could be easily terrified.

(g) Darwin's and Herbert Spencer's description of the physical expression of the "irascible" emotion in animals, as for instance, when about to attack an antagonist, is: a drawing back of the ears, gnashing of the teeth, and growling; while Prof. Ferrier observed that the excitation of the superior temporo-sphenoidal convolution in monkeys and the corresponding convolutions in dogs caused retraction of the ears, accompanied occasionally by a sudden spring or bound forward, and in cats it caused opening of the mouth associated with vocalization and other signs of emotional expression such as spitting and lashing the tail as if in rage. Ferrer's localization of the auditory center in this same convolution has been rejected by foreign investigators and by Prof. Schafer in this country, *Royal Society Proceedings*, Dec. 22d, 1887. This area is no other than that which Gall found so prominently developed in all carnivorous animals, and in murderers, and which he supposed to be the physical condition of the destructive propensity or irascible emotion.

The examination has not been completed, for, even limited as it is, it will excite much criticism. Little has been said of the analysis of Human Character and no mention has been made of the arguments in favor of the plurality of functions of the brain, as, for instance, the necessity of there being special ideational centers, otherwise it would be impossible to explain the hereditary transmission of peculiarities of character

and mental characteristics from parent to child, for the subject is a wide one and can not possibly be treated in one communication.

Only one humble wish the author desires to express before concluding his paper, and that is: May his critics give the subject a fair consideration and disregard the prejudices of ignorance and superstition.

BERNARD HOLLANDER.

MY BROTHER'S KEEPER.

IT takes thousands of my brothers to keep me in all the comforts I enjoy. Mine would therefore be a case contrary to all the laws of God in society and nature if it were not proper for me to do all in my power toward keeping up the brotherhood of the human race. And plain it is that I can do the most and the best work for those who are nearest me; to my own household first, and then to my immediate neighbors, relatives, friends, and acquaintances. Through these I may also reach many who never knew me, or even heard of me. Yes; every person is a member of the grand humanity on the earth, and as such he will affect the whole in some measure. And, unless he is a dead member, all the rest will likewise have some influence upon him. Any person who does not care for the welfare of others is a dead member, whom the community has to drag along while he exists; and a loathsome drag he is; a cumberer of the ground, and a stench to all that is lovely and peaceful among mankind. When a person is willing to be a stain in society, and even is pleased because others have to tolerate him he shows how utterly dead he is to everything that is human, and to all that is heavenly and Godlike.

No one is his brother's keeper in the sense of ownership, or of having a right to dictate to others as to how much they are entitled to have of this world's goods and enjoyments, and how they shall

live; but in assisting them to obtain what they need, and in making their good works successful. Yet, it is not helping another to give him what it is known he will waste or abuse, however much he may desire it, or even be in need of its proper use. You can not give to another the use of that which he will abuse; and what a person abuses is an injury to him. He who abuses what should be a blessing to him is a dead member in the human economy, and to treat him as if he were alive to every good is hurtful. Society can only drag him along by limiting him and proscribing bounds for him on all sides.

The members in human society are as different and various as are the members in the human body, and they severally need as different treatment as these. Sound, which is everything to the ear, is nothing to the eye, and very little to any other member of the body. Food, to be beneficial, must be given to the stomach; and in the healthy body the stomach has its guardians which select the proper food, and its best conditions. The feet can not do the work of the hands; yet it is but little the hands can do without the use of the feet. And unless the mind presides over and controls the whole being, nothing is more useless and base than the human body. As the several organs in the body are in many ways the keepers of each other, so each member in human society—and every person is one such member—

—is keeper in some way to one or more of the rest, and through these even of the whole; all under the power and guidance of the mind, as everything is from and by Divine Providence. And let no one fret about the dead members, for they afford opportunities for the judicious exercise of true charity. And as charity increases will they decrease.

J. R. HOFFER.

THE MIND THE STATURE OF THE MAN.

Does any one know of a reason, I pray—
Of a good solid reason, I mean—
Why one who must labor may not when at play
In the fair fields of poesy glean?
And who need complain if his hoe one shall fling
From a hand that is horny with toil,
And try, from his brain, with a steel pen, to wring
What he never can dig from the soil?

It may be, indeed, that when muscle and bone
With fatigue are all aching and sore,
The brain, though with knowledge it thickly be sown,
With reluctance will yield up its store.
And yet it will yield—if the treasure be there—
As of old at the touch of the rod
The rock in old Horeb poured forth, free and fair,
Its cool stream for the people of God.

But if from one's youth brain all fallow has lain,
And if only with bone and with brawn
One toils as the ox, then 'tis greatly in vain,
For his intellect still waits its dawn.
And what of the man if his intellect sleep,
Who but works, eats and slumbers away
The days of his years? He in darkness must creep,
Who should walk in the white light of day.

"The mind," one has writ, "is the stature of man;"
Little worth are one's lands and one's gold
If the soul must be stunted—if brain must be ban--
If the man may not ever unfold.
The wealth of the Indies can not make amend,

If we miss all the treasures that hide
In books, which the hand of the masters have penn'd,
To console, to instruct us and guide.

That man surely labors with skill none the less,
Who in leisure the wide realm surveys.
Where thought seeks forever all minds to impress—

Where the lightning of genius plays.
Then shun the drear lowlands with fogs overlain;
Climb the bright, sunny highlands of life,
Where vast, pleasant prospects the fancy enchain,
And forget, in the pleasure, the strife.

J. B. WALTER, M. D.

DOWN BY THE SEA.

I go down by the sea,
Where the waves speak to me
Of my darling, the heart of my heart,
Now her footprints no more
Mark the storm-beaten shore,
Where the billows embrace and depart.

There the sad billows break,
Like my heart for her sake,
On the lonely and desolate shore.
The winds of the sea
Are now sighing with me,
For a mortal, now mortal no more.

There the winds wove a shroud,
Of a dim, passing cloud,
Betwixt me and the bright sun above;
And the form in its fold,
Like the shape in the mold,
Was the form of the angel I love.

Would that I were a flower,
Born of sunshine and shower,
I would grow on the grave of the dead;
I would sweeten the air
With the perfume of prayer
Till my soul on its incense had fled.

And I never could fade
In the delicate shade
Of the tree in whose shadow she lies.
Up in immortal bloom,
Beyond her silent tomb
She held there in her beauty arise.

Oft I see her in dreams
On the banks of the streams
In the world of exquisite bliss,
Where the sweep of her wings,
And the songs that she sings,
Awake me to duty in this.

GEORGE W. BUNGAY.

NOTABLE PEOPLE OF THE DAY,—No. 26.

MRS. MARY E. H. G. DOW.

MANY of our readers have heard of the lady whose many initials are given above, because of her unique position in the world of business. We had heard of her but not until now was the opportunity given for presenting her strong face in our text. We had indulged a

pliable, passive sort. The body is large and deeply nourished, and so is the brain; hence every fiber of the organic elements that minister to faculty is well sustained. There is great emphasis, spirit and resilience in the character of Mrs. Dow. She is positive, straight-



MARY E. H. G. DOW.

little in curiosity as to the kind of face a woman should have who could manage a horse-railroad, and we expected to find in it elements of undoubted power. We are far from disappointed. No one can look at this engraving and say that she is anything of the soft,

forward, clear, and independent, a woman who should be able to use words with facility, and say what she means. There is a business look in the expression, a vein of the judicial too, as if she were able to weigh the *pros* and *cons* of fact and argument and discriminate

closely as regards the merits of a given question. She should be a jolly woman at times, and buoyant and humorsome, from the very fullness of her vitality. Yet it is likely that she is more serious than mirthful. She believes in the utilities and when disposed to sympathy and kindness would prefer to do her benefaction in her own way. There is a strong social nature; she is fond of friends and home, and it would be a leading aim with her to make her house a place of enjoyment and comfort. She is a pushing, energetic manager while the working hours last, but when they are over, she can enjoy ease and leisure with the best, and would not have others debarred from having their seasons of rest and enjoyment. For the excellent portrait that is printed on our first page we are indebted to the courtesy of the *Street Railway Gazette* of Chicago.

Mrs. Dow, born Mary Edna Hill, is a native of Dover, N. H., and comes from a family of Puritan stock. Her youthful education was obtained at one of the Boston high schools, and for several years after her graduation she served as a teacher and assistant principal in the high school of Rochester, N. H., and later, taught French and German at an academy in St. Louis, Mo. While in the West she conceived a liking for the stage, because of her success in amateur theatricals, but the disapproval of friends caused her to abandon the idea. At the age of twenty-five she married Mr. Geo. F. Gray, of Dover, editor of the *Press*, a newspaper of that city. Mr. Gray dying left her with three children, and five years later she married Dr. Dow, a physician of Dover, and a gentleman owning considerable property. Now we are enabled to unravel the mystery of the extra allowance of initials that appear in her name. Subsequent to this second marriage Mrs. Dow's business capacity has come rather conspicuously into notice. She had, however, when a girl, more than common experience in this respect on account of the

invalidism of her father, who was a farmer. After her marriage to Mr. Gray she was intrusted with the care of what estate he possessed, and Dr. Dow was very willing to have her take charge of his affairs.

How she came to assume control of the Dover horse-railway is interesting. The road had been a failing enterprise; for years had paid little or no dividends, and the stockholders were dissatisfied with it. At this juncture a company of Boston men made a proposition to purchase the road, and the directors were meditating its acceptance when Mrs. Dow, who owned a little of the stock, protested against its sale, and with the idea that if it was worth anything to a company of Boston people it should be to the Dover people, she set to work to secure control of as much of the stock as possible. Before the meeting of the directors that was to decide the matter of the sale was called she had secured control of more than half the stock, and astonished the directors by appearing at the meeting and defeating the purpose they had in view.

Her election to the presidency was the inevitable sequence, and her first moves as general manager were to double the insurance on the property, inaugurate a system of cash payments, thereby avoiding debts, and getting on all bills a discount of ten per cent. People who dealt with the road had not been accustomed to receive ready money from it, and the pleasant surprise caused them to make their discounts more liberal. She raised the wages of the employees, and reduced the fare from six to five cents. The reduction of fare pleased the public and augmented the receipts. Being a real judge of horses and material she was able to save the road a considerable amount in the direction of expenditure. She also added to the receipts by using tickets with advertisements relating to a favorite brand of tobacco, and this little resort, although savoring of sharp business tact, we can

not regard as creditable to her taste as a woman.

At the close of the year under Mrs. Dow's administration the affairs of the road showed a flourishing condition, and a dividend of eleven per cent. was declared. Not long ago she sold her interest at a handsome profit and in this procedure showed as much tact and judgment as she had in its purchase.

In appearance she is of medium height, rather stout, as seen in the portrait, her eyes are blue-gray and kindly, in their corners lurk the sense of humor; the nose is straight and the eyes arched; the light-brown hair combed directly off the forehead, which is high and broad, and indicative of the manager and financier; the mouth is sensitive, the expression changes with every emotion, but always there remain marks of strength of character and of that certain quality called level-headedness.

GEORGE M. PULLMAN.

WHEREVER the palace car has become a feature in railway transportation the name of Pullman is well known. It was a bold venture to introduce elegantly appointed cars with nearly all the conveniences of a private drawing room and chamber into the passenger traffic of our busy railroad companies, but the attempt was made and a brilliant success followed. To day the trunk line that does not furnish cars of the parlor, drawing room, or "palace" class would be subject to much reproach, so great is the demand for them. This demand has built up a small town near Chicago that is often referred to as a model of order and sobriety, the Pullman Company having control of the system of government. Everything is organized there on a most liberal plan, buildings, street regulations, educational and social advantages, and everything that contributes to make a community desirable being unsurpassed in any other town of similar size elsewhere. The principles of temperance are strictly enforced and

have been from the beginning, so that social vice and disorder are practically unknown and the people are notably harmonious and prosperous.

Mr. Pullman has an appearance of solidity; he is compact in body and mind. A man of eminent practicality in his ways of looking at subjects, he has the character of the manager of affairs; is a natural negotiator, and organizer. The broad head intimates force, not of an explosive or spasmodic type, but that which persists. Having made up his mind to a certain matter he



GEORGE M. PULLMAN.

does not "jump into" the current of its execution, but goes deliberately and positively to work, knowing what is to be done, and having the details at finger's end. He is well poised, calm, and good natured. It would be a difficult matter, we think, to make him irritable, for while he has a strong temper, and can feel the effects of insolence and discourtesy he has so much self-control that his feelings are not shown by anything that appears to savor of anger and excitement. He looks upon life from the side of the practical and expedient, and has studied men to such purpose

that he can meet them on their own ground, and tactically manage them. Few have his good judgment and prudent policy in this respect. The intimations of physical energy, vital harmony, and longevity appear in the organization, and it is most likely that he lives with a due regard to the maintenance of his health.

George Mortimer Pullman was born in Chautauqua County, N. Y., March 3, 1831. At the age of fourteen, he entered the employment of a country merchant, and at seventeen he joined an elder brother in the cabinet-making business at Albion, N. Y. When twenty-two years old he successfully undertook a contract for moving warehouses and other buildings along the line of the Erie Canal, then being widened by the State. In 1859 he removed to Chicago, and engaged extensively in the then novel undertaking of raising entire blocks of brick and stone buildings. In 1858 his attention was first directed to the discomfort of long distant railway traveling, and he determined if possible to offer the public something better. He went to work and remodeled

two old day coaches of the Chicago and Alton road converting them into sleeping cars which at once found favor and established a demand for improved traveling accommodation.

In 1863 he began, at Chicago, the construction of a sleeping car upon the now well known model, which was destined to associate his name inseparably with progress in railway equipment. The Pullman Palace Car Company, of which he is president, was organized in 1867, and it now operates over 1,400 cars on more than 100,000 miles of railway. In 1887 he designed and established the system of "vestibule trains." They were first put in service on the Pennsylvania trunk lines, and are now to be found on many other roads. In 1880, he founded near Chicago, the industrial town of Pullman, which contains over 11,000 inhabitants.

The extent to which the manufacture of these improved railway vehicles has been carried is shown by the output during the past year of 141 of them at a cost of two and a half million dollars. The Pullman Company also supplies freight and other cars from its factories.—Ed.

A LEAF FROM MADAGASCAR.

A FEW years ago we heard a great deal about Madagascar, because of the disposition of one or two of the European powers to appropriate that country and make it one of its possessions; but the spirit of its queen and European sentiment in general prevailed over national selfishness. It can be scarcely wondered at, however, that England, France, Spain, and other European powers have looked with longing eyes upon Madagascar, for it is an island of high fertility, and contains great forests of most valuable timber, and undeveloped mining resources. The population is upward of 5,000,000, and is for the most part constituted of orderly, temperate, and industrious people. There are several different types of race

among them, some being of negro blackness, while others are of a light olive complexion. The Hovas, for instance, the dominant race, are of olive tint, with fine black hair, hazel eyes, and erect, well proportioned figures. The finest race or tribe of the island is the Sakalava. The people of this race are black, but have regular features, curly or crisp hair, and are tall, well formed, and strong. In their relations with Europeans they have shown a marked desire for improvement and superior mental capacity.

Under the present queen, Madagascar has made considerable progress in civilization. She is a Christian, and has encouraged missionary effort. She is also a strong anti-liquor sovereign, and

has succeeded for the most part in keeping the whisky traders of Europe away from her dominions, hence native drunkenness is almost unknown except

and cotton, and make fine carpets on primitive looms.

Our illustration shows a group of the average type of the women, in



NATIVES OF MADAGASCAR.

at the seaports frequented by Europeans.

The people raise a large variety of tropical products, weave fabrics of silk

the simple dress that is common, there being little difference between the costume of both sexes.

THE DRESS, BEAUTIFUL.

TO use Frances Willard's own words, in that beautiful little book of hers, entitled "How to Win."—"Perfect unity with God's laws, written in our members, obedience to the decalogue of natural law, and the ritual of this body which was meant to be the temple of the "Holy Ghost," would have made us all beautiful to start with."

Why is it we are so attached to children, between the ages of two and twelve?

Am I wrong or imaginative, probably you are the same, in thinking they are sweeter, prettier, and more loved than they used to be? And if so, I think it is due to the charm and simplicity of their present mode of dress. The perfect freedom with which they sit down, get up, run, walk, and perform their thousand and one acts with no fear of a tortured spine, or a palpitating heart.

Why is it then, that after a certain length of time, after so many years are passed over, we must submit to this new era, this atrocious mode of being corseted, bustled, and whooped. I say we, yes, I am one of them—but *minus* the corsets.

Dear friends, do not think for an instant, I am one of those terrible dress reformers sitting here writing to you, possibly wearing a short skirt and bloomers and with closely cropped hair; not at all, but I am one of the many thousands wearing the heavily draped skirts and tight fitting basques, all of which I heartily despise, and would welcome a change with the greatest delight.

Why don't I collect my brains, and work out this change, which is to be such a boon to feminine humanity, I hear you say. Believe me, I don't know how. That such a thing can be done I feel assured. No, I shall leave it with our Modiste, he or she who is able to contrive and create such masterpieces as are seen in our monthly *Bazar*, to devise

some sweet and simple garb therewith to cover our aching backs? And let me say just here, that it is wrong, it is folly for persons, men in particular, to imagine and say that women enjoy and are slaves to these outlandish designs and foibles of fashion. Dear reader, I believe and feel assured, that the majority of our sensible women truly despise and condemn the present style of dress, and would gladly, gratefully welcome a new era, and adopt a more simple and comfortable one, were it but put before them.

Those of us who have read that admirable book of Ruskin's, "Sesame and Lillies," and have remembered his words, to the young ladies, in which he says, "Women should wear beautiful dresses. They should dress beautifully, not finely, only on some rare occasion, and then *both finely and beautifully*," Are we to understand that excellent gentlemen to have meant, that to do so, high heels, low necks, and tight waists, were requisite? Surely not. I imagine Mr. Ruskin to have had in his mind some sweet girl in simple white, or perhaps lilac silk, with delicate lace at throat and wrist, and probably a rose in her bosom.

Yet painful and trying as some of the fashions of today are, we might almost consent to put up with all, when one reads of the designs—nay monstrosities, encouraged and worn by some of our former queens, who carried them to such an extent as to be almost bewildering.

Do you know who introduced the wearing of "high heeled shoes?" None other than the Marquise de Pompadour, who was quite small, and it was fashionable at that time to be tall. At her wit's end to know what to do, in a fit of desperation, she invented high-heeled boots, which have had as wide circulation as the printing press and the telegraph. This same gracious lady had an aggravating pimple on her cheek; after fruitless at-

tempts to dispel the ugly thing she originated the black patch, which was so fashionable in the French court, and which people of to-day believe was worn to heighten the brilliancy of the complexion.

That beautiful little Queen Marie Antoinette, were she here to-day, would find few followers of her intricate dressing. It is said of her that her hair was most beautiful, and lay in exquisite masses over her head, and that the wonderful and outrageous designs, which are so much ridiculed to-day, are simply the result of having such an abundance of hair that she could do nothing with it. But her ladies imitated her and bought false hair, arranging it in towering masses, most ludicrous, in order to reach a standard of perfection.

After reading of such doings, one might be content to have things remain as they are, but no, no, we must go on, everything is *advancing*, new discoveries are being made, changes are going on daily, and why not dress? As I have said before, it can be done. I can not accomplish it, nor probably can you, nor hundreds of others. Yet it is just possible, indeed I am quite certain it is for some designer, to bring about the beautiful dress we all want so much. I refer principally to the every day one, the one worn twelve hours out of the twenty-four, by teacher, school girl, clerk, and every other busy toiler.

To be comfortable and easy, meeting all hygienic laws, it need not be ugly. Not at all. We would not have it so, but beautiful throughout. And just let me say again, the present dress is not liked, it is not desired, by people who would live uprightly, conforming to all human and divine laws. If I have been too free, have taken too much upon myself, in expressing my opinion to assume its identity with yours, I sincerely ask for pardon for my misdemeanor, and with grace shall hereafter and forever hold my peace.

A. I.

A PERFECT DAY.

THE peace of God rests on the sea,
The winds are hushed, the waves are still.
My God! is this eternity?
Or do I yet as mortal thrill?

The morning breaks 'mid rosy clouds;
The sun lights up the sapphire sea,
As if the Lord of Heaven Himself
Were there enthroned in majesty.

And as he mounts the azure arch
Bright clouds attending in his train.
He scatters jewels on his march,
That sparkle o'er the rippling main.

The splendor of the noonday sun,
Like that around th' Almighty's throne,
No eye unveiled may look upon.
It has a glory of its own.

In gold and crimson robes the west
The coming of its Lord awaits;
And as he grandly sinks to rest
It noiseless shuts the pearly gates.

Night's watch is set, and myriad stars
Their vigils o'er creation keep
While 'neath the moon's soft silvery bars;
To dream of Heaven I fall asleep.

J. O. W.

DISCONTENT AND ILL HEALTH.—One observer remarks, sententiously: "I never knew a grumbler who was well. Discontented people are always sick, or ailing, because they are always thinking sick thoughts. There is Mrs. K——, she is continually filling her mind with negations; sure that she isn't going to sleep, sure that whatever she eats will distress her, sure that she isn't any better than she was six months ago, and she will tell you that she has never been strong and never expects to be. The trouble is that she believes too much in her weakness and not at all in her possible strength. For it is impossible to be otherwise than weak when the mind is continually filled with an image of weakness. There are plenty of people who have a good physique and strong constitution, yet live as if they were walking on eggs. They do everything from the point of weakness, and the result is failure."

pointment which must be filled at a given time.

When a young girl gets a handsome ring, a gift of friendship, her eyes frequently seek the sparkling gem, and if she has to earn her money, how will she struggle to acquire the means for the new ribbon, the new gloves, the nodding plume for a new hat, and all this glowing earnestness toward improvement and style and advancement in possessions has been awakened by the social impulses. Some girls will deny this, but we saw a woman once, who was careless as to the appearance of her dress, and when upbraided in regard to it, she tossed her head and said, "It is of no consequence about me now, I am married." Five years before, a pair of new shoes, a new cloak, a handsome hat, and anything which she could indulge in as a luxury, were prized, treasured and displayed with intense interest.

Later on in life, when the little pledges of mutual love appear, how industry and skill, how economy and thrift, how prudence and forethought and ambition and energy are all harnessed to procure the means for the development of comfort and up building of the beloved child. Parental love is a wonderful impulse to effort and anxiety. We sometimes study the lower animals profitably, because they manifest faculties by a kind of blind instinct without regard to fashion and public sentiment. When we watch the young hen as she proudly steps forth from her nest, leading by her motherly voice, her delicate, unfledged brood, how she turns and observes and watches every danger, how diligently will she search for morsels of food or in her earnestness scratch in the earth to find the means of feeding the chicks. We have seen a hen in that way in her eager earnestness, push her chicks, and sometimes knock one of them heels over head for the distance of a yard, with one of her "stroke-oars."

Watch the cat, the fox, the wolf, any

of the predatory animals, as they hunt to catch game for their young; watch the robin and all other birds whose chicks can not follow them, how they hunt for food and carry it, dividing it to the eager, open mouths of the fledglings.

The sparrows that throng our streets and build their nests in our cornices and windowcaps, how they early in the season begin to carry straw and whatever is proper material for a nest, and with what unremitting assiduity, they carry food for their nestlings, and all the summer long, brood after brood are hatched and fed and protected. What industry and care, what hope and happiness and even misery, birds and other mothers exercise and suffer on account of their young. If we watch the insect tribes, even, we will find that it seems to be the business of their lives to produce and rear, protect and care for their young, and thus the parental instinct as one of the social elements, in most animals and insects, is a wonderful agent in inspiring almost every mental faculty.

How the bird in anticipation of the young lives that are to be developed, constructs in some instances a nest of marvellous ingenuity, hanging it to the limb of a tree like a pocket, perhaps over water to avoid robbery by animals, woven neatly in form and strength and delicately lined with softness, and then follows the whole summer's industry and labor and watching and protecting of the product of love.

The eagle sweeps the heaven and the earth and the sea to catch the prey which her young require, tearing it into pieces, and with motherly skill, doling it out to each, according to their wants, and when the young are almost large enough to fly and are either too lazy or too timid to try it, she shoulders them out of the nest which is built on a high crag or tree top, perhaps overhanging the sea, and as the sprawling young bird flutters and makes his first awkward

attempt at flying, and perhaps while using his wings with some effect, still sinks rapidly toward the danger below him, the mother bird sweeps around under the youngster, who gladly clings to her back, and she carries him up to the nest, and then she will roust another one out in the same way, and compel him to try his wings, and thus ere long, the young birds will venture to use their wings without urging.

When a young sparrow has flown from the nest under the cornice and has luckily lodged in a tree and some cat is watching for a chance to capture the young bird if he dares to make his descent to the ground, perhaps fifty sparrows witnessing the danger, will settle down upon the limbs of the tree and utter their threatening imprecations at the predacious cat, their enemy, holding a convention of protest as well as protection, attracting the attention of the whole neighborhood to the peril and the pluck aroused by their parental instincts, and the noisy manifestation of their Caution and Combativeness in the protection of the young.

Inhabitiveness, the home instinct is aroused by love and its fruits, and there is an inspiration toward the construction of the home. The tendency to provide a home for the shelter and food for the comfort of the family results from the instincts of love, and is prettily stated in an old Scotch ballad in which the lover says :

"I'll twine thee a bower by the clear siller fountain,
And cover it o'er wi' the flowers of the mountain;
I'll range through the wilds and the deep
glens sae dreary,
And return wi' the spoils to the bower o' my
dearie."

The man without a consort who roams the earth or the sea is satisfied so far as he is concerned, with very simple and with very mean surroundings. We notice that when a man undertakes to be a hermit, he lives in a dugout, in a cave, in some old tumbled down shanty,

which merely will protect him from the inclemencies of the seasons; but he who is more normal in his love and in the manifestation of the faculties which are brought into co-operation with affection, will show it from the appearance of a better house, the cottage, the mansion and the palace.

Sometimes a man loses his wife and becomes despondent, life seems all broken up to him, and he will say, "I think I shall sell my house, and break up." He disposes by sale or gift of the things which adorned his home, and sometimes wanders abroad, acquires enough by industry to supply his simple wants, and spends the balance of his life like a bird without a mate. The man whose social feelings have no object, who lives for himself, is apt to manifest a kind of a semi-paralysis of many of the faculties which adorn and dignify human nature and bless human life. For friends we work and toil, for wife, for husband, and child, we struggle to overcome difficulty and accumulate property; for their sake, we try to surround ourselves not only with the comforts, but the elegancies and luxuries of life. Witness the well-appointed home, the father and mother surrounded by half a dozen blooming sons and daughters, each full of hope and joy and anticipation and budding promise; watch their gathering at the table, see the bountiful repast, witness the care and affection as the viands are carefully served out to each, and then observe the interest and the pleasure which seem to be enjoyed by the parents in witnessing the hearty health and appetite of their little brood; sometimes we see self-denial, the choicest bits are bestowed on the little ones, motherhood and fatherhood bending their strength, and wisdom to the comfort and up-building of the little folk, appearing to regard the dinner hour as a season of blessing to the children rather than a mere personal gratification. There certainly is nothing more beautiful than

parental affection manifested toward offsprings in ten thousand forms.

Who is more richly blessed than the mother who toils in making garments to comfort and adorn the little ones while they sleep? She will hold up the unfinished garment and her eyes shine with joy, and perhaps she and her consort will interchange pleasant smiles and expressions as to how the little one will look and think and feel when the new garment is presented to him in the morning. We pity people who have too little of these feelings to bring sunshine and joy to their life. Truly it is more blessed to give than to receive, parental love believes it, appreciates it, and rejoices in it.

Widening the sphere a little, taking in Friendship or Adhesiveness, we have society, and that, if we may use the term, is a ring of growth outside of domesticity; first it is conjugal Love, second, it is Parental love, third, it is Home love, or Friendship. This fraternity of feeling, this spirit of gregariousness, takes in others than our own blood-relations, others besides the home circle and the family. Companionship, acquaintance, interchange of thought, friendship is distinct from all other loves.

Strangers meet, co-operate in their work, suffer and rejoice together, and become friends for life. Among the best specimens of fraternal love which history records is that between Ruth and Naomi, her mother-in-law. They were not blood-relatives, they were both widows, they were poor, neither had a home or wealth, or station to attract the other, and Ruth said when her mother-in-law proposed that they should separate, "Entreat me not to leave thee, nor to return from following after thee, for whither thou goest, I will go, and where thou lodgest I will lodge, thy people shall be my people, and thy God my God. Where thou diest will I die, and there will I be buried; the Lord do so to me and more also, if aught but death part thee and me." The story of Damon

and Pythias, which adorned the reading school-book of our time, in which one of the friends who was single insisted on taking the place of the other one who had a family who was condemned by a tyrant to suffer death, and when this was denied, permission was sought of the governor that the friend take the place of the condemned man while he could go home and settle his affairs, and would then come back and relieve his friend from custody, is perhaps the most astonishing feature of masculine friendship that the world has recorded. When the tyrant watched day after day, doubting that there was virtue enough in human nature to bring back the culprit to the jaws of death, and thus relieve his friend, and when at last the man did return and take the place to bear the shock of execution, it melted the heart of the tyrant and he set them at liberty saying that "such virtue deserves its reward." Of course this feeling exists in different degrees, yet it is supposed that "hardly would a man be willing to die for his friend."

Human nature must be studied from its best side. We have eminent examples of the exercise of each of the faculties. We use to read of a man who was condemned to starvation, and his daughter was permitted to visit him and the father was sustained for weeks by the element which nature had provided for her own child, and in this case, if we remember rightly, the tyrant learning of the fact, said that such virtue and filial love deserved reward, and set the father free.

When we read of eminent examples of devotion in love, friendship, parental affection and patriotism, we forget that men are sometimes wicked and mean and ignoble. There is not a faculty of the mental makeup, through which men have not illustrated Godlike qualities, and every faculty in turn has been subordinated and suborned to the service of sin and unhappiness.

Strength has wreaked unjust vengeance, skill has prepared the poisoned arrow or forged the fraudulent note, or invented the infernal machine. Logic has lent itself to base purposes, even the faculty of worship has become idolatrous. Faith has been perverted to fanaticism, and Benevolence to profligacy, dignity has become tyranny, steadfastness has been perverted to crushing obstinacy; ambition has become vanity, and love has been perverted to lust. Poetry has been dragged into the gutter and music has been laden with debauchery, and the orgies of iniquity; and yet the right use of the faculties glorifies human life and honors its creator. Verily in obedience to divine law, "there is great recompense and reward," and every transgression of the righteous ordinances of life can not evade its just punishment.

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PLEASANT CHAT OF PATRONS.

L—M—, Oct. 12, '89.

YOUR description of my character from photographs, is at hand, and I must say, it does me immense good to see it. I feel sure and safe in the right way now. I consider myself forever indebted to you for the happiness and security in which I now stand.

With lasting gratitude, I remain,
Sincerely yours, ———.

B—, Texas, Sept., 1889.

PROF. NELSON SIZER, Dear Sir:—In May last, you wrote my phrenological character from photographs, in which you said I was kind to children. I have been laughed at and called boyish from my attention to children, by others having little Parental Love. I say God bless the little children. I try to make every one of them happy.

I was a slave to sugar, but, since you advised me to quit the use of so much of it, I have done so and feel much better. Many thanks.

Yours sincerely, L.

NEW HOLLAND, Ill., Sept. 14, '89.

PROF. NELSON SIZER: Dear Instructor.—I think it no more than just that I should acknowledge the benefit I derived from attending the American Institute of Phrenology last year. For any amount of money I would not part with the instruction I there received. The debt of gratitude I owe you, I will try to repay by spreading the knowledge of Phrenology to the best of my ability.

Yours in the truth, C. W.

—:O:—

JOYOUS THANKS.

"I CALLED at the office of Fowler & Wells, was examined by Mr. Nelson Sizer, who diagnosed my case correctly, my troubles physically, being caused by nervousness, indigestion from improper diet, and mental overwork. He recommended a reform in diet, and an improvement in hygienic conditions. The result has proved wonderful; in sixty days, there has been a gain in weight of twelve pounds, a full restoration of natural, health-giving sleep, and the entire restoration of the nervous force, thoughts are clear and it has proved a general up-building of the entire system.

I had been treated in two years and a half by eleven physicians, both in New York and Boston, and had taken gallons of medicine prescribed, without any beneficial result. In the mean time I had lost in weight from 184 pounds to 121, and lost sleep almost entirely. I am so highly pleased over the very favorable results from Mr. Sizer's instructions that I called to present my thanks, he having done more for the restoration of my health for five dollars, than eleven doctors had for \$970. G. L. C."

New York, Oct. 26, 1889.

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SOME people still doubt the truth and utility of Phrenology, but if they could witness the examinations of strong, clear-headed strangers for a week, and have their testimony, they would change their opinions.

CHILD CULTURE.

MORE ABOUT HETTY DEAN'S SCHOOL FOR MOTHERS.

THE first thing to be taught inefficient mothers is absolute truthfulness in dealing with their children. Though most mothers would be shocked at the implied accusation, it is a fact that they are far from being truthful, even the best of them, in the trivial things that touch their children's lives. Statements are made that no sane person could accept, promises given that are not meant to be redeemed, simply because it takes less time and stops, for the time being, their children's ceaseless questioning.

Here is a striking instance of false statement. I heard a lady tell her four-year-old daughter if she ventured outside the gate the policeman would be sent for. The little creature looked at her mother with merry, defiant eyes, and very soon afterward we saw her romping on the sidewalk.

"What shall I do?" moaned the mother, "the policeman used to keep her inside the gate, but lately she does not fear him."

"You have threatened her with the policeman before and the policeman never came?" I asked.

"Dozens of times, and of course the policeman never came, but she thought he would come till recently."

"If it were my case, and I had threatened her with the policeman, I would have one on the spot if I had to move heaven and earth to get him there."

The lady looked at me a moment in a bewildered way, then her lip curled, and I saw in her indignant eyes as plainly as if it was printed on paper, "That's just an old maid's notion."

I could not be surprised when some

days later I heard that same mother bewailing the fact that her little daughter had told a lie. How can a child be truthful that lives and moves and has her very being in an atmosphere of falsehood!

Mothers make a grave mistake when they think they can put off the moral education of their children till some stated time, as, when the child has learned to walk or to talk. A close observer sees that it begins, very often, long before the child can do either, as soon, in fact, as the child has developed a will of its own. The mother who said of her little son of four years: "I have as yet paid no attention to his moral character, I have only tried to keep him physically vigorous," has a surprise in store for her whenever she shall be ready to begin her moral training. His morals, rudimentary as they may be, have all along been growing into the likeness of those about him. Children are little mirrors. Mothers, look well to the reflections that confront you in the tender mirror of your little ones. If you are careless in your statements, if you make ill-considered promises which, on a second thought, you do not keep, be not surprised if the moral image of your child is fashioned like unto your own.

"But," objects a mother, "if I stop to think of every word I utter, and if I count the probable influence of my every action on my children, I shall simply have time for nothing else."

Good heavens! Has it come to this? Oh, I know of women whose lives—unblessed by love and home—would be raised to something scarcely less than celestial bliss if all their time could be

devoted to these high duties. Oh, that mothers would magnify their office! But sometimes the best of them turn even love to a false account. Not long ago, a sweet and intelligent woman said, in the company of several other women:

"I rule my children by love. When they do wrong I tell them: 'Mamma cannot love you if you are not obedient, truthful, and good,' and they will do anything rather than lose my love."

Think of such a presentation of love from a mother who is the symbol of undying love." No one answered her though one of the company—Hetty Dean, spinster—felt her heart ready to burst with remonstrance. We all know that, if necessary, that mother love would follow her child to the dungeon and the scaffold. If she had pictured to her children grieved love, love in

tears, love in agony over wrong-doing, but had insisted, in the name of truth, that love is immortal, what then? Her children would not only have been held by love to rectitude of conduct, but would have had an impression of mother love as ineffaceable as the rock-ribbed mountains of their New England home.

How will it be when, later in life, they find that statement was essentially false?

When I found my School for the Instruction of Inefficient Mothers there shall be a chair of Maternal Ethics, where truthfulness in all things relating to children shall be insisted on as the foundation of their character, and where the work of training her little ones shall be recognized as the noblest that can engage a woman.

SARAH E. BURTON.

READING FOR YOUNG CHILDREN.

A CONTRIBUTOR to the *House-keeper* of Chicago discourses on this important topic in a pleasant and sensible manner:

One day when I went to make a call upon a lady I found her reading aloud to her granddaughter, a "wee lassie" less than three years old. She was reading from a book about animals, such as most of us would have thought suitable for a child of seven or eight. The little thing was listening in an easy, wise way that gave you no feeling that she was being forced. In the conversation that followed this subject was touched upon, and the gentle grandmother said: "Yes, I read such things to Corinna. Children must think about something, and I believe it is just as well and a good deal better to give them something to think about that is worth while. It is no harder for their minds to grasp than a lot of senseless jingles."

I found the child was hearing the jingles, too, from her mother, and that it was all being done in a right way. When she wished to be read to some one

read to her easily, quietly, with no effort to teach her to say or remember what was read, and yet gradually she was getting something worth while. Corinna and two other grandchildren of this lady, whom I have watched somewhat, are proving to be intelligent, natural children, very healthy in mind and body, and pretty good proofs of the wisdom of her theory.

So it seems well to begin very early to blend sense and nonsense, if we do it in the right way. There is a nonsense that belongs to every child by right, and that is Mother Goose's melodies. The child that does not have them has been cheated not only of much pleasure but of that which he will miss in a literary sense all his life, for do we not find frequent allusion to them in our mature reading? I once knew of a large class in a high school that was asked to write a composition on Mother Goose, and ridiculous as it may seem eleven out of the class had never heard of her or her rhymes. They certainly were lacking in needful information.

Then there is a troop of delightful stories that Horace E. Scudder calls nursery classics, tales that have been handed down through generations, changing in the wording of the telling, but keeping the same general outline. These belong to children of right, also. Cinderella and the Glass Slipper is a notable example. Jack and the Bean Stalk, Hop o' My Thumb, Little Red Riding Hood, and others. These and other tales have stood the test of generations of use, and are accepted, not as candidates for favor, but as established favorites. Mr. Scudder pleads for the use of these in the school room as a means of awakening the child's mind, opening the door into a world of imagination and beauty.

How beautiful some of the Grimm stories are, and some of Æsop's fables. Have they not become part of your higher life with their simple, direct lessons? I cannot better conclude my remarks about all the above noticed tales than by quoting Mr. Scudder's

closing sentence in his article upon "Nursery Classics" in the *Atlantic Monthly*. "The child that has spent the hours devoted to reading in its primary course over fables, fairy tales, folk-tales, and the best of such stories as go to make up the Gesta Romanorum and Christian mythology, has had a foundation laid for steady progress into the higher air of poetry and all imaginative, creative and inspiring literature."

Childhood is the age of greatest memory, as we all know, and most of the attractive things will become fixed in mind if they are only given; so give them.

Passing further along there is this to be said. Reading aloud well makes books seemingly beyond the child's comprehension very useful and intelligible to him. I presume it is the only real way to have him grow in mental strength. Giving him only what he can easily understand himself tends to mental paralysis, just as giving him only stories and jingles tends toward mental dyspepsia.

A DOUBLE LESSON.

THE following home sketch is a capital illustration of practical wisdom applied to the correction of a boy's fault. It will supply more than one suggestion to those parents who are at a loss how to punish their combative, selfish children.

"A boy came home red, rumpled, bruised, and excited. 'Come, my son,' said his father, 'what is the matter? You seem to have been fighting. Was the boy larger than you are?'

"The boy looked uneasy, and mumbled, 'No; I don't know that he was.'

"Really! And now what did you fight for?'

"A long delay, then he blurted out the truth, 'Cause he wouldn't give me half of his apple.'

"Indeed! Didn't give you half of his apple! So you have set up as a highway robber, taking your neighbors,

goods? And a bully [and a coward, whipping a smaller boy! Go, now, and get washed and dressed.'

"'He deserves a whipping,' said his sister.

"'Not at all. He has not lied; he told frankly the truth.' The boy, glad of getting off so well, soon returned to the tea-table wearing a smiling face.

"'There is no place for you,' said his father, calmly. 'Such principles as you act upon are not popular at this table. You will find proper food for a boy who conducts himself as you have done on a stand in the corner of the kitchen.'

"But breakfast and supper thus arranged proved unendurable to the boy.

"'Can I ever come back?' asked the poor child.

"'Certainly, when you have made your affairs right.'

"'But how can I do it?'

"Take your own money, buy the little boy an apple, and give it to him with an apology. Then you will be

once more an honorable fellow, and we shall be glad of your company.'

"And so they settled it."

BABY GROWTH. ITS NECESSITIES.

THE maternal physique has some subtle, indefinable influence over young children, a health-giving power not at present well understood. The new baby is still in a sense a part of its mother, though a separate unit. Its well-being requires close contact with her during the greater part of the twenty-four hours. A bed by itself is an injustice to helpless infants. It is paterfamilias who should seek another resting place, not the new life that is yet so frail and insecure. Only those who have tried this natural method can thoroughly appreciate its advantages and realize how admirably it insures the happiness of three persons. The child can be cared for during the night without exposure or any sudden chill. Always warmed and protected by loving presence, the little one sleeps long and well. After the weaning period the baby has his own bed as a matter of course. Until then an undisputed half of the maternal couch is a necessity to the embryonic citizen, if he is to grow into that relative perfection of health and strength which nature has intended for him. The human mother is the only animal that puts away its young at night, probably because the right kind of reason has not taken the place of half eradicated instinct. The hen gathers her brood under her wing; the mother bear forms herself into a sort of animate woolly nest about her cubs, just as the cat's body embraces her kittens. Our cousins of the lower orders may not be such bad examples to follow after all. At any rate why not give those "wonderful weans" the benefit of the doubt?

The slaughter of the innocents goes on in different ways. Emotional prodigality is a most efficient means of removing

the joys of the household. "Died of too much grandfather, grandmother, uncle, and aunt" would be a fitting epitaph for many a bright child. Emotion is the most exhausting of the mental attributes. What children do, and how much, is of far less importance than the way in which they do it. The evils of premature mental activity are without doubt very great; but to prematurely and unduly excite emotional manifestations is tenfold more hurtful. In this regard there seems to be the densest ignorance. The fact that young children's only business in life is to develop slowly—to eat, sleep, and play in childlike fashion—is too often forgotten in the home circle. On the contrary, they are often supposed to attend to their own work of growing and developing, and afford fun for the family at the same time. Our tender little ones are made the playthings of the household—hugged, kissed, talked to and made to talk for the pleasure and gratification of the parents and friends. Their callow brains are overworked by exciting and intense emotion. What wonder they have big heads, little bodies, and hardly any digestion!

HOW THE CHILDREN TALK.—If teachers could only hear the comments made at home by their boys upon school work, says Mrs. D. H. Goodale, they would never again think of the daily round as a mere drudgery. They would see that the drill in arithmetic, spelling, and geography serves as a body for the subtle spirit in their work which builds up slowly by accretion and by divine flashes of insight the structure of human character, that highest and most valuable work of all the work done

upon earth. They are all the while doing their part, and a very important part it is, in forming or deforming the very nature of the child.

That tact in managing children which is a matter of temperament, perhaps—some teachers and some mothers have it by instinct, while others, with equally good intentions, are sadly lacking in it—this happy tact makes a wonderful difference in a boy's success at school work. Study a boy "of good principles," as he himself says; a boy who wants to do right, but who is greatly occupied with his own interior life, his own ideas, plans and wishes—often unreasonable and impracticable, but to be treated with consideration because they are his very own.

At the primary school, where the teacher is kind, sympathetic, active, and inspires enthusiastic work he grades high—96, 98, 97, and earnestly *strives* after 100. In the grammar school he grows indifferent, if not discouraged, and brings home a report of 81, 78, 73—a little shamefaced, but evidently more vexed than grieved. This shows distinctly a change for the worse, owing to the comparative influence of two teachers whose natural aptitude for teaching is in inverse proportion to their requirements.

Nothing is harder than keeping up to one's best. Nothing is better worth the effort it costs. The teachers who find it difficult to get from their pupils the best work they are able to do, have perhaps failed to reach their own best as teachers. Very likely they are quite unconscious of the weak points which their boy critics have discovered.

"She looked so disgusted." "She only laughed." "Oh, she don't see." Light comments like these show that every shade of the teacher's manner is studied and interpreted by the keen eyes upon her.

It is not the boys and girls alone whose principles are brought to the test. The teacher, too, is weighed

in the balance in all these small emergencies of the daily school routine. The boy sees, or at least he feels, what the teacher really feels—the force of the teacher's sense of duty; her sense of the sacredness of truth, or the beauty of courtesy. What is true courtesy? No virtue is less practiced toward children, it seems to me. Is it not made up of two elements—the sincere desire to promote the happiness of those about us, and a genuine respect for the individuality of another? I believe that children are far more sensitive in these matters than is generally believed. The same delicate respect should be shown for their feelings which we wish them to show toward others.

The boy who is not plastic, imitative, easily managed, who is very apt to be "trying," may be, and probably is the very one who will develop, if rightly guided, the most individual power, and do himself and his teacher most credit by rendering useful service in the great field of active life. Have patience with him, O much tried teachers, and remember that in school as in most relations of life, there are usually short-comings on both sides, and that all your words and deeds are exposed to the keen scrutiny of your boy critics.

"MAMMA," said a little girl, one Sunday evening, after having sat unusually still in the house all day, a rainy one, "have I honored you to-day?" "I don't know," replied the mother, "why do you ask?" "Because," says the little one, shaking her head sadly, "the Bible says, 'Honor thy father and mother that thy days may be long,' and this has been, oh, the longest day I ever saw."

A VERY lively three year old boy being surprised by his mother in some mischief, the other day, sought safety in flight. He was followed, however, and asked why he ran away, he replied, "'cos I's so scouraged."



TEMPERANCE TEACHING AND REFORM.*

THE youth of our country, of all nationalities, should be made to feel that the cultivation of a taste for liquor is a dangerous habit; that alcohol in all its forms is a drug to be dreaded and avoided as strychnine or aconite, and that opium should only be given when imperatively demanded. Let parents in all conditions of life be made to feel, and educated to believe, that it is a dangerous practice to allow, and a fearful responsibility to encourage their children to drink the mild wines, beer, or cider.

While I was writing this section of my paper a gentleman, fifty-two years of age, and one who has experienced all the degradation possible from drink, has lost his fortune, ruined his health, and is separated from his family, said to me: "Forty years ago I attended church three times each Sunday, and listened to sermons one hour in length each time, and in addition attended Sabbath school, and during all these religious exercises for years I have never heard a word in regard to the baneful effects of narcotics. I commenced gradually, and knew nothing of its dangers." This is true of hundreds and thousands.

But, thanks to our educational temperance organization, this is being over-

come; and I trust that the time is not far distant when every parent will realize that it is not only not a smart thing, but a fearful crime to send their children to a saloon for liquors, and a much greater one to tempt them by offering the sugar that is in the bottom of the glass.

What shall be done with our third class, those who have already acquired the habit?

Probably about twenty per cent. can be reformed the first time their attention can be arrested long enough to keep them perfectly sober. This can be done by rest, seclusion and education. Any way by which the alcohol and opium can be eliminated from the system, and a few days' rest for the body be taken, and then followed by encouraging words, a definite plan of work, and a resolution never to associate with former companions. If the question be asked: "Why have homes and asylums for inebriates been established and maintained at a cost of money and labor, if the habit of inebriation is not a disease, and only twenty per cent. saved?" I would reply, that after temperance organizations and societies, the church and clubs have done all that is possible, some of the most promising of those reformed will relapse from causes which I have just enumerated.

These men need a place where they

*From the address of Dr. C. W. Earle at the late annual meeting of the Illinois State Medical Society.

can acquire strength; where, separated from their companions, their moral sense can be cultivated and strengthened. Some men change habit in a moment; with others it takes months, perhaps years. Many men use alcohol for years without impairment of any function of the body; others are injured in nearly every organ. For those who need considerable time to perfect a reformation, and that class, too, whose constitutions have been injured by the voluntary use of alcoholics, and who, from habit and association, have not the moral sense to say No to an invitation to drink, to such, homes and asylums are houses of refuge. Reformation is a matter of development—not a “presto-change” affair, not done in a twinkling of an eye, but a matter of growth, a matter of development. A man who has been addicted to the inordinate use of alcohol and opium is never safe. He must be on his guard. A reformed man must be taught, and the lesson must be well learned, that let come what will—sickness, trouble, death, reverses, singly or all combined—that he can not with any safety touch a drop or he will fall.

No class or profession of men see so many of these unfortunates as our profession. We should be able to tell these men that it is their duty to fight this appetite, if they have been so unfortunate as to form it, and that there is no drug that can take it entirely from them.

What is to become of the remaining per cent? I stated, it must be remembered, that I thought about twenty in each hundred could be quickly reformed if we were to get access to them. What about the remaining eighty?

Quite a number will reform after repeated trials and failures; a few, after education upon the subject, will drink less—are improved, but not reformed. A considerable number go to form the fourth class, the description and treatment of which I will now speak.

These can not be reformed either

through influence of rest, seclusion, or by the moral strength acquired in a reformatory institution. These are the uncontrollable, incorrigible, disquieted men, who have not only discouraged but rendered miserable their relatives and all their acquaintances. They have never learned to obey; they are undisciplined, and generally lack all feeling of responsibility. They are the men who beat their wives, and starve their children; the men who steal the hard earned money from their wives' purse, and the knives and napkins from their tables, to buy alcohol or opium, and when perfectly sober or free from the drug you expostulate with them they will laugh, and assure you that they know their own business. The State should assume the guardianship of this class, and should put them in an institution whose management should be remarkable for its kind administration of affairs and for a discipline most rigid. This institution should be situated on a farm, and men of this class sent there for not less than two years. From ten to twelve hours' work every day during this commitment, combined with judicious and strict discipline, with the assurance that the State would again assume charge of them if they returned to their former habits, would produce an effect on these men which would result in the reformation of nearly all. Let them learn that it is some one's business if they become absolutely indifferent to all the responsibilities of life. The medical profession should be alive in bringing about such sentiments, and by precept and practice enable them to become laws. Let us be in a position to educate the young and those of maturer years so that the second class shall not form the habit. The third class we are always ready to assist, and regarding the fourth class, those uncontrollable, incorrigible, undisciplined men and women, let us, in the language of Dr. Bucknell, bring about a sentiment that “These men are not to be ‘coddled’ in

luxurious indolence, nor impressed with the pernicious idea that they are interesting but helpless objects of social and psychological science."

COMMON BOILS.

THE popular belief that boils are "healthy" may be true in regard to a well-developed rosy development of the kind in itself, just as a parasitic vine that has enveloped a tree with a wealth of tendril and leaf may be in fine condition while the poor tree is literally dying. No, an expression of disease, whatever its nature, does not indicate health. As a writer in an exchange remarks, that no one wants one of these "comforters" on any terms, and he who said that "the best place" for a boil was "on some other fellow" voiced the general desire. A boil may be defined as a limited area of inflammation situated in the loose connective tissue which binds the skin to the deeper structures. Generally it starts in or around a sweat or oil gland, and approaches the surface as it grows. Many theories have been advanced to account for the origin of boils, but it has now come to be pretty well established that they are caused by the growth in the altered or depraved tissues of certain minute organisms. These are found in every abscess; they can be cultivated, their life history can be studied, and when they are placed in the tissues again under favorable circumstances another boil, precisely like the first, will be produced. How these boils find their way into the system it is sometimes not easy to say, but probably it is through some slight break in the skin which has escaped notice. Some persons seem to present a more suitable soil for the cultivation of the germs than others, and certain conditions of the system are very favorable to their development. A lowered state of the system, poor nutrition, sea bathing, changes of diet, especially during athletic training, and convalescence from certain fevers are not uncommonly followed by boils. Children

with scrofula and rickets are apt to suffer. Here the defective nutritive state of the system is the main cause. Excessive sweating, lack of cleanliness, the long use of poultices, the application of irritants to the skin, and especially the chafing of clothing favor their formation. Any part of the body may be affected, but they are most frequently seen on the back of the neck, in the armpit, and on the lower part of the trunk. Where the skin is firmly tied down, as in the passage of the ear, the pain and tenderness attending a boil become intense; in the looser structures it may be but moderate. If left to itself a common boil will break in four or five days, and discharge pus, and, generally, some dead tissue known as "core." It is usual to apply poultices till the abscess nears the surface and then make an opening; but often if a free incision is made at the beginning and a simple antiseptic dressing applied the process will be stopped. Poultices are of benefit only to relieve pain, and they should not be continued after the incision is made since they serve but to prolong the discharge. Dr. Pye Smith, of London, in the course of a recent discussion declared his belief that the crops of boils which sometimes are seen in the case of school children are due to the transfer of germs by means of poultices, from an open sore to the glands of the healthy skin.

We do not regard poultices as the best treatment, but simple compresses wet with an antiseptic solution will meet most cases. Immediate treatment of this kind will often prevent a growth that may assume a serious form, like that known as carbuncle. In the meantime the diet should be carefully regulated: simple, nutritious, unstimulating, unirritating food only to be taken, and

that in moderate quantity. If the stomach and bowels are disturbed they should be corrected by simple, hygienic measures

THE HYGIENE OF A SMILE.

CONSIDERED on its merely physical side, who can estimate the value of a smiling face opportunely shedding its cheerful rays. A writer, in *Good Health*, puts the matter in a clear light as showing the importance of good nature in lines where there is so much discontent and irritation :

When, in the midst of life's hurry and worry we meet a smiling face it seems a perfect God-send, and we sometimes think, when seeing how much woe and suffering there is in the world, that if we would, each of us, smile more life would be so much easier to live for all of us ; for a sunny face sweetens both outside and in, both the owner and the beholder. The trouble with us is, that when we take the pains to smile we feel, as a general thing, that we are doing it solely for somebody else's benefit, while, if we did but know it, it is "life and health and peace" to ourselves in many ways.

For one thing it is morally impossible to snarl at the same moment we smile ; for in spite of us, our voices will soften to keep the smile company ; neither can we fret ; and so both snarling and fretting have to go—and good riddance ! Worrying, too, is perforce banished ; for an entirely different set of muscles is brought into play, those which make a smile utterly refusing to be used in making people unhappy. Snarling, fretting, worrying—the three evil geni that rule over the spirits of men—how comfortable would be this present life of

ours could they be once utterly put to rout !

And they can be. Let us make this a matter of duty, for a smile is the hygiene of life just as surely as sunshine and fresh air. If you answer that you do not feel like smiling, then all the more I say, Smile ; and my word for it life's affairs will begin to mend with you from this hour.

The magical change which the training of the muscles of the human countenance in one particular direction will make upon our habits of thought, even to involving a correction of character, who can explain ? Strange that a melancholy mood of the mind should go with a downward curve of the mouth, while a serene and equable frame invariably accompanies an upward one !

But so it is. Let us then make it the real business of our lives to cultivate this all-powerful "upward curve !" Thus we shall open the door and let into our hearts and lives the fair goddess of Hygiea, and all her goodly, well-favored train, love, joy, peace, and the rest.

With these faces of ours, which have been set so long in the frown of discontent or the pucker of worry, it may be a little hard at first to coax the unaccustomed muscles ; but once we get the physical habit established the nervous energy will travel the same route over and over without thought or volition of ours ; and whether reckoned as cause or as effect the victory will be worth the winning.

TIGHT BOOTS AND SHOES.

A NEW YORK weekly condemns tight foot covering in the following style : If the remark were made that there is nearly as much evil done by the constant wearing of tight boots as by tight lacing, it would be at least

going in the direction of truth. Were the reader to be conducted round the walls of a large surgical hospital, and to witness the ugly cases of deformity, distortion and ulceration caused by the neglect of the feet, he would not soon

forget it. And the worst forms of these are caused by the tight boot. Toes are plaited, bones are twisted, become necrosed, and have to be removed, and lameness for life ensues. But apart from any such painful results as these, the very discomfort alone of having the feet worn in a vice must be great, and certainly does not tend to improve either the health or the temper.

That a nation's sons and daughters should learn to walk well and with some degree of stateliness, is, perhaps, more important than it seems. For the upright position conduces to the health of every organ of the body. But no man in tight boots ever did or could walk properly, and no young lady with very high heels either. In the last case, the

most that can be said for the gait, is that it is fashionable; it certainly is not beautiful.

It is when young that one should learn to walk. Even the little bear's mother knew that when she threw him on the ground and told him to be off. Perhaps human beings know the fact too, but it would hardly appear so in thousands of cases, for in good society we do not often notice that the poor wee feet of "totties" not ten years old, have been crammed into boots two sizes too small for them. No wonder children are sometimes peevish, though they strive to look prim. Their feet may become stunted in size, but the cruelty is likely to stunt their very minds as well.

POPULATION; MEANS OF RESTRICTION.

RESTRICTION of population is a demonstrated necessity of the future. To meet it there are but two general methods—*limiting the number of marriages*, and *limiting the number of offspring to each*.

Limiting the number of marriages would be a restriction of personal liberty, which only positive law and severest penalties could effect. Then the class of citizens permitted to contract such alliances must be well defined. Some personal quality, accomplishment, or condition, must be made the basis of eligibility. Strong as the social instincts are the general effect of such a law could be no other than monotony, and sameness of effort, which are detrimental to the best interests of humanity. If wealth were made the test of eligibility the whole world would become a vast stock-market, and thefts and fraud would be perpetrated everywhere. Financial might would be financial right. And thus if any other condition depending upon individual effort were made the test. If morals, or religion, how would those qualities be ascertained? If intellect, what degree, and

of what faculties, and how recognized? If a sound, healthy body and normal functions, a strict observance might forbid all; a loose observance permit an excess. In any case the variety of culture and complete development of humankind must be replaced by degeneration or departure from harmony, in the direction of the legal requisition; and the test must be frequently altered, for the law of supply and demand governs all such transactions. Besides this more than half of the race must remain unmarried, which, in a period of selfishness and degradation such as a law of this tenor would indicate, would encourage, if not compel, the deepest social crimes, and their consequent moral blight and physical destruction. But positive law, the only agent which could effect all this degradation, is the will of the majority, and a yoke so galling could never be forced upon more than half of mankind. As long as the pre-creative faculty is part of the human constitution, so long the due performance of its function is binding upon all, and any undue restriction is a departure from the course of nature and the laws

of life. Restriction of population must therefore be effected by limiting offspring.

If there be any order or purpose in the course of nature, a period of earth existence as long as the inherent strength of the organism will warrant is necessary to human completeness and a proper entrance upon a future state. Murder, then, becomes heinous in proportion to the period of life cut off. Fœticide and infanticide are consequently rankest forms of murder. They are the greatest possible perversions of nature, and rob the victim of all the pleasures and advantages which are annexed to a long life. Restriction, made necessary by the operation of natural causes, can not be met rightfully by such unnatural, brutalizing means.

Number of progeny depends, primarily, upon gender and mutuality in marriage: and, secondarily, upon the plane of association. Racial progress is shown to be in the direction of physical preservation and mental and moral elevation, the perfection of mankind. We should look, then, for the preservation of gender, increase of conjugal mutuality, and an elevation of the plane of association. Two of the conditions of *increase* of population will be preserved, but these will be more than counterbalanced by change of association. Life on the low, propensional plane is very provocative of passion. As the plane elevates, and intellect, refinement, morals, and religion become dominant, thought less frequently leads to it, for association of faculties, generally, is first among those of the same group, then, to surrounding groups. When life becomes more an ideal, refinement and high sentiment and noble thought will mark the association of man and woman, and gender will find expression in its mental rather than its physical aspect. It appears then that human elevation, which is to be coincident with increase of population, naturally leads to the required restriction.

It would require a keen, critical analyst, and much fuller and more carefully classified data than we now possess, to determine the actual influence of scale of being, physicality, gender, health, education, domestic relations, habit, occupation, and other conditions, upon the number of progeny; hence the great difficulty, if not impossibility, of determining the true cause of those differences of fertility presented by the several races. By the best statistics, the rate of increase in the American Negro, for a period of ten years, is found to be a few per cent. higher than that of native born whites. Standing alone, this would appear conclusive in favor of restriction by elevation; but these whites are of all nationalities, some quite as low in the scale of being as the colored, and the difference presented may really be due to physical weakness rather than human elevation in the whites. The reliability of such evidence is lost.

Better evidence is to be found in the fact that men whose occupations involve continued intellectual and moral efforts have fewer offspring than those whose occupations and habits involve more of the physical. Pass through the whole list of worthies, from the Abbots and Adamses to the Youngs and Zenos, turning the pages of hundreds of biographies, and you will find many with none, a goodly number with one, two, and three, some with four and five, and a few of our early Puritans of great ability, with numbers exceeding this. The average will fall quite low. Note the contrast between these and the body of mankind. By the census of 1880, the average number of persons to each family was found to be 5.67, or 3.67 children to each pair. Now, there are a number of men and women who are the children of aliens, and yet unmarried, which will reduce this average to some extent though hardly appreciable. It is obvious, however, that this number is much too low to represent the actual

number of children born to each marriage; for, among the families which make up the aggregate of our population many are aged, their children being married and numbered among the families; while these, being yet young, frequently have none, or only one. Between these two there is a numerous class who have completed various degrees of the period of fertility, and consequently present only a proportionate number of progeny. In view of this, five to each union would not seem overdrawn. Population is rapidly increasing. Merely to maintain the present number, would require that two children to each union should reach maturity and reproduce. To produce this vast increase and maintain in increasing numbers the swarms of celibates, male and female, which are found in Eastern cities and on the Western plains, would require at least three. Half die before reaching maturity. This would indicate six as the average. Considering that the physical constitution and vital stamina of the intellectual class is superior to that of common men, this contrast is certainly a telling fact in proof of restriction by elevation.

If this be true, the philosophical principle that all necessities have been provided for in the beginning and by natural law, is vindicated. It also shows that the great law of balance, which restricts animals to their district and prevents excessive reproduction, applies also to man, only with modified means. Exception is only apparent, being due to his vast geographical area, his highly adaptive and progressive nature, and his comparatively recent introduction. He has not yet attained a maximum when restriction will be necessary.

JOHN W. SHULL.

—♦♦—
SOME GOOD RULES FOR DYSPEPTICS.

—1. Eat two meals a day.

2. Eat slowly, masticate the food very thoroughly, even more so, if possible, than is required in health.

3. Avoid drinking at meals; at most take a few sips of warm, unstimulating drink at the close of the meal, if the food is very dry in character.

4. In general dyspeptic stomachs manage dry food better than that containing much fluid; so avoid light soups.

5. Eat neither very hot nor cold food. The best temperature is about that of the body. Avoid exposure to cold soon after eating.

6. Be careful to avoid excess in eating. Eat no more than the wants of the system require. Strength depends not on what is eaten, but on what is digested.

7. Never take violent exercise of any sort, either mental or physical, either just before or just after a meal. It is not good to sleep immediately after eating.

8. If it is thought necessary to eat three times a day make the last meal very light. For most dyspeptics two meals are better than more.

9. Never eat a morsel of any sort between meals.

10. Never eat when very tired, whether exhausted from mental or physical labor.

11. Never eat when the mind is worried or the temper is ruffled, if it is possible to avoid doing so.

12. Eat only food that is easy of digestion, avoiding complicated and indigestible dishes, and taking but two or three kinds at a meal.

13. Most persons will be benefited by the use of oatmeal, wheat meal, or graham flour, cracked wheat, and other whole-grain preparations, though many will find it necessary to avoid vegetables, especially when fruits are taken.

14. Some kind of fruit, ripe, fresh, or in the simple form of stewed or canned should be eaten at breakfast, as fruit promotes digestion. The use of fruit obviates the necessity of drinking while eating, and for those who have been habituated to drinking, a dish of stewed apples or prunes, will serve as well.

THE CAUSES OF INSANITY.

AN interesting table showing the assigned causes of insanity in the cases of all patients admitted into public and private asylums of England and Wales during ten years 1878-88 is given in the report of the Commissioners in Lunacy just issued. These causes are not taken from the statements in the papers of admission of the patients, but are those which have been verified by the medical officers of the asylums. The total number of admissions during ten years was 136,478, being 66,918 of them male and 69,560 of the female sex. The totals in the following table exceeds the total number of patients admitted, as in some cases there was a combination of causes.

Causes of Insanity.	Male	Female	Total
MORAL :			
Domestic trouble (including loss of relatives and friends).....	2,787	6,782	9,569
Adverse circumstances, (including business anxieties and pecuniary difficulties)	5,493	2,567	8,060
Mental anxiety and worry (not included under the above two heads) and overwork.....	4,435	3,843	8,278
Religious excitement.....	1,693	2,076	3,769
Love affairs, etc.....	456	1,768	2,224
Fright and nervous shock	635	1,314	1,953
PHYSICAL :			
Intemperance in drink.....	13,286	5,004	18,290
Sexual diseases.....	2,684	763	3,447
Over-exertion.....	449	312	761
Apoplexy.....	1,557	129	1,686
Accident or injury.....	3,521	702	4,223
Diseases of women.....	—	11,315	11,315
Puberty.....	170	412	582
Fevers.....	489	301	790
Privation and starvation.....	1,112	1,475	2,587
Old age.....	2,568	2,205	4,773
Other bodily diseases or disorders.....	7,420	7,299	14,719
Previous attacks.....	9,566	13,138	22,703
Hereditary influences ascertained.....	12,708	15,360	28,068
Congenital defect ascertained.....	3,461	2,420	5,881
Other ascertained causes.....	1,584	738	2,322
Unknown.....	14,286	13,085	27,371

The total number of lunatics, idiots, and persons of unsound mind in England and Wales on January 1 last was 84,340, being an increase of 1,697 on the figures of the previous year. The

ratio to the whole population has arisen from 28.67 to 29.07 per 10,000, which is the highest point at which it has stood. The rate of recovery to the admissions is calculated at 38.71 per cent.

WHAT THEY ARE REALLY.—Aqua fortis is nitric acid.

Aqua regia is nitro-muriatic acid.

Blue vitriol is sulphate of copper.

Cream of tartar is bitartrate potassium.

Calomel is chloride of mercury.

Chalk is carbonate of calcium.

Salt of tartar is carbonate of potassa.

Caustic potassa is hydrate of potassium.

Chloroform is chloride of formyle.

Common salt is chloride of sodium.

Copperas, or green vitriol, is sulphate of iron.

Corrosive sublimate is bichloride of mercury.

Dry alum is sulphate of aluminum and potassium.

Epsom salts is sulphate of magnesia.

Ethiops mineral is black sulphate of mercury.

Fire damp is light carburetted hydrogen.

Galena is sulphide of lead.

Glauber's salt is sulphate of sodium.

Glucose is grape sugar.

Goulard water is basic acetate of lead.

Iron pyrites is bisulphide of iron.

Jeweler's putty is oxide of tin.

King's yellow is sulphide of arsenic.

Laughing gas is protoxide of nitrogen.

Lime is oxide of calcium.

Lunar caustic is nitrate of silver.

Mosaic gold is bisulphide of tin.

Muriate of lime is chloride of calcium.

Nitre or saltpetre is nitrate of potash.

Oil of vitriol is sulphuric acid.

Potash is oxide of potassium.

Realgar is sulphide of arsenic.

Red lead is oxide of lead.

Rust of iron is oxide of iron.

Sal-ammoniac is muriate of ammonia.

Slacked lime is hydrate calcium.

Soda is oxide of sodium.

Spirits of hartshorn is ammonia.

Spirits of salt is hydrochloride of muriatic acid.

Stucco, or plaster of Paris, is sulphate of lime.

Sugar of lead is acetate of lead.

Verdigris is basic acetate of copper.

Vermillion is sulphide of mercury.

Vinegar is acetic acid diluted.

Volatile alkali is ammonia.

Water is oxide of hydrogen.

White precipitate is ammoniated mercury.

White vitriol is sulphate of zinc.

—*American Artizan.*

ANIMAL MURDER.

ANIMALS are little studied, little appreciated by most people. The breath of God in the poor foreign creature is cut off as ruthlessly as though we ourselves, were masters of life and death instead of faint hearted victims. Animal—brute—murder is a vice which most of the honored and great, even, do not hesitate to commend, ignoring the selfishness of the thought, and faithful to the supposed necessity.

I have in a former article already stated that two impulses guide the human soul: the animal, derived from the brute we slay, and the spiritual—our crown. This latter should rule the world, and bring us to an entrance into heaven. Man and the brute are much alike in the animal nature. God and man are alike in the spiritual nature. Man is God's servant. The beast is servant to man. The accustomed liberty of the brute is at war with the moral impulse of obedience to man, which constitutes the perfect servant. The accustomed animal liberty, or the animal impulse of man, is at war with the spiritual impulse of perfect obedience to God. We, the servants of the Most High, have also by divine intention servants for our pleasure, use, and wisdom. But as God allows a partial independence to ourselves, so we must by the law of perfect masterhood allow a partial independence to our servants. We have no right to impose on the divinely implanted impulse, the moral disposition of brutes, and torture, kill, and afflict the houses of flesh that God made.

People, as a rule, I admit, are not in the state to educate animals successfully.

I, who have lived among them for a summer, can not comprehend a hundredth part of their uses. If I could put a mental construction on all the mutterings and cacklings of the fowls, the voices of the lambs, and the happy conversations of the other domestic creatures, how supreme I should regard myself—able to act as the true mistress to my servants! As it is, with our dull imitations, we are but weaklings in supplying outside needs.

The useful, so called, and harmful are beyond doubt required. For what, we must discover knowledge to tell us. It is belying the perfection of the Maker of this magnificent and well-ordered universe to create a useless thing. If the thing is not useless it is useful. We have never yet found a void in nature.

As the spiritual impulse in its growth of faculties modifies the action of the animal impulse that brings the human being back to the level with the brute, from which he started, so the moral impulse of their obedience to man, in animals proper, modifies the savage wildness which at present unfits them for service, and can overcome it. There is an evidence of this in the horse, our most treasured and domesticated brute. One can be trained to the utmost gentleness. Others are seemingly as untamable and disobedient to the master as he can be disobedient to God. A further fact is that the horse as well as the man knows when he is balky and expects the punishment he is bound to get.

In order to prove exclusively this action, this existence of the divine impulse

of obedience in brutes, examine the brain of some creature for the discovery of such faculties as display in faith, affection and obedience to man. To support the impulse, there must be faculties in the state of growth. A wild animal will necessarily have very small if any such development.

A good master generously treats his servants. I affirm that this matter is important, that the animal is for man,

and to be respected as an individual spirit for our use, while the body which holds the spirit is not to be pulled into bones and muscles and eaten for our accomodation. It is not in service to the stomach, but to the mind. It has been demonstrated that we possess a faculty that involves a love for animals. Is there nothing in the animal corresponding to this? Observe.

MAY CLINE.

NOTES IN SCIENCE AND INDUSTRY.

The December Eclipse of the Sun.—The last session of Congress appropriated \$5,000 to defray the expenses of an expedition to be sent under direction of the Secretary of the Navy to the west coast of Africa, to observe the total eclipse of the sun on December 22. It is reported that the Pensacola will be employed for this expedition, and the preliminary details have been arranged by a board, of which Commodore John G. Walker, chief of the Bureau of Navigation; Capt. R. L. Phythian, superintendent of the Naval Observatory; Prof. Asaph Hall, of the Naval Observatory, and Prof. Simon Newcomb, superintendent of the Nautical Almanac, are members. One of the navy officers, familiar with the details, says: "The expedition will be divided into two parties, one of which will be under the direction of Prof. Joseph Russell, of Washington, and the other under Prof. Todd, of Amherst. The former is an expert in solar photography, and will have charge of the corps detailed to obtain photographs of the eclipse. Permission has been obtained from the Portuguese government for the expedition to land at St. Paul de Loanda, the capital of the Portuguese possessions on the west coast of Africa. The expedition will proceed from that place inland to Maxima, on the Cuanza River, where the two parties will separate and take up stations near that point, and have all their instruments set up before the date of the eclipse. The line of the center of totality will strike the coast at a point about 100 miles south of St. Paul de Loan-

da, and pass directly over the stations. The expedition will be absent about three months."

The Record of a Street-car Cable.—The following record of a street-cable that recently wore out its life doing duty on the California street road will be read with interest. It was first published in the *Pacific Lumberman*. The diameter of the cable when laid was one inch and a quarter, but 20 months of constant hauling and wear over the pulleys and through the grip thinned it down one-eighth of an inch. Its length was 17,513 feet, and its weight, 44,604 pounds. For nineteen hours a day it kept moving every day for 20 months, and as its speed was seven miles an hour, the distance it traveled was 79,800 miles. It transported about 6,000,000 passengers, or about six times the population of the State, and turned over to the company \$300,000 worth of nickels, being at the rate of \$15,000 a month, or \$500 a day. As the total power of the road was 400-horse power, it may be calculated this rope was doing as much hauling while in motion as 200 horses, and as each car hauled by horses uses four teams a day, the daily work of this cable was equal to that of 800 horses, with a deduction, however, for the great power required to move 44,604 pounds of cable. The cable was composed of six strands of steel wire cables, each one containing 19 wires, varying in size from six to eight wire gauge, and twisted around a stout hempen core five-eighths of an inch in diameter.

The New York Academy of Anthropology.—At the meetings of November much interest has been exhibited. November 6, Prof. G. F. Wright, of Oberlin Seminary, addressed a large audience on the relation of man to the glacial period; and Nov. 12, the Rev. John W. Sanborn, of Lockport, N. Y., talked of the manners and life of the Indians, especially those of the N. Y. reservation. The lecture of Prof. Wright was especially interesting, because of his mention of recent discoveries in the glacial drift that have a most important effect upon the determination of the existence of man. After delineating, with the assistance of a large map, the line of deposits made by the receding glacier across the continent, he described a small stone god that was recently brought up by a sand pump near Boise City, Idaho, from a depth of 320 feet beneath the surface of the earth. He and many other scientists think it is the oldest mark of human life that has yet been discovered, and believe it to be the work of the antediluvian man. It shows its great age by the peculiar coating of an oxide of iron that covers it. It was brought to Prof. Wright's attention by President Adams, of the Union Pacific Road only a few weeks ago. This was the second time that it has been exhibited. It is about one and one-half inches long, of a hard flint stone, very rudely chipped. As a work of art it is very important, showing that the prehistoric man who designed it was far removed from the intermediate condition, cranially and mentally, that is assigned to his fellows by some evolutionists. The meetings of the Academy are held in one of the large lecture rooms of the Training School for Teachers, which has been tendered for the purpose by the President and Trustees of that institution.

A Simple Electric Generator.

—An apparatus described in the *Elektronischen Echo* (Leipsic), should be of universal interest now-a-days. By means of this apparatus an electric spark can be obtained in the simplest way imaginable, by any one, with very little expense of time or trouble. A strip of tin foil is fastened around the center of a common lamp chimney, and then a straight strip of the same material is pasted on the chimney from one end of the

same to within a centimeter of the ring, then a piece of silk is wrapped around a brush, and the interior of the chimney is rubbed briskly with it, but the fingers must not touch the tin foil. If this is done in the dark, each time that the brush is withdrawn from the chimney a bright electric spark will be seen to spring from one piece of tin foil to the other. Many other experiments of this kind can be tried with this simple apparatus. For example, it may be shown that poor conductors can be electrified by rubbing, further, that good conductors can carry the electricity from an electrified body to one which has not been charged with electricity, and finally the power of bodies charged with the same kind of electricity to repel each other, may be illustrated in the following manner: Bind a woolen thread (or better still, an iron or brass wire) over the tin foil ring, and on the end of this hang little strips of thin paper. If the interior of the chimney is now rubbed, the silk-covered brush being introduced at the opposite side to that into which it was formerly placed, the ring of tin foil is charged with electricity, which is conducted by the thread (or wire) to the strips of paper, which fly apart. As in all such experiments, the loss of electricity through dampness must be avoided. This can be done by thoroughly drying the brush, the silk, and the chimney at the fire, before trying the experiment.

A Hot Place.—One of the hottest regions of the earth is along the Persian Gulf, where little or no rain falls. At Bahrin the arid shore has no fresh water, yet a comparatively numerous population contrive to live there, thanks to copious springs which burst forth from the bottom of the sea. The fresh water is obtained by diving. The diver, sitting in his boat, winds a great goatskin bag round his left arm, the hand grasping its mouth; then he takes in his right hand a heavy stone, to which is attached a strong line, and thus equipped he plunges in and quickly reaches the bottom. Instantly opening the bag over the strong jet of fresh water, he springs up the ascending current, at the same time closing the bag, and is helped aboard. The stone is hauled up, and the diver, after taking breath, plunges in again. The source of

these submarine springs is thought to be in the green hills of Osman, some five or six hundred miles distant.

A Useful Cement.—Procure a piece of unvulcanized, pure India-rubber, and with a wet knife cut from it the thinnest shavings possible; with a pair of sharp shears divide the shavings into fine shreds. Fill a wide-mouthed bottle about one-tenth full of the shredded rubber. With pure benzine, fill the bottle three-fourths full. The rubber in a moment will perceptibly swell if the benzine is a good article. If frequently shaken, the contents of the bottle in a few days will be of the consistency of honey. Should there be clots of undissolved rubber through it, add more benzine; if it be thin and watery a little more rubber is needed. A pint of cement may be made from a piece of solid native rubber, the size of a large hickory nut; this quantity will last a family a long time, and will be found invaluable. Three coats of it will unite, with great firmness, broken places in shoes, refractory patches, and detached soles on rubbers. It will fasten backs on books, rips in upholstery, and will render itself generally useful to the ingenious housewife, as it will dry in a very few minutes. It forms an admirable air and water-tight cement for bottles, by simply corking them and immersing the stoppers in it.

A Curious Insect History.—There is a hard sandstone in Provence, interspersed with friable strata, in which burrowing insects construct their chambers. A kind of bee, *Anthophorus*, makes nests there and fills them with honey, on which it leaves its eggs to float; then, finally plasters up its chamber. Instead of *Anthophores*, entirely different insects come out from these nests—*Sitaris*, belonging to a group very remote from the bees. Let us see how they manage to substitute themselves for the legitimate proprietor of the nest. In the autumn the impregnated female of the *Sitaris* deposits her eggs in front of the sealed galleries of the *Anthophorus*. The young are hatched from these eggs, and lie in front of the closed doors, and thus remain in a mass, mingled with the dust and rubbish of the place, through the winter. In the spring, such of the bees as have reached their term come out from their prison.

These earliest insects are all males; but, though precocious in being hatched, they are still tender to the changes of the weather, and remain half frozen and torpid in the dust along with the young of the *Sitaris*. The time has come for the last to begin to act. They have been called *Triangulins* by Leon Dufour, from the claws with which they are armed, and by which they attach themselves to the bodies of the *Anthophores* waiting for the next stage in the conditions that favor their development. With fine weather the female *Anthophores* come out and carry on their work of burrowing and storing up honey till the time of fecundation arrives. Then the *Triangulin* changes its quarters from the body of the male to that of the female, where it remains on the watch for the laying of the egg, when it transfers itself to that, and with it enters the honey-chamber. With it it is shut up when the *Anthophorus* closes the door of the chamber for another season. The *Triangulin* will not eat the honey, for it is sure death to it by drowning if it touches it. It floats on the egg and feeds upon it; when it has used up its ration, it changes its shape, as well as its habits and taste. It is as eager now for the honey as it was to keep away from it, and grows upon it till it goes through another change and becomes the *Sitaris* which we observe coming out from the chambers of *Anthophorus*. Three years of assiduous studies and investigation were required to obtain this curious life-history—*Science Monthly*.

To Preserve Flowers.—Ladies who surround the stems of their corsage bouquets with moistened powdered willow charcoal, which in turn may be wrapped in moss or cotton, will find their flowers remaining fresh long after the departure of all beauty from those of their less thoughtful neighbors. The same substance placed in the bottom of the vase in which flowers are kept, will be very useful, provided the stems are cut off with a sharp knife once or twice a day.

Copying Printed Matter.—It is stated that printed matter can be copied on any paper of an absorbent nature by dampening the surface with a weak solution of acetate of iron, and pressing in an ordinary copying press.



NEW YORK

December, 1889.

PURPOSE.

A GOOD purpose, what an inspiration! They who have it and go perseveringly forward in endeavor to accomplish are doing a divine work. The light that leads them on is a celestial beam, and their nature expands as they go on. The gospel of Phrenology teaches man the necessity, the virtue, the advantages of purpose, and as clearly demonstrates to each individual *that* he has a part in the great theater of the world. It illuminates every sphere of useful activity with cheer, and makes honest labor noble.

The great preacher of Boston said not long ago, "It is not what the best men do, but *what they are* that constitutes the truest benefaction to their fellow men." At the risk of repeating what we may have uttered before in this place let us say that this gospel shows the value of life, and how the willing heart can gather infinite delight from countless influences that exist in earth and air and sea.

Our Phrenology, the Phrenology taught in these pages and in the schools approved by this JOURNAL, offers no assurances to the melancholy pessimist but bids him to take comfort to his soul

and look above and behold the evidences of goodness. He that discourses of the perils and misfortunes that beset human life, who dwells upon the prevalence of wrong, ignorance, and brutality, and sees no higher motive in human conduct than some phase of selfishness, lives in a low sphere of thought, has no high purpose. He has not read the lesson of his being aright; he has sold his noble birthright for a cheaper price even than a mess of pottage.

Some one tells the story that seems to fit in here. He was walking in one of the streets of New York and saw two ragged boys sauntering along together. One of them had a bunch of half withered flowers, and now and then both stopped to admire and smell of them. "Look sharp, Billy," he who held the flowers said, "p'raps you'll find some-thin' bimeby." A little later the same good natured voice was heard with "Hullo Billy, ef somebody hain't dropped a peach after takin' only a bite out of 't, and 'taint much dirty, neither. Here, Billy, you just have a bite of it fust." Billy responded to the invitation to try the flavor of the discarded fruit, but was evidently rather modest about putting his teeth very deeply into it for his companion said, "Pshaw, Billy, that aint the way; bite bigger. Mebbe we'll find another 'fore long."

So the apostle of this gospel of Phrenology urges all to be courageous, "bite, bigger," and take larger morsels of the fruitage of truth; not to withdraw snail-like into the contracted shell of narrow views and sordid craving, exhibiting merely the breadth of a

"clown's back

Turned broadly to the glory of the stars,"

but casting aside the old clogs of habit and petty selfishness to demand a larger share in the world's work and duty.

ON THE DISPOSAL OF THE DEAD.

WE have just thumbed the leaves of a little pamphlet in which are collected the opinions of sixty or seventy people, more or less known in American society, with regard to cremation. As this pamphlet comes to us from a company that has set up a crematory for public use, it is to be expected that the weight of opinion expressed therein would favor this method of disposing of the dead. The question, however, arose, how many of the number would positively demand of his family and friends to see that his body was reduced to ashes? We felt that the common repugnance to being reduced, soon after the heart had ceased to beat, to nothing but a little heap of dust, would at the last moment exercise its influence, and the men who had written so warmly concerning the great benefit to result to society from a general adoption of cremation, would after all resign their mortal remains to the "funeral director" for interment in the much beshafted cemetery on the hillside.

On scientific, philosophical, and sentimental grounds we are not in favor of the old-fashioned burial system, and can not altogether respect the judgment of those who with a full understanding of those grounds will yet cling to the mischievous practice. We know that the crematory would solve the problem effectually of disposing of the dead, but it seems to us a departure much too great from the practice of ages to be

made general, and that some other method must at least be introductory that will possess features of attraction in itself to the average mind.

There is the mausoleum plan. It seems to us that it should win upon public attention when once understood, for it combines features of economy and aesthetics that are very commendable. Instead of the vast garden cemetery, situated at an inconvenient distance from town, and with its associations of weariness, grimness, exposure, and expense, despite the sculptured elegance of monuments and the horticultural neatness of grounds, we are assured that a structure of stone and iron of handsome design could be erected in the midst of a city or town capable of accommodating from ten to forty thousand bodies, each being placed in a special compartment to be owned as cemetery lots are by individuals or families, and accessible like them. These compartments are to be ventilated by the fanning method, noxious gases and vapors arising from decomposition being carried by a pipe and shaft system to a central furnace in the sub-cellar and there consumed. As a result of this process the body becomes desiccated gradually in a manner absolutely inoffensive to sight and smell; the weight is reduced two-thirds or more, but the form and features are but little altered.

By this method, or an improvement upon it that would be likely to be made were the mausoleum idea to "take," the identity of a body would be preserved much longer than it is when under the sod, and there would be none of the hideous associations of decomposition, contamination of soil, atmos-

phere, or water, that necessarily occur after the ordinary form of burial.

No cemetery establishment appears to be secure from spoliation or destruction in the course of time; especially when its site is in or near a growing city is it liable to be invaded, and its memorials broken up; but the mausoleum, built as a feature of architectural ornament, as well as a resting-place for the dead, may have the character of permanency. A true temple in which science, art, sentiment, and religion are centered, it will have for the living an interest like the ancient temple of the Greeks and Romans, and its safety and perpetuity be secured.

THE EXPOSITION OF 1892.

A WORD of comment is seasonable on this much agitated subject—especially as it is suggested by the attitude of many of the more prominent citizens of New York. When we consider the expenditure and effort involved in a demonstration on the colossal scale that would be desirable for the commemoration of America's discovery, or rediscovery, by Columbus, it is but natural that there should be much uncertainty as to its outcome, and in a city where business is the all-absorbing interest with its hundred competitive interests, the commercial factor would be the most prominent consideration. It is said that other cities, notably Chicago and St. Louis, want the Exposition, and bid high in the millions for it, but certainly New York City can afford to put more dollars into the undertaking than these, and doubtless would "bid higher" than they, rather than let them have it.

But certain considerations enter into this proposed celebration of a great historical event that seem to be much overlooked by those who discuss it. One is, the propriety of celebrating the discovery of America by Columbus in a city so far from the land that the Genoese navigator first sighted. San Salvador, or Cat Island, is one of the Bahamas, and lies close to the Tropic of Cancer. The discovery of North America belongs to the Venetian, Cabot, who coasted down from New Foundland in 1497. It would seem reasonable that the four hundredth anniversary of Columbus's discovery should be claimed by the Spanish settlements of the Antilles, and its natural place would be the leading city of that region, Havana.

If, however, such a designation as that is to be taken merely in the light of a pretext for setting 1892 as the time, and it is expected to have a *National* character, then should the Exposition not be placed at the Nation's capital? Would not a country of Europe look upon any national demonstration involving great expense and general popular interests as naturally the property, so far as location is concerned, of the Nation's capital?

So far as popular convenience is concerned, St. Louis, as a representative Western city, would be a proper place, but a national festival would be deprived of many of its most valuable associations were it not celebrated at the center of national government, especially if that center has in itself features of historical attraction that are not to be found any where else.

We doubt not that if the affair be held in New York it will be a good

thing for the general population of the city and neighborhood, and personally we should not object to such holding, for our interests are identical with those of our fellow-townsmen, but in that event we should urge the point of consistency, and have it called New York's Great Exposition.

A WORD FOR OURSELVES.

IN another place a formal announcement is made regarding the program for next year. The experience of the past twelve months warrants the statement that the publishers have not made the mistake that some readers appeared to claim in reducing the subscription rate. The circulation of the magazine has been considerably extended, and with that extension has been obtained what was the prime motive of the reduction, an entrance into a fresh sphere of readers, where the influence of the PHRENOLOGICAL would be productive of benefit. The evidences of such influences have begun to appear already in a manner that is more than ordinarily gratifying and the prospect of fresh additions to the list of regular readers is excellent.

Down in Brazil there has been a memorable event, an event that deserves a prominent niche in contemporaneous history. We think that the late Emperor showed a very sound spirit in view of the change that had been wrought in popular sentiment; and we congratulate the Brazilian people in the peaceful manner in which so great a governmental transformation was brought about. How their conduct contrasts with the history of political changes among the nations of Europe!

The whole movement is promising, we think, and points to the rising of a great South American republic that may consort with the United States in all public measures that contribute to strengthen and develop the industrial and commercial resources of both nations, and promote also a mutual growth of substantial morality in their people.

Some years ago when Dom Pedro was in New York, we met him in company with our late friend of humanity, Peter Cooper, and then the Emperor of Brazil did not impress us as possessing that autocratic quality that is associated with the ruler of an empire who believes in the "strong government" that must rest upon a vast array of bayonets and cannon. Doubtless his liberal, kindly spirit has nourished much of the growth of ideas that now blossom into activity and necessitate his surrender of the sceptre.

As for the PHRENOLOGICAL JOURNAL, some reader may perceive an analogy here in the influence of its matter and purpose exerts in bringing about a moral transformation in the mental life of many who may at first scan its pages carelessly, but later are found reading them earnestly, and adopting their teachings and suggestions into habit and manner. The policy of this magazine is never changed. It will aim as heretofore, to help men and women to think rightly and to live rightly. With many examples to give of those who have derived great and lasting benefit from its pages and gratefully acknowledged the fact it expects to make many other like examples in the time to come—in 1890 and the years following.

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.

ALWAYS write your full name and address plainly. If you use a pseudonym or initials, write your full name and address also.

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. Personal and private matters addressed to the Editor in the professional capacity of a physician will also receive his early attention.

A BUSINESS EDUCATION.—C. O.—We are inclined to think that now-a-days a young man, or young women, needs about as much education for business as for what is called a professional pursuit. In the centers of business life you will find a large proportion of college-bred men among the merchants and clerks, and that proportion is constantly increasing. The point of a good education being important in the world of commerce may not appear so clear to the majority of those who commenced as boys to learn the art of store-keeping and "grew up" in it, but to the man of broad view concerning the use and purpose of life, a liberal education is the best possible beginning. What we want in every community are not close, narrow-eyed self-seekers, but men who can see beyond the small circle of their own personal interest, and take in the relations of society to those means that contribute to the upward development of human nature. The question of education to-day, as one properly says, "is not one of dollars and cents, but of developed manhood and increased capacity for using wisely the money that may be acquired."

As a man among his fellows of like pursuits the educated man commands more respect than the uneducated, and is more likely therefore to rise. This fact is itself an argument strong enough, we think, to decide the parent who cares for the future of his boy.

ERYSIPELAS.—M. F.—In the treatment of erysipelas or of any eruption of a severe and irritable character we should have regard to the condition of the patient's stomach and bowels, and study to adapt the diet so as to furnish needed nutrition and not add to the blood disturbance. The disease itself shows that the blood is impure, and the first treatment should be given with a view to alleviate the fever and skin irritation. The application of wet cloths, enemmas, and baths are efficient in reducing the fever, while the feet should be kept warm, and the head cool. Sometimes a special application to the inflamed part affords prompt relief when the burning is severe, as for instance, an ointment of lanolin and ichthyol in equal parts, and following that with a light, wet compress. Hygienic treatment is best in such cases, but requires administration by one who understands what he is about.

NATURAL EXERCISE.—J. B.—Yes. A system of exercising the muscles that has nothing of strain, jerk, and spasmodic change in it is best. So far as we have examined the method of Delsarte it seems to us in accordance with nature. No apparatus is necessary, and there is nothing introduced in the manoeuvres that tends to over-fatigue or exhaust. The main purpose appears to be to bring into use every muscle, and to educate it to do its work easily and gracefully. For those who are required to work in such a way that only a few of the muscles are exercised this system affords change and relief, and does not exhaust like the use of dumb-bells, weights, and apparatus designed to try one's strength.

MEASURING CHILD BRAINS.—C. N.—We have no extended list of observations bear-

ing on the development of the child brain—from birth to maturity. The standard treatises give some general information on the subject, but no tables that would be of service in the special line our correspondent mentions. At the present day attention is given by some, who have opportunity for observation in hospitals and houses for children, to the early development of the mental faculties, and some very interesting facts have been recorded. If these observers would take into their consideration the cranium also, and compare its growth from month to month with the particular expression of facultative activity, we should secure in time very valuable *data* bearing upon brain development. We should like to have the privilege of daily visitation at some home where children from birth to seven years are kept under the care of intelligent and watchful nurses. We think that in the course of two or three years we should obtain a series of observations that would add much to psychology, and the science of functional localization.



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

Doings of Women Folk.—No. 2. Woman's world fairly bristles with activity. All classes are on the alert, and each are in the field with their special organization, to do their own peculiar work. The working women's clubs number over 200,000 members in the city of New York. They are banded together for mutual protection against the aggressions of employers, and have secured some special legislation in their own interest. The Mutual Benefit Associations have become almost universal in all the large establishments, where hundreds, if not thousands, of women are employed. It is a simple agreement between themselves whereby each employee pays an initiation fee of one dollar, and after that thirty cents per month, and in case of sickness or inability to obtain work, receives an income of five dollars per week.

This may, in truth, be called the Era of

Organization on the part of employers and employees, with social, religious, political, commercial motives, all for mutual defense and mutual benefit, and all forming the "protoplasm" of the coming civilization. All of these organizations have to do in some way with the question of Poverty, and after all the main object is to keep the wolf from the door. A contest with the wolf in some sort of a way has seemingly been the *bête noir* of human enterprise since the world began. The question arises, is it really the highest order of gladiatorial combat of which the human race is capable, or is it possible to enter the tournament of human ambitions for some higher grade of contest? Why not slay the wolf, and enter the arena of combat on the intellectual and moral plane, with no wolf gnawing at the heartstrings, and consuming the vitality? The particular enterprise which women have taken under their special management, and which outranks all the others in scope, and magnitude, is that of the School Question. The reading public is familiar with the details of their work in the City of Boston one year ago. The aggressions of the parochial schools upon the domain of public instruction, and a demand that the public money should be divided *pro rata* in proportion to the attendance, attracted the attention of the Boston women, and being vested with the right of suffrage on school matters, in the Bay State, they rallied their force and changed the result of the election about ten thousand. The leaders of this movement in Boston have set up their headquarters in New York this year, and expect to have an active campaign here.

Just to give these women an idea of the magnitude of their undertaking, we will inform them that it is not the ballot box with which they have to deal in this city, but an absolute despotism. They will not be called upon to change the majority vote, but the despotic sway of one man who has control in the department of schools, parks, churches, water, and aqueduct. Very few New Yorkers really understand this fact.

When one considers that there are half a million of children to be educated in this metropolis, that there are a quarter of a million of fathers and mothers deeply concerned in the practical adjustment of this question, and that nearly \$10,000,000 are

levied and collected each year for the support of public schools, it becomes a question of some moment who shall have the entire control of a matter freighted with such immense responsibility.

Since beginning this letter my attention has been called to the fact that a petition is being circulated in this city, obtaining as many signatures as possible, praying his honor, the Mayor, of the City of New York, to reappoint Miss Grace Dodge to the same position on the Board of Education she has so creditably filled for the last three years. Now, which were better, that the citizens of the City of New York should walk right up to the ballot box, and determine who should fill that position, or that they should beg, as a privilege, from the appointing officer, what they should command as a right.

Miss Dodge is a woman of considerable wealth. She is the daughter of the late Wm. E. Dodge, the merchant prince, and, with one brother, inherited his vast estate.

Now, perhaps, Mrs. Margaret L. Shepard, of Boston School Reform fame, will begin to see that she has a large undertaking before her. It is one thing to correct an abuse when there is a free, untrammelled ballot, and quite a different thing to accomplish the same work when it has got into the hands of a few arbitrary men. The fact that over \$9,000,000 have already been disbursed to parochial schools is, of itself, an abuse, and shows for the most part, how public money is used for political ends.

But we can not dwell longer on this subject; we leave it with the simple suggestion, that women and men everywhere can scarcely give attention to a more practical question than that of taking the public schools out of the domain of politics, and placing them under the immediate direction of the people most concerned.

C. A. BLODGETT.

PERSONAL.

THAT was an interesting occasion when a company of gentlemen, representing the American Association for the Study and Cure of Inebriety, met at Burlington, N. J., to celebrate over the banquet table the seventy-first birthday of Dr. Joseph Par-

rish, the President of the Society. Among those present were Dr. Albert Day, of Boston; Dr. T. D. Crothers, of Hartford; Dr. L. D. Mason, of Brooklyn; Dr. W. G. Parrish, and Mr. W. D. T. Traves, of Burlington. This society is a systematic movement in the lines of science for the correction of the great evil of American society, and is doing an excellent work quietly and steadily through the instruction of the people with regard to the nature of inebriety, and the havoc wrought by their prevalent drinking habits.

GEORGE W. BUNGAY, Esq., the well-known author, poet, and lecturer, is again in the Lyceum lecture field. He is an entertaining and instructive speaker, and knows, from much platform experience, what can and will interest his audiences. Mr. A. Foster, of the Star Lyceum Bureau, New York, is his agent.

PROF. L. N. FOWLER and Miss Fowler are making a tour in Ireland, and, according to papers lately at hand, are warmly received wherever they appear on the platform. In Belfast their lectures were given to large audiences.

WISDOM.

"Thou must be true thyself,
If thou the truth would teach."

IF knowledge is power, patience is powerful.—*Robert Hall*.

THE feeling of distrust is always the last which a great mind acquires.

GIRLS we love for what they are, young men for what they promise to be.—*Goethe*.

SMALL faults are little thieves that open the door for big ones to enter.

In the age of miracles,
Men's deeds were miracles.
Who believes the impossible
Can the impossible achieve.

—*Heine*.

THE innocence which knows no risk and is taught no caution, is more vulnerable than guilt, and oftener assailed.

MIRTH.

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

MR. PUGLEY.—But give me some hope. I am willing to wait.

MISS GREY.—Well, wait nine days—you will have your eyes open by that time.

FIRST DENTIST.—Are you meeting with any success?

SECOND DENTIST.—Oh, I am pulling right along.

FIRST GIRL.—"Got any pickles in your pocket?" Second Girl—"Yes, and some gum." First Girl—"That's all right. I've got some cold beans and two slatepencils. Let's lunch."

TEACHER.—"Johnnie, what part of speech is nose?" Johnnie: "'Tain't enny." "Ah, but it must be." "Mebbe youn is because you talk through it, but the only part of speech I've got is my mouth."

JONES's Apprehensions.—Brown—"Ten English paupers came over on the last steamer."

JONES (rich and father of several daughters)—"Great goodness! Not all dukes, I hope."



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 the Editor with recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.

INEBRIETY. Its Etiology, Pathology, Treatment, and Jurisprudence. By Norman Kerr, M. D., F. L. S., Fellow Medical Society, London, etc. Second Edition. 12mo, pp. 471. London, H. K. Lewis, Pub.

This work, by the leading authority in England, on diseases of drunkenness is a notable one. It covers the field of the subject so far as it has been observed at the

present time and may be accepted as standard. In the study of inebriety Dr. Kerr has been a pioneer, and he has sought to obtain from every phase of it, *data* for the formulation of a positive belief in the pathological sources of the disorder. His conclusion that inebriety is a disease is epitomized in the neat definition of page 35: "To avoid confusion, let me define inebriety as a constitutional disease of the nervous system, characterized by a very strong morbid impulse to, or crave for, intoxication." This morbid influence or craving is not for the mere purpose of indulging appetite, "but for the temporary relief of the inebriate nervine agony" that the unfortunate victim feels as a consequence of the alcoholic habit.

The author is fully alive to the objection that is made to the view of his class of specialists that the inebriate is, by such an interpretation, made an irresponsible element in society. He claims that a physician would be as radical in his treatment of a case of disease by allowing it to run its course without effort at relief and control, as to abandon the inebriate to his periodical debauch. The approach of an attack of inebriety, he holds, is usually shown by well-defined symptoms. A knowledge of the patient's actual condition will suggest the adoption of such a regimen and mode of life as will promote physical, intellectual, and moral health, and decrease the morbid derangement while increasing the power of resistance and control. Physicians, he holds, should recognize it as a disease, and treat it according to all the rules of rational medicine. They should teach such measures and define such habits as would tend to prevent the acquirement or transmission of the inebriate disposition. He agrees with American writers like Crothers and Wright, that if recognized as a disease and taken in time, inebriety, no matter what its predisposing or exciting causes, can be cured, while if treated simply from a moral standpoint the result is more than likely to end in habitual drunkenness, insanity, and death.

For those who are desirous of a pretty thorough acquaintance with the causes and phenomena of chronic drunkenness the book is very useful, being filled with statis-

tics; the accounts given of many peculiar cases that have come under the author's observation make it very interesting, even to the general reader. One part of the book gives a history of legislation regarding inebriety. This is valuable, especially as it includes what has been done in America in this relation. The first American Act with reference to an asylum for inebriates was passed by the Legislature of the State of New York in April, 1854, and three years later the charter of the first State Inebriate Asylum provided for "the medical treatment and control of the inebriate." Since that time, it must be said, that the work of caring for inebriates has been chiefly in private hands.

COMPLETE MUSICAL ANALYSIS. By A. J. Goodrich. Author of "Goodrich's Piano Manual," "The Language of Music," etc. 8vo. pp, 352. The John Church Co. Publishers: Cincinnati, O.

One of the most industrious of our countrymen in the field of music, as a teacher, writer, etc., is Prof. Goodrich, and it should be recognized that he has made a name for himself by diligent personal effort, and by means undiluted by anything of an imported nature. An American, he has sought to give a quality of originality and freshness to the art of music that should stamp it with characteristics peculiarly American. As an original observer he has made certain studies that no other musical author has crystallized or formulated in types, and if the musicians of America fail to recognize the genius and spirit of the truly home-made artist Prof. Goodrich is, there must be some strange blindness affecting their musical perception.

In "Language of Music" and "The Art of Song," volumes that have appeared in the years past, we have the work of a man who sees much beyond the common range of the practical musician, and who feels that there is a science of expression that may be formulated by definite principles, so that the composition of music shall rest upon a solid foundation, and not be a matter of individual opinion or of scholastic prejudice and caprice. In the present carefully prepared work, the author puts into practical array, by a series of illustrative

examples, the principles that relate to the analysis of musical composition, and consequently to the understanding and proper appreciation of what is excellent in tone and harmony. His object is to aid teachers and students of music, in their examination of the better class of composition, to know the why and how of this piece or that; in short, to analyze a musical work as one would analyze a piece of fine prose writing. The work is divided into eleven parts, each part containing four or more chapters, and a compendium that recites the authors from whom he has drawn the examples that thickly strew the text. Commencing with the simple forms of composition, with natural intervals, he goes on step by step until the higher and intricate chromatics of the rondo, the sonata, the symphony, the overture, etc. are considered in detail.

We congratulate the author on the production of an eminently useful text book, and one for which there is much need, and can scarcely doubt that the musical public of America, or at least, that part of the musical public that gives serious attention to the acquirement of a healthful musical-taste, will heartily welcome it.

LIFE. PHYSICAL AND SPIRITUAL. By John Bunyan Campbell, M. D., V. D. 12mo, cloth. Published by author at Cincinnati, Ohio.

The topics that the author discourses on are enumerated in his very elaborate title page, viz.: "Modern spiritualism, the development of new human faculties and powers, magnetism, how to cure diseases, promote happiness, etc." He tells remarkable stories of clairvoyance, the travels of the soul out of the body, trance phenomena, magnetic healing, thought reading, etc. "Of the wonderful performance of Jossakeed at Leech Lake," which the author states was related at "a late meeting" of the N. Y. Anthropological Society we had never heard, although a regular attendant for many years at the meetings of that society. The phenomena, however, of this incident are by no means more wonderful than those of the average cabinet performance. The phenomena of spiritualism, as commonly given, he does not appear to consider valid, but claims that all that is done by mediums

who can be trusted, is the effect of "soul power," and no supernatural interpositions are necessary. How this "soul power" becomes effective is not made clear, at least we can not understand the "explanation" of the book.

CURLEY HEAD. By Elviston Wright. 12mo, pp. 262, cloth. Price \$1. National Temperance Society, New York.

A pleasantly written book, of an experiment made by a well-to-do young woman, who was independent enough to put into practice a scheme for doing some benevolent work among street boys. The scene is laid in Boston, and the manner of the telling has a certain Bostonese flavor. This young woman is led, by a sudden meeting with a little neglected boy, called by his rough companions, Curley Head, to organize a "Thinking Club," made up of newsboys, bootblacks, and street arabs, and her house was the meeting place at stated intervals. The result of their thinking and deliberations led them to mend their ways, making them more kind, helpful, and mannerly to others, and to declare themselves against tobacco, strong drink, lying, and swearing. Their allegiance to their young president, "Curley Head," who proved a child of sweet disposition and a hopeless invalid by reason of being run over, is touchingly described.

PUBLICATIONS RECEIVED.

"**PRINCIPLES AND PRACTICE.**" A series of brief Essays. By H. Clay Trumbull, in six volumes, each complete in itself. Price \$2.60. Published by John B. Wattles, of Philadelphia.

Every reader of the *Sunday School Times* must have been greatly interested in the exceedingly practical and well-written editorials appearing in that paper, and the demand for them, in a shape for preservation, has led to the publishing of them in this series of books, in which they are grouped together, not in the order in which they were published, but as they are related to each other. The titles of these books are, 1. "Ourselves and Others;" 2. "Aspirations and Influences;" 3. "Seeing and Being;" 4. "Practical Paradoxes;" 5. "Character Shaping and Character Showing;" 6. "Duty Knowing and Duty Doing." The writer manifests a very sharp knowledge of human nature. Read by every phrenological teacher and student these papers will be found of much value, being, in many cases, written from a genu-

ine phrenological point of view. No parent can fail to be helped in the care and training of children, and young people will be greatly stimulated in their efforts at true character building by their perusal. Desirous to facilitate their circulation we will receive and fill any orders that may be sent us for them at the price given above, which is very moderate, considering the size and character of the volumes.

FIRST REPORT OF THE HOME HOTEL ASSOCIATION. Founded by Miss M. A. Fisher.

The early results of this effort of a philanthropic, earnest-hearted young woman, are encouraging. We are glad to know that her work finds some appreciative support. Such a foundation, to meet a need arising out of our social conditions, was a happy thought, and already there are grateful men and women who have experienced its beneficence.

HAMPTON ACADEMY. Howell B. Parker, Principal.

The circular descriptive of this organization and curriculum of this school, which is situated in a town not far from Atlanta, Ga., shows that the South is not behind in educational progress. The principles of mental science are made fundamental in the system of study, and this fact is one conspicuous reason for Mr. Parker's great success.

THE WESTINGHOUSE-EDISON CASE, OR, LAWYER AND MAN vs. EDISON.

Full text of Justice Bradley's opinion with regard to claims for the production of an incandescent lamp by electricity. This opinion favors the Edison side, whereas the result of the previous controversy in the Patent Office, despite the powerful influence of the different companies operating under Edison patents, favored the priority of the Sawyer-Man patents, or their registration. The showing of these contests is, that the use of electricity, in its different forms, has been a gradual development.

"OUR SECOND CENTURY.

Our enterprising neighbor, Mrs. C. F. Deilm, has made a very readable paper, and she is now issuing an addition with a series of sketches entitled "Merchants of Our Second Century," in connection with which she gives a classified commercial directory of the best houses of the country and their New York representatives, thus helping to bring business men into pleasant and profitable relationship. Since Mrs. Deilm managed so successfully the "Century Safe" enterprise in 1876, she has shown other original methods of bringing her work agreeably before the public. Probably no newspaper in the country is read with greater avidity by its regular subscribers.

C. F. WELLS, NELSON SIZER, H. S. DRAYTON, ALBERT TURNER,
President. Vice-President. Secretary. Treas. and Bus. Manager.

FOWLER & WELLS CO.

On February 29, 1884, the FOWLER & WELLS CO. was incorporated under the laws of the State of New York as a Joint Stock Company, for the prosecution of the business heretofore carried on by the firm of FOWLER & WELLS.

The change of name involves no change in the nature and object of the business, or in its general management. All remittances should be made payable to the order of

FOWLER & WELLS CO.

The Subscription Price of the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH is \$1.50 a year, payable in advance, or \$1.65 when premiums offered are sent to subscribers.

Money, when sent by mail, should be in the form of Money Orders, Postal Notes, Express Money Orders, Drafts on New York, or Registered Letters. All Postmasters are required to Register letters whenever requested to do so.

Silver or other coin should not be sent by mail, as it is almost sure to wear a hole in the envelope and be lost.

Postage-Stamps will be received for fractional parts of a dollar. The larger stamps are preferred; they should never be stuck to the letters, and should always be sent in sheets; that is, not torn apart.

Change of post-office address can be made by giving the old as well as the new address, but not without this information. Notice should be received the first of the preceding month.

Letters of Inquiry requesting an answer should inclose stamp for return postage, and be sure and give name and full address every time you write.

All Letters should be addressed to Fowler & Wells Co., and not to any person connected with the office. In this way only can prompt and careful attention be secured.

Any Book, Periodical, Chart, etc., may be ordered from this office at Publishers' prices.

Agents Wanted for the PHRENOLOGICAL JOURNAL and our Book Publications, to whom liberal terms will be given.

Our premium List, giving complete descriptions of the Premiums offered to subscribers, sent on application.

Our Descriptive Catalogues or our new List of "Books for Women" will be sent to any address on receipt of stamps for postage.

OUR REDUCED TERMS.

We have decided on a reduction in the price of the PHRENOLOGICAL JOURNAL from \$2.00 to \$1.50 a year, in consideration of the fact that it is our desire to secure as large a circulation of it as possible, and also of the fact that the larger the number printed the less is the cost for each. In doing this the size of the JOURNAL will not be materially changed, and it is our purpose to improve the quality in every way possible. The new price should certainly place it within the reach of all who would like to read it, and we will be disappointed if this change does not result in a largely increased subscription list. We shall continue the offer of the Bust or Chart premium to new subscribers as before, that is, to all who will send 15 cents extra with each subscription for boxing and packing the large bust, which is sent by express at the expense of the subscriber, or for postage on the chart or small bust, which is sent prepaid.

A Call For Help.—We feel justified in calling upon the friends of Phrenology and friends of the PHRENOLOGICAL JOURNAL to render us a little assistance at the present time. We have reduced the price of the JOURNAL for the purpose of increasing its circulation, and in this way a knowledge of Phrenology. We can not of course present the JOURNAL and its claims to every one, we shall advertise it largely and send out a great many specimen copies, but this is not likely to be sufficient to accomplish our purpose fully, and for this reason we take the liberty of calling upon our friends for their co-operation. At \$1 a year—and this is our club rate—we believe a club can be made up in every neighborhood by a person sufficiently interested to introduce the JOURNAL, and in towns and cities, of course many clubs could be made, one by almost every person who would try, and will not our friends make a timely effort and give the JOURNAL a new start?

CURRENT EXCHANGES.

The July Popular Science Monthly comes early enough for a notice here. It is an interesting number, as a few quotations from its contents will show: What is Civil Liberty? A Study of Suicide. Sea Butterflies. Christianity and Agnosticism. Farm Life in China. D. Appleton & Co., New York.

The Santitarian. Monthly. A. N. Bell, M. D., Editor. New York.

National Temperance Advocate. Organ of the National Temperance Society. Monthly. New York.

Illustrated Catholic American. Monthly. New York.

Woman's Magazine. An illustrated monthly. Brattleboro, Vt.

Medical Analectic. As the name implies an epitome of Medicine and Surgery, conveniently arranged for the members of that department of professional life. G. P. Putnam & Sons, New York.

Popular Educator. Monthly magazine of education, somewhat general in its scope. Boston.

Le Progres Medical. Weekly. Organ of the Faculty of Paris. Bourneville, Editor of the sheet.

Voice of Masonry. Family magazine. J. W. Brown, Editor. Artistically arranged and elegantly printed. Chicago, Ill.

American Druggist. Monthly. Devoted to Pharmacy, Chemistry, and Materia Medica. Of rather awkward shape, yet of decided practical value to the trade and profession represented. Wm. Wood & Co., New York.

Scientific American. Weekly. Munn & Co., Editors and publishers, New York.

Christian Thought. Bi-monthly. W. J. Ketchum, publisher. June number contains four distinct papers, notes of the late meetings of the American Institute of Christian Philosophy, and other items. New York.

Manufacturer and Builder. Monthly. A well arranged industrial paper. Henri Gerard, publisher, New York.

Harper's Young People. Weekly. New York.

Cultivator and Country Gentleman. Weekly. Luther Tucker & Sons, New York.

Georgia Eclectic and Med Journal. Keeps up with the progress of practical medication. Monthly. J. W. Stone, M.D., and W. M. Durham, M.D., publishers, Atlanta, Ga.

Brooklyn Med Journal for June contains articles on Disinfection, Tuberculosis, an elaborate paper on the development of the Crystalline Lens, etc. Brooklyn, N. Y.

Medico-Legal Journal, June, contains portrait and sketch of Dr. C. H. Hughes, of St. Louis, and special articles on topics of insanity. New York.

The Century Magazine for June—although not so early to hand as usual—is testimony in behalf of the old saying that the best of the feast comes last. A fine portrait of Corat, the eminent French artist, is the frontispiece. The convict mines of Koro is another view of Siberian life. The Bloodhound will please dog-fanciers. Early Heroes in Ireland. Certain Form of Woman's Work for Woman. Spinnello, one of the Italian old Masters. King Solomon of Kentucky. A fresh chapter of Lincoln history. An American Amateur Astronomer—being a sketch of Mr. S. W. Burnham. All have illustrations in the customary high quality of the *Century*. New York.

The "Man Wonderful Manikin."—In the health department of this number of the *JOURNAL* will be found an extended description and illustration of this new MANIKIN and to which we would call special attention. The issuing of this was somewhat delayed, but all advance orders have been filled, except that the Manual is not ready yet, but will be in a few days. Since the first announcement of the Manikin a number of very important changes have been made, the views increased, and it is now printed on cloth lined material instead of paper. It is also made to stand erect, instead of folding in the center, and in consideration of these changes it was found necessary to increase the price from \$4 to \$5, net. We do not sell it to the trade or to agents, and all orders should be accompanied by the price, \$5. On receipt of this sum it will be sent, prepaid, to any address in the United States or Canada.

How to Feed the Baby.—The author of this grand little work sends us the privilege of publishing the following letter which he has received:

CHICAGO, Ill., June 1st, '89.

DR. CHARLES E. PAGE,

47 Rutland St., Boston, Mass.:

Dear Sir:—I have long felt that I would like to write you asking your advice upon some points concerning the health of my babe. Through my cousin, Mrs. Underhill, I heard of your book on the true way of treating infants, which I purchased, and feel it has been a great blessing.

Please advise me and enclose bill, and I will be much obliged. I try to teach my friends and the nurses with whom I come in contact the truths contained in this wonderful book, and often find that I have an influence for good, but it is not easy to get people in general out of old practices, no matter how unsuccessful those ways may be.

Again I wish to thank you for that book that I feel the Lord allowed to fall into my hands. I ask His guidance each day, and I believe that I was led to this.

Gratefully yours,

(MRS.) J. C. BUCKNER,

3342 Rhodes Avenue.

The St. Louis Hygienic College.—Our readers will see in our advertising columns a card from the St. Louis Hygienic College of Physicians and Surgeons. This young institution seems to be taking firm root in the soil of the Mississippi valley. Surely no more available point could have been selected for a school of this kind. St. Louis is central, and therefore accessible from all parts of the vast commonwealth; it is also in the midst of a population that is progressive, intelligent, and prosperous.

We wish the new college the very best of success. Its principles are liberal and its teachings are much needed; the people too are ready to receive them. A good patronage last year speaks well for the character of the work done, and also for the future of the school. The announcement for this year, we understand, is ready.

"On Trial."—We wish to increase the circulation of the *PHRENOLOGICAL JOURNAL* as much as possible during the summer months, and with this in view we make special offers of the *JOURNAL* "ON TRIAL" at reduced rates, will send it the balance of this year, six months, or to clubs of ten, will send it at 50 cents each with an extra copy to the person making the club. Will not each of our old readers co-operate with us in the matter by calling attention to the *JOURNAL* and securing some names for us on these terms? The larger the circulation of the *JOURNAL* the better we can make it, and in this way all will be benefited.

Good for Summer Time.—Demorest's Magazine says: Health in the Household; or, Hygienic Cookery, by Susanna W. Dodds, A.M., M.D., with whom our readers are familiar through her popular contributions to "Sanitarian," is a valuable work, which the author has aptly dedicated "to all who love good health as well as good eating," and it should find a place in every household. This is not an ordinary cook-book, neither is it a receipt for ordinary cookery; but the intelligent housekeeper, after reading Part I,—which, under the title "The Reason Why," is devoted to the subject of food generally, and the relative hygienic properties of different kinds,—will have gained more practical knowledge relating to the preservation of health than from volumes of medical works; and if the information be cleverly utilized in the selection and preparation of food for the family, the benefit will be noticeable, not alone in the general health, but in the decreased expenditure. While the author, from principle, advocates a vegetarian diet, she does not insist upon strict adherence to it; and while Part II is devoted exclusively to "The Hygienic Dietary," Part III, which is added to the last edition, offers "The Compromise," in which many dishes are included that belong naturally to a more "worldly" diet, and to which are added many excellent and practical suggestions about general housekeeping. This work will be found specially useful to those who would like to live rightly and for health and comfort during the summer months. We will send it by mail, postpaid, on receipt of price, \$2. Address this office.

The Self-Instructor in Phrenology.—This work is temporarily out of print, but a new, revised, and enlarged edition is in preparation, and will be ready in August. The work is being carefully revised by Prof. Sizer, and will be illustrated more largely than before with entirely new designs which are being made by an artist especially for this book. It will be found the most complete hand-book for special study and as a technical hand-book than has ever been published at so low a price. Although it will be greatly improved and enlarged, it is not likely the price will be increased from 75 cents, although it may be published at \$1. The work will be bound in extra cloth, and advance orders will be filled at the old price, 75 cents, whether the price is increased or not.

Memory.—A correspondent in writing on this subject says, "I have studied Mnemonics and a number of systems of memorizing, and I find much more pleasure, profit, and good sense from the study of your 'Memory and Intellectual Improvement' than from all sources combined. There is no doubt but that the methods laid down by Prof. Fowler in his work are the proper ones for the development of Memory and the Intellectual faculties. It is a work which should be read and studied carefully by every intelligent person." Thousands of others have had about the same experience. The price of this work is \$1, by mail, postpaid.

Home and Country.—This is the title of a journal, published monthly, devoted especially to the interests of the members of the Grand Army of the Republic, although matters which interest them necessarily interest other patriotic citizens. In the last number is the introduction of a series of articles under the title of the "Universal Republic of the Nations, or the Modern Race, for National Expansion of Industrial, Commercial, and International Life." In this the writer proposes to consider the elements which this nation possesses to make it the commercial Mistress of the Globe, a series of articles which promise to be of special interest.

The journal is published by Joseph W. Kay, 98 Maiden Lane, New York.

"Enchantment."—This is the name given a new and very popular Game for the Lawn, introduced by Milton Bradley & Co., Springfield, Mass. It has many advantages over Croquet and Lawn Tennis, and is very fascinating and attractive. It gives a chance for exhilarating exercise without any temptation to excess. Wherever it is seen it is liked, and we are glad to learn it is becoming very popular. Our friends who are interested in out-of-door sports should send for a descriptive circular and price list of this and the other popular games for which this firm are justly popular.

Prof. Ida V. Davis, class of '88, has done remarkably well this season. She began in New Jersey with fine audience and elicited much commendation from the press. She has lectured with great success in the State of Minnesota. In Anoka recently, a town of over 5,000 inhabitants, the large city hall could not contain the many people who came to hear her. Everywhere she has had large audiences and has done an extensive and good work. She evidently has an enviable career before her.

Heads and Faces.—In Australia, as an evidence of the popularity of this work abroad as well as at home, we would say we have just filled an order for 1,000 copies from one agent there, and this is supposed to be the beginning of his trade in this book. We have already sent large numbers of the book there as well as to England.

"Human Magnetism."—The publication of this work has been delayed a little, but it is now in the printer's hands, and well under way, and we hope to have it ready during the present month. It is being very fully illustrated, and will prove to be the best work yet published on the phenomena of Hypnotism, Magnetism, Psychology, and all other trance conditions. On account of recent experiments in Phreno-Magnetism it will be especial interest to every reader of the JOURNAL. All advance orders will be filled as soon as the book is ready.

The Victoria Warden says: "Recently a lady, with her husband and children, was walking down Kent street, when her attention was drawn to Prof. Hugo Campbell, now in Lindsay. 'John,' says she, 'who is that strange gentleman?' 'That, my dear,' replied the husband, 'is the celebrated phrenologist, Prof. Hugo Campbell. He is stopping at the Simpson House here. Wouldn't you like to get your head read? He can do it well.' 'Papa,' says the precocious one of the family, 'can he make your head red?' 'The whole family went to the Simpson House and became "read" headed.

Do You Share the Results?—Why not use other people's brains as well as your own in order to lessen life's work, and especially so when the coming hot weather will make life a burden to those who have to do laborious housework? The very word "Pearline" sounds clean and sweet enough to recommend even a poorer article. But "Pearline" does as clean and as sweet work as its name implies. Now if there be a housekeeper among the thousands of *Witness* readers who has hitherto lived so far beneath her privileges as not to have used "Pearline," surely she will at once purchase a packet and test what it will do for her. "Pearline" represents brains. That is, it is the product of long and hard processes of thought, investigation, and experiment. You are invited to share the results.—*From New York Witness*, June 12th, 1889.

The Health Food Co.—In this number of the JOURNAL will be found an advertisement giving a price list of the products made by the Health Food Co., 74 Fourth Ave., this city. This will not only be a matter of information to our readers who are in need of their goods, but will also serve to give somewhat of an idea of the scope of their business. It will be seen that they manufacture a great variety of foods, and we would simply say that all who would live to be well, whether in health now or not, should be interested in sending for the printed matter giving a description of these foods which will be sent free to any reader of the JOURNAL who will mention above address.

FOR SALE at great reduction, Stock and Cabinet (good-will included) of a long-established Phrenological Office. Immediate possession, or a novice will be instructed. Address, X. Y. Z., care "Phrenological Journal," 775 Broadway, New York.

BUSINESS CARDS.

The Hamman, a Family Hotel, with Turkish Baths, 81 and 83 Columbia Heights, Brooklyn, N. Y. Three minutes' walk from Fulton Ferry.

Susanna W. Dodds, M.D., and Mary Dodds, M.D., Hygienic Physicians, 2826 Washington Ave., St. Louis, Mo. All diseases, acute and chronic treated without medicine. Send for circular.

The New York Medical College and Hospital FOR WOMEN, and Homeopathic Dispensary for Women and Children. 213 West 54th Street, New York.

Mrs. J. T. Campbell, M.D., 153 W. 128th St., New York.

OUR HEALTHFUL HOME is pleasantly located on Reading Heights. Send ten cents in stamps, for our Book Circular, with Portrait. Address, A. Smith, M.D., Reading, Pa.

Fowler & Wells Co., Phrenologists and rubbers, 775 Broadway, N. Y. Agents Wanted.

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THE ST. LOUIS

HYGIENIC COLLEGE OF PHYSICIANS AND SURGEONS

will begin its Third Annual Course of Instruction, October 8, 1889. It educates men and women for practice in Hygieo-Therapy, or curing the sick by strictly hygienic agents. This school is legally chartered and officered. It has annually a full course of lectures of six months each, there being three courses in all. Thorough instruction is given in Anatomy, Surgery, Chemistry, Physiology, Pathology, Hygieo-Therapy, Sanitary Engineering, Physical Culture, and all other branches pertaining to a good medical education.

For further information address, for announcement,

S. W. DODDS, M. D.,

2826 Washington Ave., St. Louis, Mo.

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Letters of Inquiry requesting an answer should inclose stamp for return postage, and be sure and give name and full address every time you write.

All Letters should be addressed to Fowler & Wells Co., and not to any person connected with the office. In this way only can prompt and careful attention be secured.

Any Book, Periodical, Chart, etc., may be ordered from this office at Publishers' prices.

Agents Wanted for the PHRENOLOGICAL JOURNAL and our Book Publications, to whom liberal terms will be given.

Our premium List, giving complete descriptions of the Premiums offered to subscribers, sent on application.

Our Descriptive Catalogues or our new List of "Books for Women" will be sent to any address on receipt of stamps for postage.

OUR REDUCED TERMS.

We have decided on a reduction in the price of the PHRENOLOGICAL JOURNAL from \$2.00 to \$1.50 a year, in consideration of the fact that it is our desire to secure as large a circulation of it as possible, and also of the fact that the larger the number printed the less is the cost for each. In doing this the size of the JOURNAL will not be materially changed, and it is our purpose to improve the quality in every way possible. The new price should certainly place it within the reach of all who would like to read it, and we will be disappointed if this change does not result in a largely increased subscription list. We shall continue the offer of the Bust or Chart premium to new subscribers as before, that is, to all who will send 15 cents extra with each subscription for boxing and packing the large bust, which is sent by express at the expense of the subscriber, or for postage on the chart or small bust, which is sent prepaid.

A Call For Help.—We feel justified in calling upon the friends of Phrenology and friends of the PHRENOLOGICAL JOURNAL to render us a little assistance at the present time. We have reduced the price of the JOURNAL for the purpose of increasing its circulation, and in this way a knowledge of Phrenology. We can not of course present the JOURNAL and its claims to every one, we shall advertise it largely and send out a great many specimen copies, but this is not likely to be sufficient to accomplish our purpose fully, and for this reason we take the liberty of calling upon our friends for their co-operation. At \$1 a year—and this is our club rate—we believe a club can be made up in every neighborhood by a person sufficiently interested to introduce the JOURNAL, and in towns and cities, of course many clubs could be made, one by almost every person who would try, and will not our friends make a timely effort and give the JOURNAL a new start?

CURRENT EXCHANGES.

The Treasury. For Pastor and People. Monthly. E. B. Treat, New York. Is an excellent religious periodical for general circulation.

American Medical Journal. St. Louis, Mo. Liberal in its tenets and practical in its therapeutic teachings. E. Younkin, M. D., Editor.

American Law Register. Monthly. D. B. Canfield Co., Philadelphia. Is of much service to the lawyer and public man. Its corps of editors is composed of leading jurists east and west.

Chicago Medical Times. Liberal eclectic—a lively thing for the doctors. Monthly.

Illustrated Pacific States. Monthly. Creditable to the Golden Horn. A. T. Dewey, San Francisco.

Popular Science Monthly. August number at hand with articles on Agnosticism and Christianity (Huxley), Life in the Solomon Islands, "Scientific Charity," Electrical Waves, The Wastes of Modern Civilization, Mr. Mallock on Optimism (a critique), Savage Life in South America, a Sketch and Portrait of Lavoisier, the latter an exceedingly fine specimen of art. D. Appleton & Company, New York.

The School Journal. Monthly. E. L. Kellogg & Co., New York.

The Manufacturer and Builder. A Practical Journal of Industrial Progress. Monthly. Henri Gerard, New York.

The Eclectic Magazine of Foreign Literature, for July, has notable articles on Art Topics, Life in India, the Prehistoric Peoples, etc. New York.

Book News. Monthly. Philadelphia.

The Century. July. Winchester Cathedral, The Last Trip In, A Western Realism, San Antonio of the Gardens, Inland Navigation of the U. S., Mines of Kara, On the Indian Reservation, Lincoln Renominated, Woman in Early Ireland, Gentile da Fabriana, one of the old Masters, are topics that carry more or less of admirable illustrations in this number. New York.

The British Women's Temperance Journal. The Official Organ of the British Women's Temperance Association. Monthly.

The Literary News. An Eclectic Review of Current Literature. Illustrated. Monthly. New York.

Vick's Illustrated Magazine. Science Applied to Agriculture. Monthly. James Vick, Rochester.

The Phrenological Magazine. A Journal of Education and Self-Culture. Monthly. Leading Organ of Mental Science in Great Britain. L. N. Fowler, London.

Voice Magazine. A Journal of Expression, Vocal and Physical. Monthly. Edgar S. Werner, New York.

Harper's Young People. Illustrated. Weekly. Harper & Bro., New York.

The Western Rural, and American Stockman. For the Farm, Field, and Fireside. Weekly. Milton George, Chicago.

Buds and Blossoms and Friendly Greetings. For Old and Young. Monthly. J. P. Avery, New York.

The Teacher's Outlook. A Magazine devoted to General Literature, Science, Health, Industrial and National Affairs. Monthly. W. G. Todd, Des Moines, Iowa.

Food, Home, and Garden. Published for the Vegetarian Society of America. Monthly. Milliette Publishing Co., Camden, N. J.

The Homiletic Review. International Monthly Magazine of Religious Thought, Sermonic Literature, and Discussion of Practical Issues. For the clergyman and church worker a ready assistant. Funk & Wagnalls, New York.

Annals of Surgery. Monthly Review of Surgical Science and Practice at Home and Abroad. J. H. Chambers & Co., St. Louis and London.

The Saturday Globe. A Weekly Democratic Review of the better tone. New York.

Book Talks.—The Gospel Banner, of Augusta, Me., publishes the following by Rev. Phebe A. Hanaford: "An interesting and instructive book has just been issued in attractive form by the Fowler & Wells Co., of New York City, called 'Every-Day Biography.' It is a 12 mo. volume of 378 pp., and is designed for home or school use. Price, \$1.50.

The author, Amelia J. Calver, has written a preface so delightfully explanatory of the origin and purpose of the book, that I give it in full to the *Banner* readers, premising that I know of few Birthday books which I would prefer to this, and suggesting but one thing to promote its usefulness, and that is that an edition interleaved for additions by the owners should be published. The author's prefatory words are these:

"On a pleasant September afternoon as I strolled along the seashore, I was attracted by the number, variety, and beauty of the colored pebbles which adorned the lips of the sea. With an eagerness of interest, I soon selected as many as I could carry away; but as I brought my pleasant search to a close, I cast one glance at my gathered treasures, and a longing gaze at the infinite stretch of glittering shore that I must leave, and the thought of the yet scattered beauties haunted me.

But when again in my mountain home, and I found in my collection such a variety, from the large, symmetrical stone of milky whiteness, through every shade of color to the crystallized dew-drop, representatives of as many elements of the geological world, I appreciated my pebbles none the less, that on the wave-washed shore there were still myriads of pebbles whose number would be increasing through all time.

Similar to this seaside incident has been the experience of gathering the material for this little book, now offered to the public. In duties as a teacher, in studies as Chautauquan, I have for several years past been collecting and arranging names in the order here found, as an easy reference for "Author's Days" in school, and "Memorial Days" in the Chautauqua home circle, until it was suggested by friends that the work might be of profit to other schools and other home circles.

This little book makes no pretensions to a Cyclopaedia, embracing every name of note in history, but represents some of those who, by word or work, leave a distinct color on the shores of time.

and have become conspicuous as my pebbles were upon that sparkling seashore.

Although many of the "grand old masters," the epoch-making names are prominent, it has been an object also to present the "humbler poets," who sing the "simple heartfelt lays" that guide and gladden these common, everyday lives of ours, where it is to be hoped this little volume will be especially useful. In compiling this work I have regarded conciseness a necessity, and accuracy a duty, and have therefore aimed to consult the best authorities, and if it shall find a welcome on the desk of both teacher and student, and in the home library, where more costly references are wanting, I shall feel repaid for the time and care devoted to it.

Of course the work is not exhaustive, and many familiar names must be missed from the roll, for only a few could be given for each day, and the writer's knowledge or choice might forbid the mention of many names another might mention. I observe the name of Hosea Ballou and of several other of our ministers.

In a few paragraphs at the close some notable facts as to birthdays are given. The year 1769 is called the year of "great babies," for in that year Napoleon, Wellington, Cuvier, Humboldt, Chateaubriand, Picard, Bourrienne, Brunel, Marshal Ney, and other well-known personages were born.

It is a noticeable fact, also, that Abraham Lincoln and Charles Darwin were born on the same day, Feb. 12, 1809.

Horace Mann and William H. Prescott on May 4, 1796. Miss Cummins, author of 'The Lamp-lighter,' and Gen. Lew Wallace, author of 'Ben Hur,' were born April 10, 1827.

Miss Calver has displayed a commendable patience and skill in preparing her interesting book, and I hope it will be widely circulated among Chautauqua graduates, for they have learned to observe properly the birthdays of the wise and great.

Among the many valuable practical works published by the Fowler & Wells Co. is a work entitled 'For Girls (price, \$1.00): A Special Physiology, being a supplement to the study of General Physiology, by Mrs. E. R. Shepherd,' which I most cordially commend to mothers, both for their own enlightenment, and to place in the hands of their daughters when they reach a suitable age. It is a thoroughly common-sense view of important matters, and may help to keep many a darling daughter in health, or if the shadows of suffering have already come, may aid in bringing light and peace again. The book is duly illustrated, and is written with great good sense and delicacy. The author, whom I have often met in pleasant relations as a fellow-member of a well-known literary society, is a lady of genuine worth, and is widely and highly esteemed. She has written the book with a sincere desire to do good, and will unquestionably have her reward. It is not a book for indiscriminate perusal, but just such an one as a wise father and tender mother would desire to have placed judiciously in the hands of a beloved young daughter. 'That our daughters may be as corner-stones, polished after the similitude of a palace.'

New Haven, Conn."

A Special Manikin Proposition.—It is our desire to have the "MAN WONDERFUL MANIKIN," described in the last number of the JOURNAL, introduced as widely as possible over the entire country without an unnecessary delay, and, as a means to this end, we have decided to make a special proposition to our subscribers. The price is \$5.00, and we do not sell it to the trade or through agents, but it is net. We will send it as a premium for 4 subscribers to the JOURNAL at \$1.50 each, or we will send the JOURNAL 4 years and the "MANIKIN" for \$6.00. The above proposition should enable every reader of the JOURNAL who is interested in Physiology to obtain this, for certainly those who are not so situated as to obtain subscribers will find it good interest on the money to send advance subscriptions. Teachers will be especially interested in this as an aid to their work, and when once used will be found indispensable, and in every family this "MANIKIN" should be studied, as it enables all to become familiar with the human body in a way that it is easily understood. It is conceded to be the finest piece of work of the kind ever put on the market. We also make a special offer of the "MANIKIN" and "Man Wonderful in the House Beautiful," giving the book as a premium to those who order the "MANIKIN," and sending all prepaid if 50 cents extra, that is, if \$5.50 are sent with the order.

Agents Wanted.—We desire the services of an agent in every neighborhood for the sale of our publications. We would like to secure the co-operation of those who are interested in the subject from having been readers of the JOURNAL and our books. Especially do we wish to increase the circulation of the PHRENOLOGICAL JOURNAL in this way, and those who take up "Heads and Faces," and some of our other popular works, find a good demand. Our Special Terms to Canvassing and local agents will be sent on application.

To Teachers.—We wish to call the special attention of teachers to the publications issued in their interest, as given in our list of "TEACHERS' BOOKS," which will be sent to any address on application. Also, would call attention to our new "MANIKIN." This should be in the hands of every teacher, even though the school is supplied with a larger Manikin, as it will be found useful for home study and class use, and it is in some respects superior to those that cost five times as much. It will be noted that while the price of the Manikin is \$5.00 we make special offers.

"Tea and Coffee."—A work showing their effects physically, intellectually, and morally on the human system, by William A. Alcott, with notes and additions by Nelson Sizer. This has been out of print for some time, but we have just put on press a new edition, and will be prepared to fill all orders for it promptly, sending the book by mail, postpaid, on receipt of price, 25 cents. This work sets forth clearly the effects of these stimulants, and it should be read by all, whether users of these drinks or not.

Health Books.—At this season of the year it is important that we know how to live in order to be well, and in this connection we call attention to our various publications on the "LAWS OF LIFE AND HEALTH," and our complete catalogue will be sent to any address on application.

Summer Reading.—We do not publish what is popularly known as "summer reading," a line of light literature, stories, etc., but we do claim that our publications offer the very best summer reading that can be taken up, especially the reading of "Heads and Faces," which will be found attractive to those who are at summer resorts, and where people congregate, giving the very best possible chance for the study of the Human Head and Face. We also publish a charming story called the "Lucky Waif," which will be read with interest by parents and teachers, and all who have to do with child-life. This we send by mail, postpaid, on receipt of \$1.00, but we think no one will go amiss in reading any of our books, a complete catalogue of which will be sent on application.

The Servant Question.—This is the title of No. , of Human Nature Library," and will be found very suggestive to those who have to deal with servants, and should be read by all who would know what can be done for the solving of this perplexing question. Price, 10 cents.

Our Trial Trip.—We hope our readers will not forget that the JOURNAL is offered for the last six months of this year for 75 cents, and we hope that they will make an effort to interest their friends and neighbors in becoming subscribers. We ought to have a very largely increased circulation as the result of this special proposition.

Hubbard's Blue-Book of Trade-Marks and Newspapers is published by H. P. Hubbard Co., Advertising Agents, New Haven, Conn. The volume contains illustrations of nearly 1,500 trade-marks gleaned from all over the world, with laws relating to trade-marks, and lists of daily, weekly, and other advertising mediums, together with copyright laws. It is a work which will be found of interest to every advertiser. Price, \$1.50. Address as above.

A Business Chart.—The object of this Chart is to present to the eye a history of business in this country since the war. The statistics have been collected with care, and are believed to be from the best sources. By the aid of this Chart a man can determine at a glance just what the price of pig-iron was in any past year, or the proportion of failures, immigration, railroad building, circulation of money, and other topics; the whole showing by its peculiar arrangement the flow of business facts through a number of years, thus the past history of business is always at hand and easy for reference without the labor required to hunt it up from encyclopedias and other sources. The price of the Chart is \$1.00 per copy by mail, postpaid. Address this office.

Points for Drummers.—One of our exchanges in speaking of "How to be Successful on the Road. By an Old Drummer," says: "This little pamphlet is decidedly well written and neatly printed. It is an interesting statement of the observations of a drummer during a long and successful career which can not fail to interest and instruct the younger members of the profession. The author takes refuge from such as may disagree with him behind the modesty for which the craft is celebrated in the following prefatory paragraph:

'These are simply my own ideas on the subject; to me they have brought success. Surely reason enough that I should uphold them, though I take it for granted that every salesman will preserve his own individuality, for under no other colors can he win.'

The instruction is embraced in two brief chapters, and is supplemented by appendices entitled, 'Qualifications Required' and 'Route Lists. The latter appendix contains five larger town routes, with the names of hotels which have satisfactorily catered to the author."

"Tobacco."—The work on Tobacco by Alcott, showing its effects on the human system physically, intellectually, and morally, with notes by Prof. Nelson Sizer, has been out of print, but we have just printed a new edition and we are prepared to fill all orders received for it promptly, on receipt of price, 25 cents. This work not only shows the effects of the habit, but it also indicates the methods of relieving the subject, or for curing it. It should be read by all.

Handy to Amusements and Shopping.—When in New York stop at the Sturtevant House, Broadway, cor. 29th street. It is finely furnished and the prices are reasonable. You won't regret it. Matthews & Pierson, Props.—*Bulletin.*

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CURRENT EXCHANGES.

Current Comment and Legal Miscellany. D. B. Canfield Company, Limited, Philadelphia.

Power, Steam. An advanced Industrial Monthly. New York and Chicago.

Christian at Work. Weekly. Well known. Illustrated. J. N. Hallock, New York.

Harper's Weekly. Has been publishing lately a series of descriptive articles on leading western cities, with graphic views. New York.

Western Medical Reporter. Monthly. Epitome of Medical Progress. J. E. Harper, M. D., editor, Chicago.

The Century. For August. Midsummer number. Has a very attractive series of pictures of the Thames River, England, illustrated by Pennell. Afternoon at a Ranch, gives us glimpses of cowboy life; State Criminals at the Kara Mines; Artist Wanderings among the Cheyennes; Wood Engravers in Camp; the Story of Lincoln's Life; Painter—Engraving, are other interesting features well illustrated. New York.

The Brooklyn Medical Journal for August has an elaborate article on the Disposal of the Dead, that discusses the later methods suggested by advocates of hygienic progress. Brooklyn, N. Y.

Homiletic Review. August. Social Science; the Riddle of the Sphinx; Limitations of Charity, are among the topics that are likely to attract attention. Funk & Wagnalls, New York.

Lippincott's Magazine for September, early at hand, has a novel entitled "Solarim," first, and a dozen of topics follow, making a thick number. Philadelphia.

Good Health. Battle Creek. Monthly. J. H. Kellogg, M. D., Editor.

Medical Summary. August number has an article of value to its readers on Temperaments in Diagnosis, but the writer has, we suppose, only outlined his purpose in it. Philadelphia.

Christian Thought. August. Science and the Bible; Five Points in an Evolutionary Confession of Faith; Evolution and Development, are noteworthy. Wilbur B. Ketchum, New York.

Illustrated Catholic American. Weekly. New York.

The Treasury for Pastor and People for September has a good list of sermon matter, theological articles, essays, discussions of questions of the day, and a considerable variety of other helpful matters. The illustrations are a portrait of Dr. R. Terry, of the South Reformed Church, New York City. Dr. Terry contributes a sermon. E. B. Treat, New York.

Harper's Magazine for September gives the reader an idea of what American Artists have done for the Paris Exhibition, and a creditable glimpse it is, judging by the excellently engraved reproductions of several pictures; Kentucky Fairs is a spirited paper well illustrated; Holy Moscow, and London Mock Parliaments, are the other titles that will please the reader. The editor's contributions as usual deserve special notice. New York.

Our Little Ones and the Nursery, issued by the Russell Publishing Co., Boston, is one of the most attractive of the many juveniles published. Many of the illustrations are artistic gems, and cannot fail to have a very important educational influence in the hands of our children. It is offered on favorable terms, clubbed with the *PHRENOLOGICAL JOURNAL*. See Clubbing List.

Good Housekeeping is published fortnightly by Clarke W. Bryan & Co., Springfield, Mass. This can not fail to be of interest to every intelligent, wide-awake housekeeper. Many of the articles are of great practical value. It is published at \$2.50 a year. For rates with the *PHRENOLOGICAL JOURNAL*, see Clubbing List.

On Trial.—In addition to our special offer of THREE MONTHS FREE to new subscribers, we propose another LIBERAL OFFER as a means of securing new readers. That is to furnish the JOURNAL to those who have not been subscribers for the past year, for three months, commencing with the next number, for twenty-five cents. Now it will only be necessary for our readers to present this to their friends in order to secure names. Although we make this specially low rate to subscribers, we do not ask our readers to work for nothing, and therefore propose to send to any of the PRESENT SUBSCRIBERS, who will send us four new names at twenty-five cents each, any book in our catalogue advertised at twenty-five cents, or this amount can apply on the purchase of any other higher priced book, and to make the offer still more tempting to any one who will send us one dozen trial-trip subscribers we will send a \$1.00 book. Now, may we not receive a good list of names from every post office where we now have readers? Send in the names as fast as they can be obtained, and as soon as list is complete, premiums will be sent, and the October number of the JOURNAL will be mailed when issued.

Of Interest to Advertisers.—We have received from J. Walter Thompson, of 38 Park Row, this city, his Hand-Book, issued for circulation at the Paris Exposition, of the advertising mediums of this country, and especially of the various magazines. It is a work that will be found of interest to all advertisers; unique in its way, presenting as it does fac-similes of the covers and title pages of the different magazines, with rates for advertising. Each page is duplicated, one published in French, the other in English. Mr. Thompson also issues a catalogue of Magazines, compiled for the use of advertisers, in which are given the reasons why magazines are the best advertising mediums published. Every advertiser should send to Mr. Thompson for this.

Our New Publications.—Our complete announcements for the coming season are not quite ready, but we wish to call the attention of our readers to the following recent, new, and forthcoming books.

"EVERY DAY BIOGRAPHY" (price \$1.50) is a work which is likely to receive a hearty welcome by many readers. It is hard to find one who would not be interested in taking up a book containing about 1,500 brief biographical sketches arranged under the dates on which the birthdays occur, and going back through time, so far as any record of birthdays can be found, so that on any given day one can tell whose birthday is passing. This book will be of interest to the general reader, and of special interest to teachers, members of the Chautauqua Circles, and students.

"READY FOR BUSINESS" (price 75 cents). This book contains a series of practical papers written for boys by E. J. Manson, a well-known journalist and a practical man. It talks not of the qualifications required for the various occupations as is shown in "CHOICE OF PURSUITS," and some of our other works, but presents to the reader facts as to the amount of education necessary, the time required for the mastery, opportunities for employment, and probable remuneration in various trades and professions. There is not a boy or young man in this country who would not be profited by reading this book, and it should also be read by parents who have the interest of their children at heart.

"HUMAN MAGNETISM" (price 75 cents).—In this work Dr. Drayton, the editor of the *PHRENOLOGICAL JOURNAL*, presents in a condensed and compact form all the latest theories and philosophy, together with the results of experiments made by himself and others, and it is a work the reading of which will be found especially interesting to those investigating this interesting subject, and profitable to all who would know something about "Magnetism" and its wonderful influences.

"PRACTICAL TYPEWRITING" (price \$1).—In this work, the author, Mr. Bates Turrey, has made a great advance over all previous writers, and produced a work showing, as no other book does, the capabilities of this wonderful machine, the Typewriter. Its object is to enable the operator to use the machine by the sense of touch, as a musician does the piano, or other instrument, not studying the keyboard, but simply confining the sense of sight to the reading of the matter to be written. No typewriter, whether studying or a practical writer, can afford to be without this. It contains some of the handsomest specimens of typewriting ever produced, as the author is an expert in manipulating the machine.

"THE NEW SELF-INSTRUCTOR IN PHRENOLOGY" (price 75 cents). The revision of this work with

new illustrations is now nearly completed, and we hope to have the book in the printer's hands within a few days. It will be a wonderful improvement on the previous editions, and in many respects the best illustrated work on the subject ever issued. The illustrations are new, drawn by an experienced artist, and engraved for this work especially for the purpose of showing the exact location of each of the phrenological organs. In each case two portraits are given, one showing the faculty small, the other large, and the reading matter has been carefully revised by Prof. Sizer. We expect to have for this book an immense sale.

"HEADS AND FACES" (price, in cloth, \$1; paper, 40 cents). The presses are now running on the 75th thousand of this book, which is of itself a strong testimonial as to the great popularity of the work. It is still selling, and in some places it is more popular than ever. Our agents continue to send in large orders, and the demand for the book will be likely to increase the number of copies to 100,000 soon.

"HOW TO BE SUCCESSFUL ON THE ROAD AS A COMMERCIAL TRAVELER." by An Old Drummer. The *Jewellers' Catalogue* says of this book: "The present age is essentially a drumming age, and no house can be successful that does not have good men on the road. There are many young men, however, who start out to learn that business and who depend on their success for their future prospects. To such this book is to be commended. It is a *vade mecum* of all that can be imparted by an experienced man to an unexperienced one, and there is nothing lost in sitting at the feet of such a Gamaliel as this. His opening paragraph gives the key-note to the book:

"The most essential quality of the successful commercial traveler is the art of influencing others so as to interest him in his plans and purposes. Knowledge of human nature, a flowing address, and easy manners are necessary to this end."

"How to acquire this art, how to be easy, graceful, and winning is set forth copiously in the two chapters of this little book. The traveler should slip it in his pocket, and read it on the road; he should lay its lessons to heart, and practice upon them at every opportunity. It is a book not for employers, but for employees, and it is useful not alone for the drummer, but for every young man who, embracing the mercantile profession, seeks to make his way in life honorably, profitably, and pleasantly." Price, only 20 cents. Fowler & Wells are the publishers, 775 Broadway.

"NERVOUSNESS."—We have just issued a new edition of Dr. Drayton's excellent work on "Nervousness, its Nature, Causes, Symptoms, and Treatment." It is a practical work, and the reading of it will prevent much suffering by indicating methods of relief. Price, only 25 cents.

The "Dickens Premium."—We have made arrangements with a large book manufacturer, to furnish a complete set of the works of Charles Dickens in connection with the PHRENOLOGICAL JOURNAL, and we make an unprecedentedly liberal offer, giving the complete set bound up in 15 volumes in heavy Manilla binding with the JOURNAL one year for only \$2.50, or where three club together at \$2 each, and to any person who will make up a club of ten at \$2 each, we will give an extra copy of the JOURNAL, and the Dickens set free. This offer is open to old or new subscribers, and we have no doubt but that there are among our readers many who will appreciate this opportunity of getting a set of books written by this great Delineator of character. For further particulars see fourth cover page of this number of the JOURNAL. It will be noted that these books are sent prepaid, there being no extra expense.

Prof. (S.) Riley Again.—A reader of the JOURNAL writing from Pennsylvania says: "Seeing a notice in the last number of the JOURNAL headed 'A Fraud,' I must say I am very glad some one has reported him (Prof. Riley). Some three or four years ago he came to our town and gave some lectures, and I was the means of his getting over sixty persons to have their heads examined. A few got their Charts, all paid him, and he promised to get the Charts, but he never gave them. He did the cause more harm than good, we all found him out, but too late. He claimed then to have been a pupil of Prof. O. S. Fowler. The last time Prof. Fowler was in Pittsburgh I attended some of his lectures, called to see him, and asked if Prof. Riley had ever studied with him, he said 'No, I do not know the man.' I could say more about him, but this is unnecessary."

We have had other letters endorsing what we said of this FRAUD in a recent number of the JOURNAL, and complaints continue to come in in regard to his dealings and pretenses. Certainly the readers of the JOURNAL will give him a wide berth.

Worth Remembering.—Matthews & Pierson are the popular proprietors of the Sturtevant House, Broadway, cor. 29th street, N. Y. It is one of the best in the city, and a home-like, central place to stop.—*News*.

Clubbing for 1889-90.—For the accommodation of our readers and friends we have made arrangements for the combination of other publications with our popular and useful magazine as follows: The subscription price to the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH is \$1.50; and any of the following may be included at the prices given.

Names sent for the JOURNAL with either of these will count on Premium List, and to agents the same as though sent singly.

Electric Magazine.....	\$4 25	Scottish Am.....	2 60
Atlantic Monthly.....	3 40	N. Y. Evang'list, new	2 10
Lippincott's Mag.....	2 50	The Treasury.....	1 85
Harper's Monthly.....	3 10	Homiletic Review.....	2 00
Weekly.....	3 25	Am. Garden.....	1 35
Bazar.....	3 25	The Pansy.....	85
Young People.....	1 70	Baby Land.....	45
The Century Mag.....	3 60	Peterson's Mag.....	1 00
St. Nicholas.....	2 60	North Am. Review.....	4 10
Popular Sci. Mon.....	4 20	Tribune, Weekly.....	90
Godey's Lady's Book.....	1 70	Semi.....	2 10
Arthur's Home Mag.....	1 35	Times, Weekly.....	90
Rural New Yorker.....	1 00	Sun.....	90
Scribner's Mag.....	2 50	World.....	90
Cosmopolitan.....	2 50	Country Gentleman.....	2 15
Demorest's Mag.....	1 60	Herald, Weekly.....	50
Home Journal.....	1 00	Illus. Chris'n W'kly.....	2 30
Am. Agriculturist.....	1 10	Weekly Witness.....	90
Wide Awake.....	2 10	Poultry World.....	90
Our Little Men and Women.....	85	Gardeners' Monthly.....	1 50
Our Little Ones.....	1 25	Herald of Health.....	80
Critic.....	2 50	N. E. Journal of Education.....	2 15
The Independent.....	2 60	The School Journal.....	1 45
Belford's Mag.....	2 20	Christian Union.....	2 60
Cassell's Fam. Mag.....	1 25	Christian at Work.....	2 60
Babyhood.....	1 10	Laws of Life.....	90
Scientific Am.....	2 60	American Field.....	4 10
Supplement.....	4 25	Good Housekeeping.....	2 10
Do. with Sup.....	5 75	Chic'go Inter-Ocean Weekly.....	85
Phonographic Mag.....	1 25	Chic'go Inter-Ocean Semi-weekly.....	1 90
The Forum.....	4 10	Mag. Am. History.....	4 20
Observer, new sub.....	2 25	The Old Homestead.....	35
The Studio.....	2 00	Magazine of Art.....	3 00
Galaxy of Music.....	80	Belford's Mag.....	3 00
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Puck.....	4 00	Youths' Companion.....	1 35
Judge.....	3 30	new.....	1 35
Modern Priscilla.....	40		
The Home Maker.....	1 60		

The only condition for obtaining the above reduction is that the person ordering shall subscribe for, or be a subscriber to the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH, then any number of the above publications may be ordered. Make up your list and send on the amount, saving time, money, risk, and trouble. Agents can often offer the above combination to advantage. Address all orders to FOWLER & WELLS Co., Publishers, 775 Broadway, N. Y.

"THE FAMILY HORSE."—This is the title of a work on the selection, stabling, care, and feeding of a horse or horses for family use. It is not devoted to the matter of breeding, or of training, but on the very important subject of the proper care of the horse when it has been purchased. It contains many valuable suggestions in the matter of selecting as well as to what, when, and how to feed, and it is a work that will pay every horse owner well to read. Unquestionably the value of many horses to their owners is greatly lessened by want of knowledge and improper care. The book is published by Orange Judd Co., 751 Broadway, New York. Price, \$1.00.

Three Months Free.—Although we have reduced the price of the JOURNAL to \$1.50 a year, and are offering a choice of either the Bust or Chart premiums free to new subscribers, we propose a still further reduction, by offering the last three months of this year FREE to all new subscribers for 1890, whose names are sent in at once, giving the JOURNAL and the premium to new subscribers for fifteen months for \$1.50 with 15 cents extra when the premium is sent. This, we think, will prove an inducement which will result in an increased list of names. We ask our present readers to co-operate with us by calling the attention of their friends to this offer, and make an effort to send us new subscribers. The larger our subscription list is, and the more money we receive, the better we can make the JOURNAL, and in this way our present readers will reap the benefit of an increased circulation, and, besides, we make liberal premium offers to those who will take advantage of them. We do and must rely on the co-operation of those interested in the subject in our efforts to extend the circulation of the JOURNAL.

A Special Manikin Proposition.—It is our desire to have the "MAN WONDERFUL MANIKIN," described in the last number of the JOURNAL, introduced as widely as possible over the entire country without an unnecessary delay, and as a means to this end, we have decided to make a special proposition to our subscribers. The price is \$5, and we do not sell it to the trade or through agents, but it is net. We will send it as a premium for 4 subscribers to the JOURNAL at \$1.50 each, or we will send the JOURNAL 4 years and the "MANIKIN" for \$6. The above proposition should enable every reader of the JOURNAL who is interested in physiology to obtain this, for certainly those who are not so situated as to obtain subscribers will find it good interest on the money to send advance subscriptions. Teachers will be especially interested in this as an aid to their work, and when once used will be found indispensable, and in every family this "MANIKIN" should be studied, as it enables all to become familiar with the human body in a way that it is easily understood. It is conceded to be the finest piece of work of the kind ever put on the market. We also make a special offer of the "MANIKIN" and "Man Wonderful in the House Beautiful," giving the book as a premium to those who order the "MANIKIN," and sending all prepaid if 50 cents extra, that is, if \$5.50 are sent with the order.

Agents Wanted.—We desire the services of an agent in every neighborhood for the sale of our publications. We would like to secure the co-operation of those who are interested in the subject from having been readers of the JOURNAL and our books. Especially do we wish to increase the circulation of the PHRENOLOGICAL JOURNAL in this way, and those who take up "Heads and Faces," and some of our other popular works, find a good demand. Our Special Terms to Canvassing and local agents will be sent on application.

In writing to Advertisers always mention the Phrenological Journal.

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OUR HEALTHFUL HOME is pleasantly located on Reading Heights. Send ten cents in stamps, for our Book Circular, with Portrait. Address, A. Smith, M.D., Reading, Pa.

ADVERTISEMENTS.

SPECIAL NOTICE.—Readers will oblige the Publishers if they will state, when writing to any of our advertisers, that the advertisement was seen in the PHRENOLOGICAL JOURNAL.

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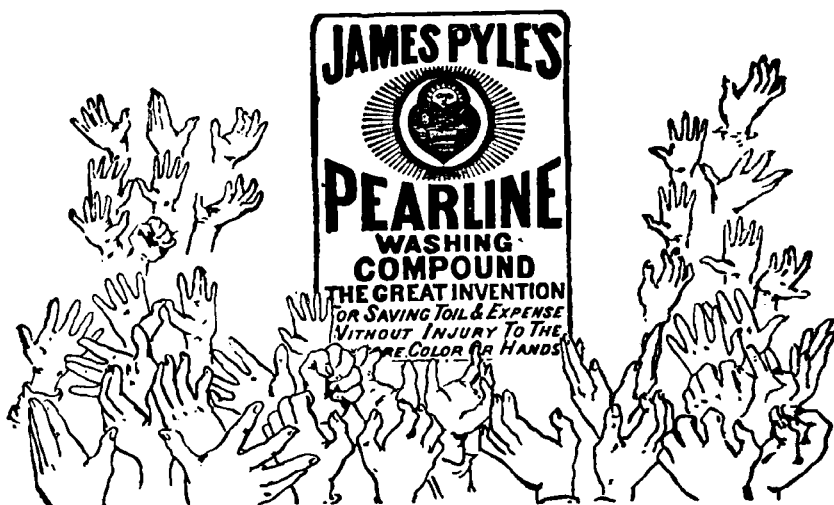
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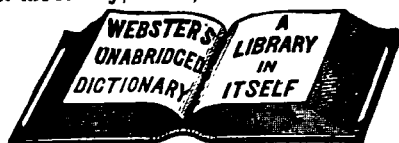
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On February 29, 1884, the FOWLER & WELLS CO. was incorporated under the laws of the State of New York as a Joint Stock Company, for the prosecution of the business heretofore carried on by the firm of FOWLER & WELLS.

The change of name involves no change in the nature and object of the business, or in its general management. All remittances should be made payable to the order of
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The Subscription Price of the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH is \$1.50 a year, payable in advance, or \$1.65 when premiums offered are sent to subscribers.

Money, when sent by mail, should be in the form of Money Orders, Postal Notes, Express Money Orders, Drafts on New York, or Registered Letters. All Postmasters are required to Register letters whenever requested to do so.

Silver or other coin should not be sent by mail, as it is almost sure to wear a hole in the envelope and be lost.

Postage-Stamps will be received for fractional parts of a dollar. The larger stamps are preferred; they should never be stuck to the letters, and should always be sent in sheets; that is, not torn apart.

Change of post-office address can be made by giving the old as well as the new address, but not without this information. Notice should be received the first of the preceding month.

Letters of Inquiry requesting an answer should inclose stamp for return postage, and be sure and give name and full address every time you write.

All Letters should be addressed to Fowler & Wells Co., and not to any person connected with the office. In this way only can prompt and careful attention be secured.

Any Book, Periodical, Chart, etc., may be ordered from this office at Publishers' prices.

Agents Wanted for the PHRENOLOGICAL JOURNAL and our Book Publications, to whom liberal terms will be given.

Our premium List, giving complete descriptions of the Premiums offered to subscribers, sent on application.

Our Descriptive Catalogues or our new List of "Books for Women" will be sent to any address on receipt of stamps for postage.

OUR REDUCED TERMS.

We have decided on a reduction in the price of the PHRENOLOGICAL JOURNAL from \$2.00 to \$1.50 a year, in consideration of the fact that it is our desire to secure as large a circulation of it as possible, and also of the fact that the larger the number printed the less is the cost for each. In doing this the size of the JOURNAL will not be materially changed, and it is our purpose to improve the quality in every way possible. The new price should certainly place it within the reach of all who would like to read it, and we will be disappointed if this change does not result in a largely increased subscription list. We shall continue the offer of the Bust or Chart premium to new subscribers as before, that is, to all who will send 15 cents extra with each subscription for boxing and packing the large bust, which is sent by express at the expense of the subscriber, or for postage on the chart or small bust, which is sent prepaid.

A Call For Help.—We feel justified in calling upon the friends of Phrenology and friends of the PHRENOLOGICAL JOURNAL to render us a little assistance at the present time. We have reduced the price of the JOURNAL for the purpose of increasing its circulation, and in this way a knowledge of Phrenology. We can not of course present the JOURNAL and its claims to every one; we shall advertise it largely and send out a great many specimen copies, but this is not likely to be sufficient to accomplish our purpose fully, and for this reason we take the liberty of calling upon our friends for their co-operation. At \$1 a year—and this is our club rate—we believe a club can be made up in every neighborhood by a person sufficiently interested to introduce the JOURNAL, and in towns and cities, of course many clubs could be made, one by almost every person who would try, and will not our friends make a timely effort and give the JOURNAL a new start?

CURRENT EXCHANGES.

America. Devoted to honest politics and good literature. Weekly. Sisson, Thompson & Co., Chicago.

The Eclectic Magazine, of foreign literature, art, and science. Monthly. E. R. Pelton, New York. Carefully made selections in variety every time.

Woman's Illustrated World. A journal for all women. Ruth E. Avery, New York.

The West Shore. An illustrated western magazine. Monthly. L. Samuel, Portland, Ore.

Book News. Monthly. John Wanamaker, Philadelphia. What is this driving man not into?

Popular Science News and Boston Journal of Chemistry. Monthly. James R. Nichols, Boston. A good combination.

Germantown Telegraph. A family and agricultural paper. Weekly. Henry W. Raymond, Germantown, Pa. An old standard.

Le Devoir. Revue des Question Sociales. Monthly. Madame Godin, au Familistere. Guise (Aisne), France. Radically social and industrial.

Treasure Trove. An illustrated magazine for young folks. Monthly. E. L. Kellogg, New York.

The Builder and Wood-Worker. For architects, cabinet-makers, stair-builders, carpenters, etc. Monthly. F. G. Hodgson, New York.

Triffts Monthly Galaxy of Music. A magazine of vocal and instrumental music. 10c. a No., \$1 a year. F. Triffts, Pub., Boston, Mass.

The Medical Analectic. A weekly epitome of progress in all divisions of medico-chirurgical practice. Convenient for the busy doctor. R. W. Amidon, M. D., Editor. G. P. Putnam's Sons, Publishers, New York.

Harper's Young People. An illustrated weekly. Harper & Bros., New York.

The Cincinnati Medical News, and Chemical Brief, and Sanitary News. Monthly. Dr. J. A. Thacker, Cincinnati. A well arranged medical.

New York Observer. Weekly.

The Hahnemannian Monthly. Medical. Doctors Bartlett and Van Lenness. Philadelphia. Organ of the system according to authority.

The American Law Register. Monthly. D. B. Canfield & Co., Philadelphia. Capital for the reading lawyer and practical man.

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The Century for September has a fine portrait of Chief Justice Marshall, and a sketch of the same by Justice Bradley of the United States Supreme Court. Winged Botanists is beautifully illustrated; Masai adds another to the series of Italian old masters; An American Artist in Japan, is entertaining; The Pharaoh of the Exodus and his son in the Light of their Monuments is a good Biblical study; History of the Kora Political Prison, another Siberian sketch; Jufirm Van Steen, Old Bascoor Place; Telegraph in Battle are other well illustrated topics. Century Co., New York.

On Trial.—In addition to our special offer of THREE MONTHS FREE to new subscribers, we propose another LIBERAL OFFER as a means of securing new readers. That is to furnish the JOURNAL to those who have not been subscribers for the past year, for three months, commencing with the next number, for twenty-five cents. Now it will only be necessary for our readers to present this to their friends in order to secure names. Although we make this specially low rate to subscribers, we do not ask our readers to work for nothing, and therefore propose to send to any of the PRESENT SUBSCRIBERS, who will send us four new names at twenty-five cents each, any book in our catalogue advertised for twenty-five cents, or this amount can apply on the purchase of any other higher priced book, and to make the offer still more tempting to any one who will send us one dozen trial-trip subscribers we will send a \$1.00 book. Now, may we not receive a good list of names from every post office where we now have readers? Send in the names as fast as they can be obtained, and as soon as list is complete, premiums will be sent, and the October number of the JOURNAL will be mailed when issued.

Our "Dickens" Premium.—We call the attention of our readers again to our great offer of the works of Charles Dickens as a Premium in connection with the PHRENOLOGICAL JOURNAL. This is the best opportunity ever presented for securing the works of this great delineator of human character. They are published complete in 15 volumes, bound in paper covers, small but good, clear type, and offered with a years subscription to the Journal for only \$2.50, or in clubs of 10, at \$2 each, with an extra copy of the Journal to the person making up the club. Will our readers not call the attention of their friends to this offer, and try and get some names to send as per offers made. It will be noted that the books are sent prepaid, there being no extra bill for express charges, etc.

"Fruits, and how to Use Them."—This is the title of a practical manual for housekeepers by Hester M. Poole, now in press, devoted exclusively to the use and preparation of fruits, including all kinds of foreign and domestic edible fruits and nuts, fresh and dry, and is very comprehensive. For instance, there are 100 receipts for the use of apples. Directions are given for canning, and preserving both the fruit and fruit juices; for the making of fruit sauces for puddings and other desserts. It is the only work of the kind ever prepared, and being from the pen of an intelligent, practical woman, who is used to writing for the press, it will certainly be comprehensive and exhaustive, the price will be \$1. It is now in the printer's hands and will be ready Nov. 1st. All orders received from subscribers to the *PHRENOLOGICAL JOURNAL* before that date, will be filled at 75 cents.

"Health in the Household."—This is a comprehensive and practical work on the healthful preparation of food, and is one which should be found in the house of every reader of the *PHRENOLOGICAL JOURNAL*. It is unquestionably the best cookbook ever published. It gives the reason why Hygienic methods of living are the best, with abundant receipts for a great variety of dishes, and there is also added a department where a compromise is offered, i. e., receipts for the preparation of food in a manner that the author does not consider strictly hygienic, but in that way is a great improvement over the common methods of cooking. These receipts can be followed easily and will be acceptable to all who are not prepared for what is known as the strictly hygienic plan. We commend the book to our readers, and will send it by mail, postpaid, on receipt of price, \$2, bound in either strong cloth, or in a special oil-cloth binding. Agents are wanted for this, to whom liberal terms will be given.

The Student's Set.—In reply to inquiries as to the books to read to gain a knowledge of the subject of Phrenology, would say we have arranged a list of books, which we call "THE STUDENT'S SET," affording an opportunity for a systematic study, and these are the books recommended to those who are preparing to attend the American Institute of Phrenology, and consist of "Brain and Mind," \$1.50; "Forty Years in Phrenology," \$1.50; "How to Read Character," \$1.25; "Popular Physiology," \$1; "New Physiognomy," \$5; "Choice of Pursuits," \$2; "Constitution of Man," \$1.25; "Heads and Faces," 40 cents, and the Phrenological Bust, \$1; amounting to nearly \$15, which we send by express, on receipt of \$10.

Dr. D. H. Campbell, one of the old graduates of the Institute, is with us again, the present year, taking another course, and brings with him one of his converts to the subject, and promises to send a good many students in the future, being more than ever convinced of the great advantage to be derived from this course of instruction.

The "Man Wonderful Manikin."—This is a capital aid to the study of Physiology. It is now thoroughly before the public and being introduced rapidly in all kinds of medical institutions where physiology is taught and in private families. It is published at \$5, net, and at this price, it is the cheapest Publication of the kind ever issued, in fact we know of nothing that has been sold for less than \$25. We do not claim that this is as large or comprehensive, but that it does show the essential parts, and that it is in some respects much better, it is more convenient for handling, and a number of teachers have said to us, they would even prefer it at the same price. We make the price of this net, no discount, and it is not sold through the trade. We offer it on special terms as a premium in connection with the *PHRENOLOGICAL JOURNAL* for four subscribers at \$1.50 each the Manikin will be sent as a premium; one subscriber for four years will count the same as four subscribers for one year. This is an especially liberal offer, and one which will enable every person interested in the subject to procure the "Manikin." Let every reader of the Journal make an effort to obtain it.

The American Institute of Phrenology.

—The class of 1889 is now in session, and is one of the largest and most enthusiastic classes that has ever met, including a number who have done good work in the phrenological field, clergymen, lawyers, teachers, and business men, with a number of ladies, who are listening to from three to five lectures each day, on Phrenology, Physiognomy, Anatomy, and Physiology, Magnetism, and other allied topics, by the best instructors in the world. The course includes opportunities to visit the public institutions and places of interest in and about the city, such as the Metropolitan Art Gallery, Museum of Natural History, the Asylum for the Insane, the City Prison, Stock Exchange, etc. Each year we receive letters from persons who have expected to attend, but have been unable to on account of pecuniary embarrassments. To those who do not feel able to spend the necessary amount, we offer an opportunity for obtaining a scholarship without cost in money, but simply by a little well-directed effort. For a club of fifty subscribers to the *PHRENOLOGICAL JOURNAL* the tuition including a diploma is given free. Now is the time to make up a club in order to be able to attend next year's session, and in this connection we would remind the public that it should be borne in mind that the old veterans now in the Phrenological work will not always be able to instruct others, that the time will come of necessity when they must lay aside their working armor.

Mrs. M. E. Cox, a disciple of Dr. Trall's, and a graduate of the Hydro-Therapeutic College, has sent us the first number of a new paper called "Life and Light," issued by her at Omaha, Neb. It is in the interest of the healthful condition of Body and Mind, and the publisher has our good wishes for it. Terms \$1 a year, and orders should be addressed to Dr. M. E. Cox, corner 20th and Spruce streets, Omaha, Neb.

The "Dickens Premium"—We have made arrangements with a large book manufacturer, to furnish a complete set of the works of Charles Dickens in connection with the PHRENOLOGICAL JOURNAL, and we make an unprecedentedly liberal offer, giving the complete set bound up in 15 volumes in heavy Manilla binding with the JOURNAL one year for only \$2.50, or where three club together at \$2 each, and to any person who will make up a club of ten at \$2 each, we will give an extra copy of the JOURNAL, and the Dickens set free. This offer is open to old or new subscribers, and we have no doubt but that there are among our readers many who will appreciate this opportunity of getting a set of books written by this great delineator of character. For further particulars see fourth cover page of this number of the JOURNAL. It will be noted that these books are sent prepaid, there being no extra expense.

How to Raise Fruit, by Thomas Gregg.

Published and sold by the Fowler & Wells Co., of New York. Cloth, \$1. The author of this concise manual is an acknowledged authority on fruit growing, and the book itself the outcome of an experience in the cultivation of all kinds of fruit that extends over a period of years. Such topics as the preliminaries to planting, transplanting, and after culture, compose the opening chapters of the work, whereupon the various, small and other fruits are taken up seriatim and treated in such a manner as to encourage and instruct the beginner in horticulture. This book is principally written for the amateur, and not intended for professional fruit growers, and to this class, whether in city or country, we sincerely recommend the volume.—*The Detroit Com. Advertiser.*

"Practical Typewriting."—The publication of this work has been unavoidably delayed, owing to some additions and changes being made in the plan of the work, by which it has been very greatly improved. We hope to have it ready before this number of the JOURNAL reaches our subscribers, and all advance orders will be filled promptly. Owing to the changes referred to the price has been set at \$1 instead of 50 cents, but of course no extra charge will be made to those who have sent for it in advance of its publication.

Clubbing for 1889-90.—For the accommodation of our readers and friends we have made arrangements for the combination of other publications with our popular and useful magazine as follows: The subscription price to the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH is \$1.50; and any of the following may be included at the prices given.

Names sent for the JOURNAL with either of these will count on Premium List, and to agents the same as though sent singly.

Electric Magazine..\$4 25	Scottish Am..... 2 60
Atlantic Monthly.. 3 40	N.Y. Evang'l.ist, new 2 10
Lippencott's Mag... 2 50	The Treasury..... 1 85
Harper's Monthly... 3 10	Homiletic Review... 2 00
" Weekly... 3 25	Am. Garden..... 1 35
" Bazar... 3 25	The Pansy..... 85
" Young People 1 70	Baby Land..... 45
The Century Mag... 3 60	Peterson's Mag..... 1 60
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Godey's Lady's Book 1 70	" Semi "..... 2 10
Arthur's Home Mag 1 35	Times, Weekly..... 90
Rural New Yorker.. 1 60	Sun..... 90
Scribner's Mag..... 2 50	World..... 90
Cosmopolitan..... 2 50	Country Gentleman 2 15
Demorest's Mag..... 1 60	Herald, Weekly..... 90
Home Journal..... 1 60	Illus. Chris'n W'kly 2 20
Am. Agriculturist.. 1 10	Weekly Witness..... 90
Wide Awake..... 2 10	Poultry World..... 90
Our Little Men and Women..... 85	Gardeners' Monthly 1 50
Our Little Ones..... 1 25	Heard of Health... 80
Critic..... 2 50	N. E. Journal of Education..... 2 15
The Independent... 2 60	The School Journal 1 95
Belford's Mag..... 2 20	Christian Union... 2 60
Cassell's Fam. Mag 1 25	Christian at Work.. 2 60
Babyhood..... 1 10	Laws of Life..... 90
Scientific Am..... 2 60	American Field... 4 10
Do. with Sup 5 75	Good Housekeeping 2 10
Supplement..... 4 25	Chic'go Inter-Ocean Weekly..... 85
Phonographic Mag. 1 25	Chic'go Inter-Ocean Semi-weekly..... 1 90
The Forum..... 4 10	Mag. Am. History. 4 20
Observer, new sub. 2 25	The Old Homestead 35
The Studio..... 2 00	Magazine of Art... 3 00
Galaxy of Music... 80	Vick's Mag..... 90
The Esoteric..... 1 00	Pop. Educator..... 1 75
Puck..... 4 00	Youths' Companion new..... 1 35
Judge..... 3 30	
Modern Priscilla... 40	
The Home Maker... 1 60	

The only condition for obtaining the above reduction is that the person ordering shall subscribe for, or be a subscriber to the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH, then any number of the above publications may be ordered. Make up your list and send on the amount, saving time, money, risk, and trouble. Agents can often offer the above combination to advantage. Address all orders to FOWLER & WELLS Co., Publishers, 775 Broadway, N. Y.

"Choice of Pursuits, or What to Do, and Why," by Prof. Sizer. A new, revised, and enlarged edition of this book has just gone to press containing 200 pages more than the former edition with nearly 100 portraits of men who have been successful in the various walks of life. This book shows what qualification is needed for success in any line; it shows you how to study yourself, and to have a knowledge of your adaptation in any given line of life, and will enable you to decide whether you can do best in a profession, in mechanism, or in business. Price of the new, enlarged edition is \$2.

True Enough.—A correspondent of the *New York School Journal* in a letter published in a recent number says: "I have just finished my first reading of 'Man Wonderful.' Isn't it charmingly written? Could you not spare space for the first four paragraphs for the 'Burglar Alarm?' one year from now, the teachings of Physiology and Hygiene would be obligatory in this state. I hope this, or something like it will be recommended as a textbook." If teachers understood the great advantage to be gained from the use of this book, either as a manual for oral instruction, or as a class textbook, they would not be deprived of it if they had to buy it themselves, in cases where it is not supplied by the board of education. It is making its way steadily and is making friends among progressive teachers in every direction, and especially when used in connection with the "MAN WONDERFUL MANIKIN." If you are not a teacher, will you not call the attention of teachers whom you know to this valuable work. It is handsomely published, is a large 12 mo volume, and sold at \$1.50.

To Phrenologists and Lecturers.—We have just added to our supplies for the use of lecturers a line of imported Oleographs, representing life size portraits of a number of European rulers, including King William the I., his son King Frederic, and the present King William of Germany, together with Bismarck, Von Moltke, and also the Emperor of Austria and of Bavaria, Parnell, and a few others. These are faithful representations in color of oil portraits, and can be supplied at 25 cents each. We also have a few female heads useful in presenting types, at the same price. We can supply life size lithographs of the President and Vice-President, Ex-President Cleveland, the late Senator Logan, James G. Blaine, and Henry Ward Beecher, and a few others, at 25 cents each. At this price any of them can be sent by mail, but if desired, mounted in sets of four, on muslin, with rings for hanging, 25 cents extra for each portrait must be added.

"Ready for Business."—On another page in this number of the *JOURNAL* will be found the advertisement of this new book, to which we wish to call the attention of every young man and boy, and to the parents of young men and boys; we would simply say you cannot afford not to read it. It shows better than ever has been shown before what is necessary in order to succeed in any one of the dozen of the leading avocations of life. If a young man wishes to be an Electrical Engineer, this will tell him what he can accomplish in life in this way; if he wishes to become a practical Chemist, this will show what education is required, and how to obtain business. It shows what has to be contended with, and how to overcome difficulties. It does not claim to indicate in what line of work any given individual will succeed best by reason of adaptation, but for the obtaining of this knowledge the reader is referred to the book itself.

Plymouth Rock Pants Co.—Our readers have noticed the attractive and telling advertisement of this company, in recent numbers of the *JOURNAL*. We simply wish to say that we have every reason to believe that notwithstanding a good deal is claimed by them, that they will do in every respect all that they promise.

BUSINESS CARDS.

The Hammam, a Family Hotel, with Turkish Baths, 81 and 83 Columbia Heights, Brooklyn, N. Y. Three minutes' walk from Fulton Ferry.

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ADVERTISEMENTS.

SPECIAL NOTICE.—Readers will oblige the Publishers if they will state, when writing to any of our advertisers, that the advertisement was seen in the *PHRENOLOGICAL JOURNAL*.

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The change of name involves no change in the nature and object of the business, or in its general management. All remittances should be made payable to the order of
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The Subscription Price of the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH is \$1.50 a year, payable in advance, or \$1.65 when premiums offered are sent to subscribers.

Money, when sent by mail, should be in the form of Money Orders, Postal Notes, Express Money Orders, Drafts on New York, or Registered Letters. All Postmasters are required to Register letters whenever requested to do so.

Silver or other coin should not be sent by mail, as it is almost sure to wear a hole in the envelope and be lost.

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Change of post-office address can be made by giving the old as well as the new address, but not without this information. Notice should be received the first of the preceding month.

Letters of Inquiry requesting an answer should inclose stamp for return postage, and be sure and give name and full address every time you write.

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Any Book, Periodical, Chart, etc., may be ordered from this office at Publishers' prices.

Agents Wanted for the PHRENOLOGICAL JOURNAL and our Book Publications, to whom liberal terms will be given.

Our premium List, giving complete descriptions of the Premiums offered to subscribers, sent on application.

Our Descriptive Catalogues or our new List of "Books for Women" will be sent to any address on receipt of stamps for postage.

OUR REDUCED TERMS.

We have decided on a reduction in the price of the PHRENOLOGICAL JOURNAL from \$2.00 to \$1.50 a year, in consideration of the fact that it is our desire to secure as large a circulation of it as possible, and also of the fact that the larger the number printed the less is the cost for each. In doing this the size of the JOURNAL will not be materially changed, and it is our purpose to improve the quality in every way possible. The new price should certainly place it within the reach of all who would like to read it, and we will be disappointed if this change does not result in a largely increased subscription list. We shall continue the offer of the Bust or Chart premium to new subscribers as before, that is, to all who will send 15 cents extra with each subscription for boxing and packing the large bust, which is sent by express at the expense of the subscriber, or for postage on the chart or small bust, which is sent prepaid.

A Call For Help.—We feel justified in calling upon the friends of Phrenology and friends of the PHRENOLOGICAL JOURNAL to render us a little assistance at the present time. We have reduced the price of the JOURNAL for the purpose of increasing its circulation, and in this way a knowledge of Phrenology. We can not of course present the JOURNAL and its claims to every one; we shall advertise it largely and send out a great many specimen copies, but this is not likely to be sufficient to accomplish our purpose fully, and for this reason we take the liberty of calling upon our friends for their co-operation. At \$1 a year—and this is our club rate—we believe a club can be made up in every neighborhood by a person sufficiently interested to introduce the JOURNAL, and in towns and cities, of course many clubs could be made, one by almost every person who would try, and will not our friends make a timely effort and give the JOURNAL a new start?

CURRENT EXCHANGES.

In *Harper's Magazine* for November American topics are well represented by The Mexican Army, The Republic of Columbia, and At Grande Anse. This last is a readable article on a little village in Martinique. A century of Hamlet is enriched with many portraits of actors. The Building of the Cathedral at Chartres; Bird Notes; York and its minister, are also among the illustrated subjects. Mr. Curtis talks of New England in admiring terms, and the other editors have well filled spaces. Franklin Square, New York.

The Century for October, opens with a portrait of Moliere as *Caesar*, and Moliere as compared with Shakespeare, forms an important feature of the reading matter. The Siberian Mines; Baseball gets too much approval from a contributor, Fra Filippo is the "Old Master" talked about and illustrated this time. Three Jewish Kings, The Longworth Industry, Ben and Judas, A happy portrait of Southern life in one of its phases, Reminiscences of Herschels, by Maria Mitchell, Manual training in Modern Education, The Democratic Zeal in Education. Altogether an interesting array of topics, this time. Century Co., New York.

The Medico-Legal Journal, September number Contains portrait of Sir John C. Allen, and a fine list of topics. The transactions of the recent Congress of Medical Jurisprudence for the first and second days are reported. New York.

Christian Thought, for October, discusses the necessity of Faith, Woman's Work in the Church, What Science is—a Symposium, The Cash Value Conscience, the late Summer School, and other topics. W. B. Ketcham. New York.

Le Devoir. Revue des Question Sociales. Monthly. Madame Godin, au Familistere. Guise (Aisne). Enlarged and improved. The wife continues the good work of the dead husband.

The Hahnemannian Monthly. Medical. Drs. Bartlett and Van Lenness, Philadelphia. Has a good assortment of matter outside its special field of therapy.

The West Shore. Illustrated. Weekly. L. Samuel, Portland, Ore. Colored illustrations; and other changes.

New York Weekly Tribune. New York City.

The Medical Summary. Monthly. R. H. Andrews, Philadelphia. Brief notes and personal views fill its columns.

The Methodist Magazine and Family Repository. Monthly. Shaw & Sons Chicago. A new venture.

The Omaha Clinic. A monthly Medical Journal. H. J. Penfold, Omaha, Neb.

Annals of Surgery. Monthly. Review of surgical science and practice. J. H. Chambers & Co., St. Louis. Bailliere. Tindall & Cox, London, Eng. Advanced methods, and a liberal policy.

Le Progres. Medical Journal of Medicine, Surgery, and Pharmacy. Weekly. Bourneville, Paris, France. Late numbers contain very full reports of the medical and science congresses at Paris.

The Cultivator and Country Gentleman. For the Farm, Garden and Fireside. Weekly. Luther Tucker & Son, Albany.

Kindergarten. For teachers and parents. Monthly. Alice B. Stockham & Co., Chicago.

Popular Science Monthly. The Art of Cooking; The Decadence of Farming; Israelite and Jew-

dian; Responsibility in Mental Disease; A Sketch of John Le Conte, are leading items of the November No. Evidently the editor has declined a place to those who would reply to the article on "Old and New Phrenology," that appeared in the October number. A little more liberality would suit the word "popular." New York. D. Appleton & Co.

The Home Exerciser.—Now that the season of outdoor life is passing by for a while, we would remind our readers of the importance of taking proper exercise. There should be something besides the brisk morning walk, something which should develop the muscles, as out-door work, games, and other pastimes have done during the pleasant weather. The "Home Exerciser" invented by the author of "Physical Culture," Prof. Dowd is undoubtedly the best apparatus for this purpose ever devised. It is something occupying but little room, always in order and always ready for use by the most feeble or strongest members of the family. It is made in a plain but substantial style and sold at \$8, or it will be given as a premium for six subscribers to the JOURNAL; another more ornamental style is sold at \$10, which we offer for eight subscribers, or we will send the JOURNAL as a premium to any one ordering the apparatus at the regular price and enclosing fifty cents additional.

The Student's Set.—We are frequently asked for a list of the best books to read and study in order to gain a knowledge of Human Nature as based on Phrenology and Physiognomy and to answer this demand we have selected a set of books, including the Bust, called "The Student's Set," which are recommended to all interested in the subject, and to those intending to attend the Institute. The set is sold at \$10, or it is offered as a premium for a club of eight subscribers to the JOURNAL at \$2 each.

Any Books.—We will send to our readers any books desired, whether our own publications or others at the advertised price. We do this as an accommodation, enabling them to make their orders all from one place. The books ordered from us will be procured direct from the publishers, and will in all cases be fresh from the latest stock, while those from local booksellers are sometimes shelf-worn. We will also purchase for our readers any kind of merchandise from this city and the discounts allowed us as purchasers will give us all the compensation we demand. All orders should be accompanied with the amount required for the purchase as we can not send goods C. O. D.

The Servant Question.—This number of the Human Nature Library is attracting a great deal of attention, and justly so, for it is the most important consideration of the question that has ever been made. There is no household in which a servant of any kind is employed where the reading of this would not do much good both to the employer and the employed. What we want to show is how to deal with each other fairly and not unfairly. This is No. 5 of the Human Nature Library, and will be sent by mail, postpaid, for 10 cents.

FIELD NOTES.

We give below brief notes of those who are in the field. There may be omissions, and we hope our friends will report to us their plans that a note may be made of it.

Dr. D. Hugo Campbell, of class '87, attended another session of the Institute this year and has arranged to take an Edison Phonograph into the field to assist him in his work, and will visit towns in New Jersey, New York State and other points. The Doctor is full of enthusiasm, and promises to send 100 subscribers to the PHRENOLOGICAL JOURNAL during the coming year.

Prof. and Mrs. Morris have spent the last year in Minneapolis, where at last accounts they were still doing good work, lecturing, making examinations, and teaching classes. They have always been successful in making long stops at different points, but this is an unusual stay even for them, and speaks well for their drawing power.

Prof. E. E. Candee is in Minnesota and Wisconsin doing good work. He finds the field a congenial one and is successful.

Prof. and Mrs. Windsor are visiting the principal and large towns in the West where they draw large houses and make it pay.

Prof. Foster has closed his office in Louisville for lecturing the present and is now in the field. He has been in Ohio principally for the past few months. He also proposes to send a good list of subscribers to the JOURNAL for the coming year.

Prof. W. G. Alexander, class of '84, who paid us a visit during the late summer months with his bride, reports from Texas, where he finds the outlook promising.

Prof. V. P. English, class '78, after visiting in the East has returned to the West prepared for a vigorous campaign.

Prof. H. E. Swain, class '70, is still visiting what might be called his constituents, and his parish in New England, where he has worked so long and faithfully and sold such a large number of Heads and Faces, and other books. He too, is booked for a large number of subscribers to the JOURNAL.

Prof. S. F. De Vore, class '88, who lectured and taught classes so successfully in N. Y. and Pa., is up in Iowa, and will go farther West. He reports a bright outlook.

Dr. Oliver, class '85, is in his own State, Iowa, where he is lecturing successfully and making friends for Phrenology.

Rev. A. C. Dill, class '83, is still in charge of a congregation in N. J., and gave instructions in Elocution again to the class of '89.

Mat. W. Alderson has given up his editorial labors in Montana, and we trust he has "burned the bridges behind him" in entering the Phrenological field in the North West Territory.

Prof. Edgar C. Beall is still located in Cincinnati, and from the frequent orders he sends us for books we know he is a waking interest in the subject.

Mias Loretta Moran spent a part of the summer

in Canada, and is now in Washington, D. C. Her special fort is parlor gatherings, where she gives short talks on the subject and makes examinations.

Prof. James Mason, class '80, after a tour in the North West has returned to Toronto.

Dr. A. Wallace Mason, after taking a course of instruction at the Hygienic College in St. Louis, has located in Cleveland, Ohio, where he is practicing both the "Healing Art" and Phrenology.

Dr. U. E. Treat writes us that after a summer's rest we may expect to hear from him again soon, probably in his own State, Iowa.

Henry S. Bartholomew, class '85, is engaged in educational and other work in Indiana, and writes us that he has accepted an invitation to give a course of lectures before Farmer's Clubs and Societies in that State.

M. T. Richardson, class '70, is the publisher of three very important Trade Journals in this city; "Boot and Shoes," a weekly, one of the most important periodicals devoted to that trade, also the "Blacksmith and Wheelwright," and the "Saw-Mill Gazette."

Rev. David Dodds, M. D., paid us a visit the past year, as and is full of fire and enthusiasm for the subject as ever.

Samual Grob keeps up an agitation on the subject to the people of his community, which results in frequent subscriptions to the JOURNAL and sale of books.

Prof. Howard spent the summer at points on the sea-shore and we expect to hear from him in the field the coming season.

Prof. Levi Hummel has not reported for the coming year, but if in the field, we shall hear from him with good reports.

Rev. E. McDuff, now pastor of an Episcopal Church in Detroit, Mich., and a delegate to the Episcopal Convention recently held in this city, spent some time here, and was present at the closing exercises of the Institute, and made a short address which was full of practical suggestions.

Dr. W. McDonald, who has been interested in some large real estate transactions during the past few years, writes, promising an increased interest in the JOURNAL and the subject.

Dr. B. F. Pratt was at last accounts lecturing in the far West, acceptably, and sowing phrenological seed, which always brings forth good fruit.

W. N. Riddell is in the field of Nebraska, and finds it a good field.

Rev. J. Duke McFaden, class, '89, has ordered a good outfit and a large stock of circulars, and is preparing to enter the field in the vicinity of Philadelphia for the present.

Dr. Holt, class '89, was the first student to report an order for supplies and is lecturing in Pennsylvania.

Others of the last class have entered the field but have not yet reported their whereabouts, or their success, but thus far, those in the field find indications of a prosperous season's business. We

wish in this way to urge all graduates of the Institute and all friends of the subject to interest themselves in sending subscribers to the JOURNAL for the coming year. This is a great seed-sower, and if we could have 100,000 subscription to the JOURNAL, or even 50,000 it would awaken an interest in the subject that would be felt widely.

A Strong Testimonial.—A lady has just called at the office in whose family a Chart was given by Prof. Sizer thirty years ago. She assures us that she has almost committed the work to memory, and that her knowledge of the subject has preserved her life, and she refers to a physician of a large and successful practice, who told her recently that he would rather be deprived of any other mental attainment that he had ever acquired than to be deprived of his knowledge of Phrenology. This certainly is a strong testimonial but none too strong, as many others know.

Practical Typewriting.—In speaking of this work Prof. Day, of Day's School of Shorthand of Cleveland, Ohio, says:

"Dear Sir;

'Practical Typewriting' reached me by due course of mail, and having given it a careful examination my opinion of it may be summed up, briefly, as follows: It is the best work on Typewriting extant, and one which can not fail to do much good in bringing about a uniform method of fingering.

Any person following the instructions you have given will surely become a graceful and rapid writer in the least possible time. The illustrations are full and complete; you have omitted nothing that needs to be known, and I do not see how the work could possibly be improved.

It is good, very, very good, and I shall introduce it as a text book."

ALFRED DAY.

This work shows as no other work has ever done the scope of the Typewriter and will add very much to value of any typewriter when the instructions are followed. Price by mail, postpaid, \$1.

Hygienic Underwear.—Mrs. A. Fletcher whose establishment was located in 14th street for so many years has moved into the new business center 19 West 42d street, where she has opened new and exceedingly pleasant rooms for continuing the business of the manufacture and sale of Hygienic underwear and Ladies' Trousseaux, and she is now prepared to furnish every variety of goods from the strongest and most durable, to the very finest and most costly fabrics. A specialty is made of the "Union" undergarments, the Divided shirt, and Equestrian Pants for riding and bicycling which are made up in strong, warm materials for winter wear. There is probably no house in the city that has done more than this one for introducing to the women of this country a sensible method of dress for health, comfort, convenience, and style. It is a pioneer house, and we take pleasure in calling the attention of our readers to their advertisement in this number of the JOURNAL. An illustrated, descriptive catalogue and price list will be sent to any of our readers who will mention the JOURNAL, and write to Mrs. Fletcher, 19 West 42d street.

The Manual for the "Man Wonderful Manikin," is, after a good deal of unexpected delay, at last ready, and has been mailed to all who ordered the Manikin, and we are now prepared to fill orders promptly and completely. The Manikin grows in favor, especially among teachers, for whom it was prepared, parents and others are making good use of it in the home and social circles.

Why Not Fry Them.—The Widow Green tries an experiment with the gay bivalve. "Well, ma," said Mandy to the widow Green, who had just returned from the country fair, "I don't see that you've brought much home. There's nothing but this big feather duster and a lot of little sample packages. What's that in that yellow paper?"

"It's cracker dust, Mandy."

"Cracker dust! Well, now you're talking, ma. That's something like, if you've only bought enough of it. What's the matter with having those oysters fried now, instead of the horrid old stew?"

"Mandy, I do wish you wouldn't talk so outlandish. It's some beautiful cracker dust that they gave away in 'cute little packages. I got together a lot of 'em, and then I set down on 'em in the wagon and busted 'em, but I poured the whole lot into that clean paper. Of course we can have 'em fried, if you'll set the table and give us something to eat 'em on. Those oysters come into my mind the minute I set eyes on that cracker dust. Such a beautiful name it had, too! I can't think what it was, but it was printed big, so I could read it without my glasses. My stars! I never saw the beat of this frying-pan! If you could one only do your cooking on the handle, you'd have things cooked before you knew it."

"Ma," said Mandy, "what's the matter with having pie for supper?"

"Mandy, I wish you could talk like a Christian being. If you want the pie, why can't you so decently?"

"What's the matter with saying it that way ma?" said the irrepressible Mandy. "It's no matter, any how. 'It's no matter what you do if your heart be—' merciful goodness, ma, what's all that sizzling and sputtering?"

There was sizzling and sputtering sure enough. A thick smoke poured from the frying-pan. Every oyster that could be seen at all through it seemed to be trying to stand up on its hind legs and claw the air. Moreover, they were rapidly getting black in the face in the attempt. The widow stood dazed and bewildered. Mandy, with experience of the world seized the yellow paper, and examined carefully the few grains that were left.

"Cracker dust!" she said finally. "That's nice cracker dust! It's Pearlina, ma, that's what it is. It's what I've been wanting you to get for ever so long. Now if you had wanted to wash those oysters, you couldn't have done better. It's the first time, too," she added, reflectively, as she surveyed the blackened supper, "it's the very first time that I ever knew Pearlina to hurt anything. Any way, ma, we found out what was the matter with frying them, didn't we?"—*New York Press.*

The Memory Co. have issued a very attractive Pamphlet, called "A 5 minutes chat upon a subject which interests everybody," setting forth the advantage of a good Memory and how to attain it. A copy of this will be sent free to any of our readers who will send stamp with address to the Memory Co., 4 East 14th street, New York City.

Dr. D. Hugo Campbell, one of our former graduates, who attended the last session of the Institute, pledged himself to the Faculty and the members of the class at the closing exercises of the Institute to send at least 100 subscribers to the PHRENOLOGICAL JOURNAL for the coming year. If for any reason he was prevented from so doing he would advance the money, and give away the JOURNALS, and he expects to do much more than this. We know he will succeed, and with this spirit, others can do as well or even better than he promises, and we certainly trust to have the hearty co-operation of all the friends of the subject, and that the coming year will see a largely increased list of subscribers.

The "Dickens Premium"—We have made arrangements with a large book manufacturer, to furnish a complete set of the works of Charles Dickens in connection with the PHRENOLOGICAL JOURNAL, and we make an unprecedentedly liberal offer, giving the complete set bound up in 15 volumes in heavy Manilla binding with the JOURNAL one year for only \$2.50, or where three club together at \$2 each, and to any person who will make up a club of ten at \$2 each, we will give an extra copy of the JOURNAL, and the Dickens set free. This offer is open to old or new subscribers, and we have no doubt but that there are among our readers many who will appreciate this opportunity of getting a set of books written by this great delineator of character. For further particulars see fourth cover page of this number of the JOURNAL. It will be noted that these books are sent prepaid, there being no extra expense.

Clubbing for 1889-90.—For the accommodation of our readers and friends we have made arrangements for the combination of other publications with our popular and useful magazine as follows: The subscription price to the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH is \$1.50; and any of the following may be included at the prices given.

Names sent for the JOURNAL with either of these will count on Premium List, and to agents the same as though sent singly.

Electric Magazine.	\$4 25	Scottish Am.	2 00
Atlantic Monthly	3 40	N. Y. Evang'list, new	2 10
Lippencott's Mag.	2 50	The Treasury	1 85
Harper's Monthly	3 10	Homiletic Review	2 00
" Weekly	3 25	Am. Garden	1 35
" Bazar	3 25	The Fanny	85
" Young People	1 70	Baby Land	45
The Century Mag.	1 60	Peterson's Mag.	1 00
St. Nicholas	2 60	North Am. Review	4 10
Popular Sci. Mon.	4 20	Tribune, Weekly	90
Godey's Lady's Book	1 70	" Semi "	2 10
Arthur's Home Mag	1 35	Times, Weekly	90
Rural New Yorker	1 60	Sun	90
Scribner's Mag.	2 50	World	90
Cosmopolitan	2 50	Country Gentleman	2 15
Demorest's Mag.	1 60	Herald, Weekly	90
Home Journal	1 60	Illus. Chris'n W'ly	2 20
Am. Agriculturist	1 10	Weekly Witness	90
Wide Awake	2 10	Poultry World	90
Our Little Men and Women	85	Gardeners' Monthly	1 50
Our Little Ones	1 25	Harold of Health	80
Critic	2 50	N. E. Journal of Education	3 15
The Independent	2 00	The School Journal	1 95
Belford's Mag.	2 20	Christian Union	2 60
Cassell's Fam. Mag	1 25	Christian at Work	2 60
Babyhood	1 10	Laws of Life	90
Scientific Am.	2 60	American Field	4 10
Do. with Sup	5 75	Good Housekeeping	2 10
Supplement	4 25	Chicago Inter-Ocean Weekly	85
Phonographic Mag.	1 25	Chicago Inter-Ocean Semi-weekly	1 90
The Forum	4 10	Mag. Am. History	4 20
Observer, new sub.	2 25	The Old Homestead	85
The Studio	2 00	Magazine of Art	3 00
Galaxy of Music	80	Vick's Mag.	90
The Esoteric	1 00	Pop. Educator	1 75
Puck	4 00	Youths' Companion new	1 85
Judge	3 30		
Modern Pheasilla	40		
The Home Maker	1 60		

The only condition for obtaining the above reduction is that the person ordering shall subscribe for, or be a subscriber to the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH, then any number of the above publications may be ordered. Make up your list and send on the amount, saving time, money, risk, and trouble. Agents can often offer the above combination to advantage. Address all orders to FOWLER & WELLS Co., Publishers, 775 Broadway, N. Y.

Information Wanted.—We would like to have the present address of Fred Eden, who ordered some Phrenological Charts from us in June last, to be sent to Galveston, Tex., C.O.D. These were sent, but now the express company reports to us that he is not known, and that no trace of him can be found, and if not taken, the package will be returned to us at our expense. If anyone of our readers are aware of Mr. Eden's address, we will feel under obligations to you if the same is forwarded to us.

Human Anatomy.—"The very best low-cost device we have ever seen or heard of for presenting a clear idea of the bones, muscles, and interior organs of the human body, is what is called "The Man Wonderful Manikin," arranged by Adelbert Gardenier, and published by the Fowler & Wells Co., 775 Broadway, New York, at the insignificant price of \$5. To describe adequately this ingeniously planned and beautifully executed piece of work, would take too much space. But we can say unhesitatingly that every parent and teacher—yes, every intelligent reader not already thoroughly versed in the subject—will do well to place it in his library at once. This is what the *Country Gentleman* says about this. Remember we give it for only four subscribers to the *PHRENOLOGICAL JOURNAL* at \$1.50 a year.

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The Subscription Price of the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH is \$1.50 a year, payable in advance, or \$1.65 when premiums offered are sent to subscribers.

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Agents Wanted for the PHRENOLOGICAL JOURNAL and our Book Publications, to whom liberal terms will be given.

Our premium List, giving complete descriptions of the Premiums offered to subscribers, sent on application.

Our Descriptive Catalogues or our new List of "Books for Women" will be sent to any address on receipt of stamps for postage.

OUR REDUCED TERMS.

We have decided on a reduction in the price of the PHRENOLOGICAL JOURNAL from \$2.00 to \$1.50 a year, in consideration of the fact that it is our desire to secure as large a circulation of it as possible, and also of the fact that the larger the number printed the less is the cost for each. In doing this the size of the JOURNAL will not be materially changed, and it is our purpose to improve the quality in every way possible. The new price should certainly place it within the reach of all who would like to read it, and we will be disappointed if this change does not result in a largely increased subscription list. We shall continue the offer of the Bust or Chart premium to new subscribers as before, that is, to all who will send 15 cents extra with each subscription for boxing and packing the large bust, which is sent by express at the expense of the subscriber, or for postage on the chart or small bust, which is sent prepaid.

A Call For Help.—We feel justified in calling upon the friends of Phrenology and friends of the PHRENOLOGICAL JOURNAL to render us a little assistance at the present time. We have reduced the price of the JOURNAL for the purpose of increasing its circulation, and in this way a knowledge of Phrenology. We can not of course present the JOURNAL and its claims to every one; we shall advertise it largely and send out a great many specimen copies, but this is not likely to be sufficient to accomplish our purpose fully, and for this reason we take the liberty of calling upon our friends for their co-operation. At \$1 a year—and this is our club rate—we believe a club can be made up in every neighborhood by a person sufficiently interested to introduce the JOURNAL, and in towns and cities, of course many clubs could be made, one by almost every person who would try, and will not our friends make a timely effort and give the JOURNAL a new start?

THE PHRENOLOGICAL

FOR

1890.

The reduction of the subscription price was not made without some misgivings as to its expediency—but the results have demonstrated its wisdom. An increased circulation has given the PHRENOLOGICAL JOURNAL AND SCIENCE OF HEALTH entrance into fresh fields, and made hundreds of friends among intelligent and educated people who had no true knowledge of the magazine's nature and scope. This increase we are glad to say is well sustained, and there is good prospect that we shall open the year 1890 with a list nearly double that of 1888.

Among the topics that are entered upon the list for next year we will mention PHYSIOGNOMY, having in preparation a series of articles by an experienced writer and observer. Selected portions of the great work of Lavater will be recited and commented upon—with the original illustrations.

The department of PRACTICAL PHRENOLOGY will be maintained under the conduct of Prof. Nelson Sizer. To his always instructive and entertaining papers will be added contributions from the pen of such writers as Prof. James McNeill, Mr. John W. Shull, Prof. Bartholomew, the Rev. A. C. Dill, Mr. B. Hollander, and others, for the most part practical workers in the field of mental science.

A notable feature in this connection, which the reader and subscriber will find of peculiar interest, is a series of articles by MRS. CHARLOTTE FOWLER WELLS, in which she will relate her REMINISCENCES of early Phrenological life. Familiar, personally,

with the history of the development and progress of practical Phrenology in this country, and related to such eminent pioneers in this branch of scientific philanthropy as the Fowler brothers and Samuel R. Wells, and co-operating with them from the very beginning, it is to be expected that Mrs. Wells can supply a rich store of most interesting and valuable reminiscences for the pages of this magazine in the field that has been her chosen vocation for more than fifty years.

In CHILD CULTURE the names of Jennie Chappell, Mrs. S. E. Kennedy, Miss Sarah E. Burton, M. C. Frederick, and others already well known to later readers, will appear.

In the sphere of PSYCHOLOGY, MAGNETISM, ETC., we can promise the co-operation of Mr. Henry Clark, Dr. Alexander Wilder, Mrs. M. J. Keller, Dr. M. L. Holbrook, etc.

In the SCIENCE OF HEALTH the array of contributors is considerable—so that a great variety of topics relating to public and private physiology and hygiene will be considered and illustrated in the customary useful manner.

For the SOCIAL, ETHICAL, SCIENTIFIC, BIOGRAPHICAL, INDUSTRIAL, and MISCELLANEOUS relations of the JOURNAL will appear sketches, poems, and papers from the pens of such old friends of culture-growth and progress as Prof. Myron Colby, George W. Bungay, Esq., Mrs. L. A. Millard, S. M. Biddle, Annie E. Cole, C. B. Le Row, M. F. Butts, A. Elmore, Isaac P. Noyes, Ada Hazell, Mrs. S. L. Oberholtzer, etc., etc.

The reading world is beginning to learn that the PHRENOLOGICAL JOURNAL occupies no restricted, narrow, eccentric place in its devotion to the interests of the highest concern to society, and its publishers will assure that world that, with an increasing support, effort will not be wanting to make the magazine more valuable in its lines of real popular need.

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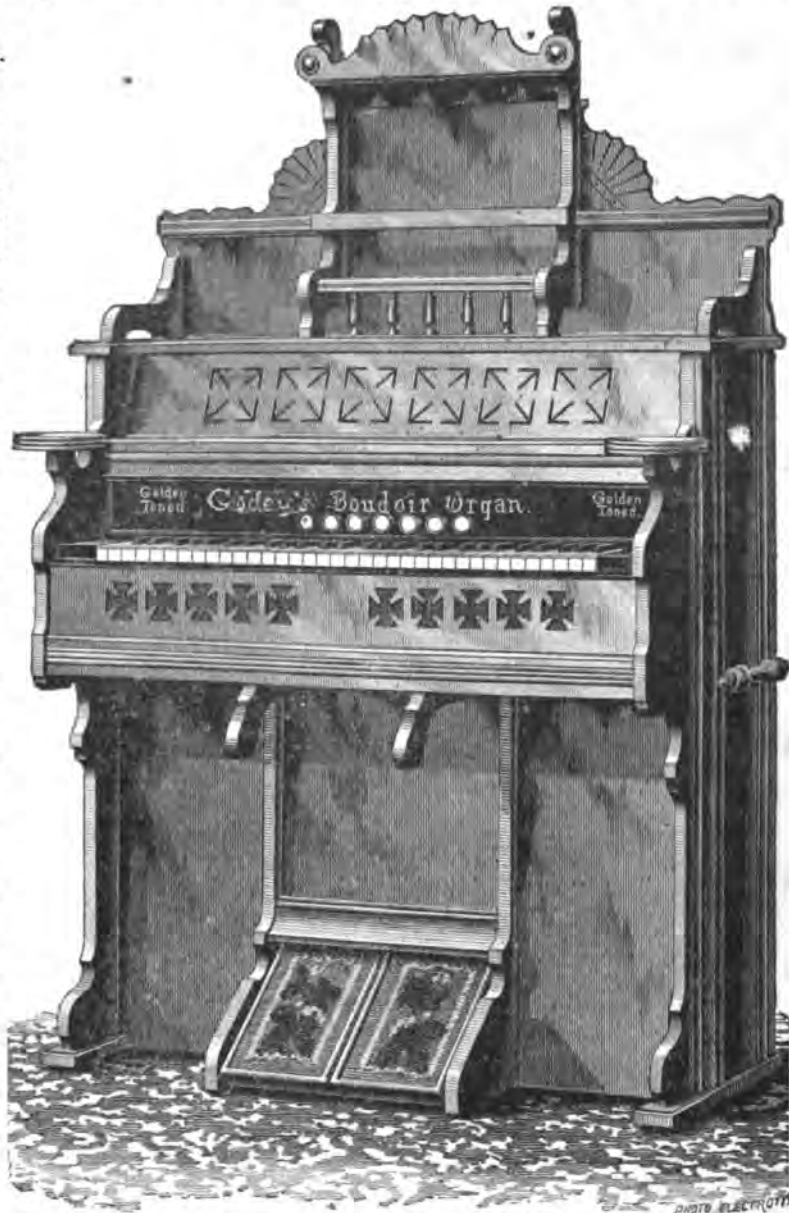
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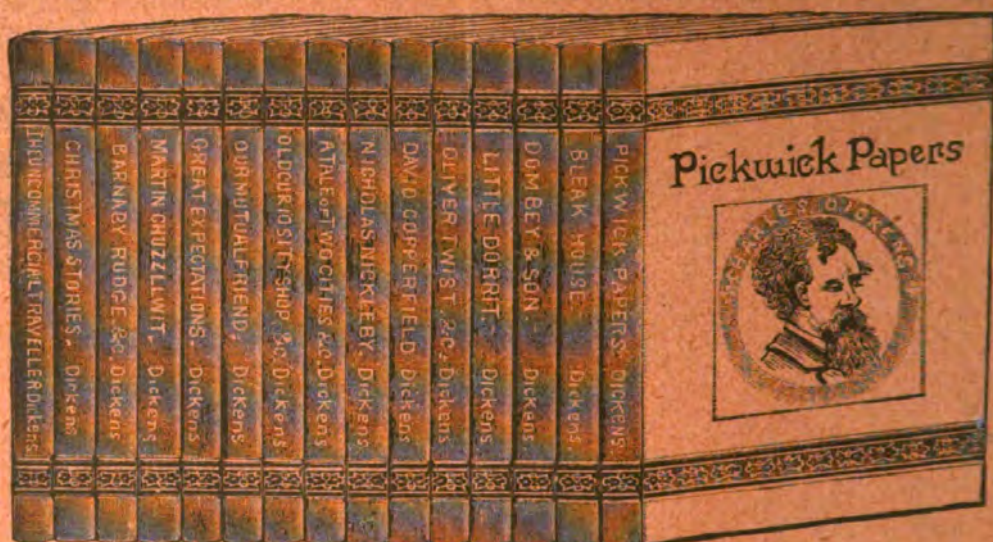
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